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!   "A first evaluation of butanoic and pentanoic acids oxidation
kinetics.

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!   Experimental data in jet stirred reactor and kinetic modelling."
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ELEMENTS

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C
H
O
N
HE
AR
END

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SPECIES

AR	N2	HE
H2	H	O2
O	H2O	OH
H2O2	HO2	CO
CO2	HOCO	CH4
CH3	CH2	CH2 (S)
C	CH	CH3O2H
CH3O2	CH3OH	CH3O
CH2OH	CH2O	HCO
HO2CHO	HOCHO	OCHO
C2H6	C2H5	C2H5O2H
C2H5O2	C2H4	C2H3
C2H2	C2H	C2H5OH
C2H5O	PC2H4OH	SC2H4OH
C2H4O2H	C2H4O1-2	C2H3O1-2
CH3CHO	CH3CO	CH2CHO
CH2CO	HCCO	HCOOH

CH3CO3  
CHOCHO  
CH3OCHO  
IC3H7  
C3H5-A  
C3H5O  
AC4H7OOH  
C3H6OH1-2  
SC3H5OH  
C3H4-P  
C3H2  
RALD3  
CH3COCH2  
SC4H9  
TC4H9  
IC4H7O  
C4H71-3  
C4H6  
C4H3  
FULVENE  
C5H5  
NC3H7O2  
C3-OQOOH  
CH3CO2H  
CH2OHCOCH3  
NC3-OOQOOH  
IC4-OQOOH  
C5EN-OQOOH-35  
NC5-OQOOH  
NC4-QOOH  
IC4T-QOOH  
NC4-OOQOOH  
C5EN-QOOH  
35  
NEOC5H11-OO  
NEOC5-QOOH  
C4H6O2  
C3H7COOH  
RBUTANOICC  
RPENTANOICB  
C2H5CHCO  
C2H3COOH  
RO2BUTANOIC  
KBUTANOIC  
ZPENTANOIC  
CH3CHCH2OH  
CH3CH2CH2O  
CH3COHCH3  
C3H5CHO  
ZNC3OHOOX  
QBU1OOX  
RPENT1OOX  
KEHYP1OH  
ZC6OHOOX  
QALD3OO  
KEA3B3L  
ZA4X  
CH3COCHO

CH3CO3H  
O2C2H4O2H  
CH3OCO  
NC3H7  
C3H5-S  
C3H6O  
CH3CHCO  
C3H6OH2-1  
C3H5OH  
C3H4-A  
C2H5CHO  
C2H3CHO  
NC4H10  
IC4H10  
IC4H8  
C4H8-1  
C4H71-4  
C4H5  
C4H2  
C6H5  
MCPTD  
IC3H7O2  
CHOCH2CHO  
HCO3  
NC3-QOOH  
IC3-OOQOOH  
NC4-OQOOH  
NEOC5H10-O  
NEOC5-OQOOH  
NC4H9-OO  
IC4P-QOOH  
IC4T-OOQOOH  
C5EN-OO  
  
NC5H12OO  
NC5-OOQOOH  
C4H8O  
RBUTANOICA  
C4H9COOH  
RPENTANOICC  
C4H7COOH-1  
C3H7CHCO  
QBUTANOIC  
RO2PENTANOIC  
KPENTANOIC  
CH3CH2CHOH  
IC3H7OH  
C3H7CHO  
RNC3OHOOX  
KEHYNC3OH  
ZBU1OOX  
QPENT1OOX  
RC6OHOOX  
KEHYC6OH  
ZALD3OO  
RALD4OOX  
KEA4X  
RALD5XOO

CH2OHCHO  
HO2CH2CHO  
C3H8  
C3H6  
C3H5-T  
CH3CHCHO  
AC3H5OOH  
HOC3H6O2  
CH2CCH2OH  
C3H3  
CH2CH2CHO  
CH3COCH3  
PC4H9  
IC4H9  
IC4H7  
C4H8-2  
C4H71-O  
C4H4  
C6H6  
C5H6  
C10H8  
C3H7OOH  
CH2OHCH2CHO  
HCO3H  
IC3-QOOH  
CH2COOH  
C4H9OOH  
NC5H10-O  
NC5H11OOH  
IC4H9T-OO  
IC4H9P-OO  
IC4P-OOQOOH  
C5EN-OOQOOH-  
  
NC5-QOOH  
NEOC5-OOQOOH  
C5H8O  
RBUTANOICB  
RPENTANOICA  
RPENTANOICD  
C3H5COOH-1  
CH2CH2COOH  
ZBUTANOIC  
QPENTANOIC  
NC3H7OH  
CH2CH2CH2OH  
CH2CHOHCH3  
RALD4X  
QNC3OHOOX  
RBU1OOX  
KEHYBU1  
ZPENT1OOX  
QC6OHOOX  
RALD3OO  
ETC3H4O2  
QA4X  
ETALD4X  
QA5X

ZA5X  
QA6X  
ETALD6X  
QIBALDG2  
ETIBALDGB  
ZIBALDG3  
IC3H5CHO  
IC3H7CHO  
N1C4H9OH  
CH2CH2CH2CH2OH  
CH3CH2CH2CH2O  
N2C4H9OH  
CH3CHCHOHCH3  
RTC4H8OH  
CH3CCH2OHCH3  
IC5H11OH  
RIPENTOHC  
C5H9OH  
IC4H9CHO  
RALD6X  
RPENT1OHB  
RESAN1OHB  
NEOC5H12  
NC5H9-3  
B2M2  
LC5H8  
CYC6H8  
CYC6H12  
NC7H16  
NC7H13  
IC8H16  
C6H5OH  
CH3C6H4  
O2C6H4CH3  
BZCOOH  
RBBENZ  
CYC6-QOOH-2  
CYC6H10-O-12  
CYC6H10-ONE  
CYC6-OOQOOH-3  
CYC6-OQOOH-3  
NC7H14O  
NC7-OOQOOH  
NC7H15OOH  
IC8-QOOH  
IC8-OQOOH  
CYC5H4  
C5H5O  
LC6H6  
RCRESOLC  
C6H5C2H  
C6H5C2H5  
XYLENE  
INDENYL  
C10H7O  
C10H7CHO  
CH3C10H6O  
BIPHENYL

KEA5X  
ZA6X  
RIBALDGOO  
QIBALDG3  
ETIBALDGG  
ZIBALDB3  
NC4H7OH  
RIBALDB  
CH3CH2CHCH2OH  
  
CH3CH2CH2CHOH  
CH2CH2CHOHCH3  
CH3CH2COHCH3  
IC4H9OH  
CH2CHCH2OHCH3  
RIPENTOHD  
RIPENTO  
C4H9CHO  
RALD5X  
C5H11OH  
ESAN1OH  
NC5H12  
NEOC5H11  
B1M2  
CYC5H8  
DIALLYL  
CYC6H10  
CYC6H11  
NC7H15  
IC8H18  
DIMEPTD  
C6H5CHO  
C6H5O  
OC6H4CH2  
C6H5O2  
STILB  
CYC6-QOOH-3  
CYC6H10-O-13  
C5H9CHO  
CYC6-OOQOOH-4  
CYC6-OQOOH-4  
NC7H15-OO  
C7KETONE  
IC8H16O  
IC8T-QOOH  
C7H6  
C5H3  
CYC5H4O  
C6H4C2H3  
RCRESOLO  
C6H4C2H  
C6H5C2H2  
RXYLENE  
C10H7  
C10H6CH3  
C10H7CH3  
C12H8  
C12H9

RALD6XOO  
KEA6X  
RIBALDBOO  
QIBALDB3  
ZIBALDG2  
KIA4G2  
IC4H7OH  
RIBALDG  
  
CH3CHCH2CH2OH  
CH3CH2CHOHCH2  
TC4H9OH  
CH3CHCH3CHOH  
MEK  
RIPENTOHA  
RIPENTOHB  
IC5H9OH  
ALDC6  
RPENT1OHA  
RESAN1OHA  
NC5H11  
NC5H10  
B1M3  
C5H7  
RC6H9A  
RCYC6H9  
NC6H12  
NC7H14  
IC8H17  
C7H8  
C7H7  
C7H7O2  
C6H5CH2O  
C6H5CO  
CYC6-OO  
CYC6-QOOH-4  
CYC6H10-O-14  
CYC6-OOQOOH-2  
CYC6-OQOOH-2  
C7DIONE  
NC7-QOOH  
NC7-OQOOH  
IC8H17-OO  
IC8-OOQOOH  
C7H5  
C5H2  
C6H4O2  
CRESOL  
C6H5CH2OH  
C6H5C2H3  
C6H5CHCH3  
INDENE  
C10H7OH  
C10H7CH2  
CH3C10H6OH  
C12H7  
FLUORENE

C6H5CH2C6H5	C14H10	C14H9
C16H10	C16H9	C6H5C2H4C6H5
C18H10	C18H9	BENZENE
LC6H5	C6H2	C6H3
C6H4	C8H2	BIN1B
BIN1A	CH2OHCH2OH	GLYCEROL
C3H4O3	FURFURAL	FURAN
CH2CCHCHO	C4H3O	MEFU2
DMF	DMF-3YL	C6H10O5
C6H8O4	C6H6O3	C5H8O4
END		

REACTIONS

!\*\*\*\*\*Butanoic Acid  
 \*\*\*\*\*!

!Molecular Pathways! Cavallotti et al. Proc. Comb. Inst. 2019

C3H7COOH=CO2+C3H8			4.1790e+14	-
0.310	72507.45	!Cavallotti et al. Proc. Comb. Inst. 2019		
PLOG /	9.870000e-02	1.540000e+43	-8.780000e+00	8.708900e+04
/				
PLOG /	9.870000e-01	4.009000e+29	-4.750000e+00	8.001930e+04
/				
PLOG /	9.870000e+00	1.258000e+22	-2.490000e+00	7.672780e+04
/				
PLOG /	9.870000e+01	4.179000e+14	-3.100000e-01	7.250740e+04
/				

C3H7COOH=H2O+C2H5CHCO			9.4400e+12	
0.250	73083.23	!Cavallotti et al. Proc. Comb. Inst. 2019		
PLOG /	9.870000e-02	3.618000e+43	-8.850000e+00	8.838110e+04
/				
PLOG /	9.870000e-01	4.301000e+32	-5.530000e+00	8.362400e+04
/				
PLOG /	9.870000e+00	2.220000e+21	-2.190000e+00	7.778320e+04
/				
PLOG /	9.870000e+01	9.440000e+12	2.500000e-01	7.308320e+04
/				

C3H7COOH=>OH+CO+NC3H7			1.0000e+16	
0.000	105500.00	!Based on BDEs		

C3H7COOH=HOCO+NC3H7			7.0560e+36	-
5.890	103725.77	!Cavallotti et al. Proc. Comb. Inst. 2019: -		
2000 cal/mol (propyl vs methyl)				
PLOG /	9.870000e-02	4.006000e+59	-1.325000e+01	1.111570e+05
/				
PLOG /	9.870000e-01	6.430000e+56	-1.203000e+01	1.120570e+05
/				
PLOG /	9.870000e+00	1.184000e+48	-9.250000e+00	1.092170e+05
/				
PLOG /	9.870000e+01	7.056000e+36	-5.890000e+00	1.037260e+05
/				

C3H7COOH=C2H5+CH2COOH			1.0000e+17	
0.000	80500.00	!Based on BDEs		

C3H7COOH=CH3+CH2CH2COOH	1.0000e+17
0.000 88000.00 !Based on BDEs	
C3H7COOH=>H+CO2+NC3H7	1.0000e+16
0.000 106400.00 !Based on BDEs	
C3H7COOH=H+RBUTANOICA	1.0000e+16
0.000 94300.00 !Based on BDEs	
H+RBUTANOICC=C3H7COOH	5.0000e+13
0.000 0.00	
H+RBUTANOICB=C3H7COOH	5.0000e+13
0.000 0.00	
H+C3H7COOH=OH+C3H7CHO	1.2000e+13
0.000 7000.00	
CH2CH2COOH=HOCO+C2H4	3.0000e+13
0.000 30000.00	
OH+C3H7COOH=>H2O+CO2+NC3H7	5.3700e+00
3.440 -761.33 !Cavallotti et al. Proc. Comb. Inst. 2019	
H+C3H7COOH=>H2+CO2+NC3H7	2.1380e+09
1.300 16754.75 !Cavallotti et al. Proc. Comb. Inst. 2019	
CH3+C3H7COOH=>CO2+CH4+NC3H7	2.9430e+04
2.330 13465.19 !Cavallotti et al. Proc. Comb. Inst. 2019	
HO2+C3H7COOH=>H2O2+CO2+NC3H7	8.8980e+03
2.330 23111.92 !Cavallotti et al. Proc. Comb. Inst. 2019	
C2H5+C3H7COOH=>CO2+C2H6+NC3H7	1.2000e+04
2.000 9289.16 !(1 Hp / 5) !Ranzi et al. Int. J. Chem. Kin. 2014/	
NC3H7+C3H7COOH=>CO2+C3H8+NC3H7	8.1000e+03
2.000 9289.16 !(1 Hp / 5) !Ranzi et al. Int. J. Chem. Kin. 2014/	
C3H5-A+C3H7COOH=>CO2+NC3H7+C3H6	3.2300e+04
2.000 15810.16 !(1 Hp / 5) !Ranzi et al. Int. J. Chem. Kin. 2014/	
O+C3H7COOH=>OH+CO2+NC3H7	1.4100e+06
2.000 4691.70 !(1 Hp / 5) !Ranzi et al. Int. J. Chem. Kin. 2014/	
O2+C3H7COOH=>HO2+CO2+NC3H7	1.0200e+06
2.000 48272.65 !(1 Hp / 5) !Ranzi et al. Int. J. Chem. Kin. 2014/	
CH3O+C3H7COOH=>CO2+CH3OH+NC3H7	2.5700e+04
2.000 3572.50 !(1 Hp / 5) !Ranzi et al. Int. J. Chem. Kin. 2014/	

OH+C3H7COOH=H2O+RBUTANOICA	1.2600e+01
3.510 -2496.29 !Cavallotti et al. Proc.Comb.Inst.2019	
corrected: number of H (*2/3), prim>sec (-2.3 kcal/mol)	
H+C3H7COOH=H2+RBUTANOICA	1.3300e+03
3.040 3494.45 !Cavallotti et al. Proc.Comb.Inst.2019	
corrected: number of H (*2/3), prim>sec (-2.3 kcal/mol)	
CH3+C3H7COOH=CH4+RBUTANOICA	5.8000e+01
3.160 5875.07 !Cavallotti et al. Proc.Comb.Inst.2019	
corrected: number of H (*2/3), prim>sec (-2.3 kcal/mol)	
HO2+C3H7COOH=H2O2+RBUTANOICA	1.5200e-01
3.830 15250.00 !Cavallotti et al. Proc.Comb.Inst.2019	
corrected: number of H (*2/3), prim>sec (-2.3 kcal/mol)	
O2+C3H7COOH=HO2+RBUTANOICA	4.4700e+05
2.260 48338.87 !Cavallotti et al. Proc.Comb.Inst.2019	
corrected: number of H (*2/3), prim>sec (-2.3 kcal/mol)	
C2H5+C3H7COOH=C2H6+RBUTANOICA	2.0000e+04
2.000 6700.00 !(1 Hsec) Ranzi et al. Int. J. Chem. Kin. 2014	
NC3H7+C3H7COOH=C3H8+RBUTANOICA	1.3500e+04
2.000 6700.00 !(1 Hsec) Ranzi et al. Int. J. Chem. Kin. 2014	
C3H5-A+C3H7COOH=C3H6+RBUTANOICA	5.4000e+04
2.000 12800.00 !(1 Hsec) Ranzi et al. Int. J. Chem. Kin. 2014	
O+C3H7COOH=OH+RBUTANOICA	2.3600e+06
2.000 2500.00 !(1 Hsec) Ranzi et al. Int. J. Chem. Kin. 2014	
CH3O+C3H7COOH=CH3OH+RBUTANOICA	4.0000e+04
2.000 1500.00 !(1 Hsec) Ranzi et al. Int. J. Chem. Kin. 2014	
H+C3H7COOH=H2+RBUTANOICB	6.0000e+06
2.000 4000.00 !(2 Hsec) Ranzi et al. Int. J. Chem. Kin. 2014	
CH3+C3H7COOH=CH4+RBUTANOICB	6.0000e+04
2.000 5000.00 !(2 Hsec) Ranzi et al. Int. J. Chem. Kin. 2014	
C2H5+C3H7COOH=C2H6+RBUTANOICB	4.0000e+04
2.000 6700.00 !(2 Hsec) Ranzi et al. Int. J. Chem. Kin. 2014	
NC3H7+C3H7COOH=C3H8+RBUTANOICB	2.7000e+04
2.000 6700.00 !(2 Hsec) Ranzi et al. Int. J. Chem. Kin. 2014	
C3H5-A+C3H7COOH=C3H6+RBUTANOICB	1.0800e+05
2.000 12800.00 !(2 Hsec) Ranzi et al. Int. J. Chem. Kin. 2014	
O+C3H7COOH=OH+RBUTANOICB	4.7000e+06
2.000 2500.00 !(2 Hsec) Ranzi et al. Int. J. Chem. Kin. 2014	
O2+C3H7COOH=HO2+RBUTANOICB	3.4000e+06
2.000 44000.00 !(2 Hsec) Ranzi et al. Int. J. Chem. Kin. 2014	
OH+C3H7COOH=H2O+RBUTANOICB	3.0000e+09
1.000 50.00 !(2 Hsec) Ranzi et al. Int. J. Chem. Kin. 2014	

$\text{HO}_2 + \text{C}_3\text{H}_7\text{COOH} = \text{H}_2\text{O}_2 + \text{RBUTANOICB}$  1.6000e+06  
 2.000 16000.00 !(2 Hsec) Ranzi et al. Int. J. Chem. Kin. 2014

$\text{CH}_3\text{O} + \text{C}_3\text{H}_7\text{COOH} = \text{CH}_3\text{OH} + \text{RBUTANOICB}$  8.5600e+04  
 2.000 1500.00 !(2 Hsec) Ranzi et al. Int. J. Chem. Kin. 2014

$\text{H} + \text{C}_3\text{H}_7\text{COOH} = \text{H}_2 + \text{RBUTANOICC}$  1.1200e+07  
 2.000 6525.60 !(3 Hprim) Ranzi et al. Int. J. Chem. Kin. 2014

$\text{CH}_3 + \text{C}_3\text{H}_7\text{COOH} = \text{CH}_4 + \text{RBUTANOICC}$  9.0000e+04  
 2.000 7443.70 !(3 Hprim) Ranzi et al. Int. J. Chem. Kin. 2014

$\text{C}_2\text{H}_5 + \text{C}_3\text{H}_7\text{COOH} = \text{C}_2\text{H}_6 + \text{RBUTANOICC}$  6.0000e+04  
 2.000 9289.16 !(3 Hprim) Ranzi et al. Int. J. Chem. Kin. 2014

$\text{NC}_3\text{H}_7 + \text{C}_3\text{H}_7\text{COOH} = \text{C}_3\text{H}_8 + \text{RBUTANOICC}$  4.0500e+04  
 2.000 9289.16 !(3 Hprim) Ranzi et al. Int. J. Chem. Kin. 2014

$\text{C}_3\text{H}_5\text{-A} + \text{C}_3\text{H}_7\text{COOH} = \text{C}_3\text{H}_6 + \text{RBUTANOICC}$  1.6170e+05  
 2.000 15810.16 !(3 Hprim) Ranzi et al. Int. J. Chem. Kin. 2014

$\text{O} + \text{C}_3\text{H}_7\text{COOH} = \text{OH} + \text{RBUTANOICC}$  7.0500e+06  
 2.000 4691.70 !(3 Hprim) Ranzi et al. Int. J. Chem. Kin. 2014

$\text{O}_2 + \text{C}_3\text{H}_7\text{COOH} = \text{HO}_2 + \text{RBUTANOICC}$  5.1000e+06  
 2.000 48272.65 !(3 Hprim) Ranzi et al. Int. J. Chem. Kin. 2014

$\text{OH} + \text{C}_3\text{H}_7\text{COOH} = \text{H}_2\text{O} + \text{RBUTANOICC}$  4.5000e+09  
 1.000 1540.75 !(3 Hprim) Ranzi et al. Int. J. Chem. Kin. 2014

$\text{HO}_2 + \text{C}_3\text{H}_7\text{COOH} = \text{H}_2\text{O}_2 + \text{RBUTANOICC}$  1.0400e+06  
 2.000 15025.60 !(3 Hprim) Ranzi et al. Int. J. Chem. Kin. 2014

$\text{CH}_3\text{O} + \text{C}_3\text{H}_7\text{COOH} = \text{CH}_3\text{OH} + \text{RBUTANOICC}$  1.2840e+05  
 2.000 3572.50 !(3 Hprim) Ranzi et al. Int. J. Chem. Kin. 2014

!Radical decomposition/isomerization!  
 !Isomerizations!

$\text{RBUTANOICC} = \text{CO}_2 + \text{NC}_3\text{H}_7$  1.0000e+11  
 0.000 30600.00 !1-5H transfer p>p Ranzi et al. Int. J. Chem. Kin. 2014 +10 kcal/mol for BDEs

$\text{RBUTANOICB} = \text{CO}_2 + \text{NC}_3\text{H}_7$  1.6000e+10  
 0.000 25500.00 !1-4H transfer s>p Ranzi et al. Int. J. Chem. Kin. 2014 +10 kcal/mol for BDEs

!Resonance stabilized alpha radical sub-set  
 ! Based on Cavallotti et al. Proc.Comb.Inst.2019 (+3 kcal to account for secondary radical vs primary radical in CH3CO2H)

RBUTANOICA=OH+C2H5CHCO 1.7400e+29 -  
 4.370 63089.60  
 PLOG / 9.870000e-02 9.770000e+46 -1.039000e+01 6.688170e+04  
 /  
 PLOG / 9.870000e-01 1.050000e+46 -9.700000e+00 6.868245e+04  
 /  
 PLOG / 9.870000e+00 4.370000e+39 -7.560000e+00 6.743470e+04  
 /  
 PLOG / 9.870000e+01 1.740000e+29 -4.370000e+00 6.308960e+04  
 /

RBUTANOICA=CO2+NC3H7 5.6200e+20 -  
 2.360 49013.60  
 PLOG / 9.870000e-02 6.760000e+42 -9.230000e+00 5.741666e+04  
 /  
 PLOG / 9.870000e-01 1.380000e+37 -7.360000e+00 5.606372e+04  
 /  
 PLOG / 9.870000e+00 5.620000e+28 -4.770000e+00 5.268970e+04  
 /  
 PLOG / 9.870000e+01 5.620000e+20 -2.360000e+00 4.901360e+04  
 /

H+RBUTANOICA=H2O+C2H5CHCO 1.6200e+18 -  
 1.440 11056.50  
 PLOG / 9.870000e-02 2.451000e+21 -2.620000e+00 3.165930e+03  
 /  
 PLOG / 9.870000e-01 2.511000e+25 -3.690000e+00 7.510720e+03  
 /  
 PLOG / 9.870000e+00 5.245000e+26 -3.940000e+00 1.208940e+04  
 /  
 PLOG / 9.870000e+01 1.620000e+18 -1.440000e+00 1.105650e+04  
 /

H+RBUTANOICA=CO2+C3H8 5.2450e+18 -  
 1.690 10183.10  
 PLOG / 9.870000e-02 7.046000e+22 -3.120000e+00 3.588080e+03  
 /  
 PLOG / 9.870000e-01 3.981000e+26 -4.110000e+00 7.754050e+03  
 /  
 PLOG / 9.870000e+00 6.624000e+26 -4.070000e+00 1.134550e+04  
 /  
 PLOG / 9.870000e+01 5.245000e+18 -1.690000e+00 1.018310e+04  
 /

H+RBUTANOICA=HOCO+NC3H7 2.2400e+22 -  
 2.260 16097.74  
 PLOG / 9.870000e-02 8.491000e+18 -1.540000e+00 5.894950e+03  
 /  
 PLOG / 9.870000e-01 3.017000e+22 -2.500000e+00 9.396200e+03  
 /  
 PLOG / 9.870000e+00 9.093000e+25 -3.390000e+00 1.449440e+04  
 /  
 PLOG / 9.870000e+01 2.240000e+22 -2.260000e+00 1.609774e+04  
 /



H+C3H5COOH-1=RBUTANOICA		1.5000e+13
0.000	3500.00	
RBUTANOICA=CH3+C2H3COOH		3.0000e+13
0.000	32000.00	!Ranzi et al. Int. J. Chem. Kin. 2014
RBUTANOICB=HOCO+C3H6		3.0000e+13
0.000	30000.00	!Ranzi et al. Int. J. Chem. Kin. 2014
H+C3H5COOH-1=RBUTANOICB		1.5000e+13
0.000	3500.00	!Ranzi et al. Int. J. Chem. Kin. 2014
RBUTANOICC=>C2H4+CH2COOH		3.0000e+13
0.000	28500.00	!Ranzi et al. Int. J. Chem. Kin. 2014
C2H4+CH2COOH=>RBUTANOICC		1.0000e+11
0.000	15000.00	!Ranzi et al. Int. J. Chem. Kin. 2014
H+C3H5COOH-1=RBUTANOICC		1.5000e+13
0.000	3500.00	!Ranzi et al. Int. J. Chem. Kin. 2014
O2+RBUTANOICA=HO2+C3H5COOH-1		1.0000e+12
0.000	5000.00	!Ranzi et al. Int. J. Chem. Kin. 2014
O2+RBUTANOICB=HO2+C3H5COOH-1		1.0000e+12
0.000	5000.00	!Ranzi et al. Int. J. Chem. Kin. 2014
O2+RBUTANOICC=HO2+C3H5COOH-1		1.0000e+12
0.000	5000.00	!Ranzi et al. Int. J. Chem. Kin. 2014
!***** Butanoic Acid LT Lumped		
*****!		
O2+RBUTANOICA=>RO2BUTANOIC		1.0000e+12
0.000	0.00	
RO2BUTANOIC=>OH+CO2+C2H5CHO		2.0000e+11
0.000	23500.00	! Waddington, est.
RO2BUTANOIC=>O2+0.6RBUTANOICA+0.25RBUTANOICB+0.15RBUTANOICC		3.0000e+13
0.000	29000.00	
O2+RBUTANOICB=>RO2BUTANOIC		1.0000e+12
0.000	0.00	
O2+RBUTANOICC=>RO2BUTANOIC		1.0000e+12
0.000	0.00	
RO2BUTANOIC=>QBUTANOIC		3.0000e+11
0.000	22400.00	
QBUTANOIC=>RO2BUTANOIC		5.0000e+10
0.000	12000.00	
QBUTANOIC=>OH+CO2+C3H6O		1.6000e+11
0.000	18000.00	

QBUTANOIC=>OH+CH2O+C2H3COOH 1.0000e+12  
0.000 22000.00

QBUTANOIC=>HO2+C3H5COOH-1 3.0000e+13  
0.000 18000.00

O2+QBUTANOIC=>ZBUTANOIC 3.0000e+12  
0.000 0.00

ZBUTANOIC=>O2+QBUTANOIC 3.0000e+13  
0.000 29000.00

ZBUTANOIC=>OH+KBUTANOIC 1.0000e+11  
0.000 24500.00

KBUTANOIC=>OH+HOCO+CH2O+CH2CO 1.6500e+15  
0.000 41500.00

KBUTANOIC=>OH+HOCO+CHOCH2CHO 1.6500e+15  
0.000 41500.00

KBUTANOIC=>OH+CO+CH2O+CH2COOH 1.6500e+15  
0.000 41500.00

KBUTANOIC=>OH+CO+HOCO+CH3CHO 1.6500e+15  
0.000 41500.00

!\*\*\*\*\* Butenoic Acid HT  
\*\*\*\*\*!

! Butenoic acid C3H5COOH-1 sub-set, only one lumped component!  
! Unimolecular and Molecular Initiation Reactions

C3H5COOH-1=>OH+CO+C3H5-A 1.0000e+16  
0.000 105500.00 !Same as 1-butene

HOCO+C3H5-A (+M)=C3H5COOH-1 (+M) 1.5000e+13  
0.000 0.00 !Same as 1-butene  
LOW/ 1.55e+56 -11.790 8984.5/  
TROE/ 0.1980 2278. 6.000e+04 5723./  
H2/ 2.00/ H2O/ 6.00/ CH4/ 2.00/ CO/ 1.50/ CO2/ 2.00/ C2H6/ 3.00/  
AR/ 0.70/

C2H3+CH2COOH (+M)=C3H5COOH-1 (+M) 1.5000e+13  
0.000 0.00 !Same as 1-butene  
LOW/ 1.55e+56 -11.790 8984.5/  
TROE/ 0.1980 2278. 6.000e+04 5723./  
H2/ 2.00/ H2O/ 6.00/ CH4/ 2.00/ CO/ 1.50/ CO2/ 2.00/ C2H6/ 3.00/  
AR/ 0.70/

C3H5COOH-1=>H2O+C2H2+CH2CO 9.4400e+12  
0.250 73083.23 !Same as dehydration for butanoic Cavallotti et  
al. Proc. Comb. Inst 2019  
PLOG / 9.870000e-02 3.618000e+43 -8.850000e+00 8.838110e+04  
/  
PLOG / 9.870000e-01 4.301000e+32 -5.530000e+00 8.362400e+04  
/  
PLOG / 9.870000e+00 2.220000e+21 -2.190000e+00 7.778320e+04  
/

PLOG / 9.870000e+01 9.440000e+12 2.500000e-01 7.308320e+04  
/

C3H5COOH-1=CO2+C3H6 4.1790e+14 -  
0.310 72507.45 !Same as decarbonylation for butanoic

Cavallotti et al. Proc. Comb. Inst 2019

PLOG / 9.870000e-02 1.540000e+43 -8.780000e+00 8.708900e+04  
/

PLOG / 9.870000e-01 4.009000e+29 -4.750000e+00 8.001930e+04  
/

PLOG / 9.870000e+00 1.258000e+22 -2.490000e+00 7.672780e+04  
/

PLOG / 9.870000e+01 4.179000e+14 -3.100000e-01 7.250740e+04  
/

! R+C3H5COOH-1=>RH+OH+C2H2+CH2CO (same as r+1-butene>rh+c4h7i-3 /2)

OH+C3H5COOH-1=>H2O+OH+C2H2+CH2CO 3.8900e+05  
2.200 -437.18

HO2+C3H5COOH-1=>OH+H2O2+C2H2+CH2CO 3.9000e-01  
3.970 11702.00

H+C3H5COOH-1=>H2+OH+C2H2+CH2CO 1.2000e+03  
3.050 1995.00

O+C3H5COOH-1=>2OH+C2H2+CH2CO 9.0000e+10  
0.700 5884.00

O2+C3H5COOH-1=>OH+HO2+C2H2+CH2CO 5.0000e+13  
0.000 37190.00

CH3+C3H5COOH-1=>OH+CH4+C2H2+CH2CO 1.1000e+00  
3.500 5675.00

! R+C3H5COOH-1=>RH+C2H2+CH2COOH (same as r+c3h6>rh+c3h5-s /2)

H+C3H5COOH-1=>H2+C2H2+CH2COOH 6.0100e+02  
3.234 12357.00

O2+C3H5COOH-1=>HO2+C2H2+CH2COOH 1.0000e+13  
0.000 62270.00

O+C3H5COOH-1=>OH+C2H2+CH2COOH 6.0000e+10  
0.700 8959.10

OH+C3H5COOH-1=>H2O+C2H2+CH2COOH 9.3000e+04  
2.369 2502.00

HO2+C3H5COOH-1=>H2O2+C2H2+CH2COOH 4.8000e+02  
3.059 20798.60

CH3+C3H5COOH-1=>CH4+C2H2+CH2COOH 6.7000e-01  
3.500 12850.00

! R+C3H5COOH-1=>RH+CO2+C3H5-A (same as h-abs on R-OH in butanoic acid)

OH+C3H5COOH-1=>H2O+CO2+C3H5-A 5.3700e+00  
3.440 -761.33

H+C3H5COOH-1=>H2+CO2+C3H5-A 2.1380e+09  
1.300 16754.75

CH3+C3H5COOH-1=>CO2+CH4+C3H5-A 2.9430e+04  
2.330 13465.19

HO2+C3H5COOH-1=>H2O2+CO2+C3H5-A 8.8980e+03  
2.330 23111.92

O+C3H5COOH-1=>OH+CO2+C3H5-A 1.4100e+06  
2.000 4691.70

O2+C3H5COOH-1=>HO2+CO2+C3H5-A 1.0200e+06  
2.000 48272.65

! Addition reactions

OH+C3H5COOH-1=CH3CHO+CH2COOH 6.9300e+05  
1.490 -536.00 !SAME AS OH+C3H6 in Aramco 2.0  
PLOG / 1.000000e+00 3.160000e-04 4.050000e+00 -1.144000e+03  
/  
PLOG / 1.000000e+01 7.590000e-06 4.490000e+00 -6.800000e+02  
/  
PLOG / 1.000000e+02 5.450000e-05 4.220000e+00 1.141000e+03  
/

O+C3H5COOH-1=CH2CHO+CH2COOH 3.0000e+12  
0.000 5000.00 !SAME AS O+C3H6 in Aramco 2.0

!\*\*\*\*\* Propenoic Acid HT  
\*\*\*\*\*!

HOCO+C2H3 (+M)=C2H3COOH (+M) 1.5000e+13  
0.000 0.00 !Same as 1-butene  
LOW/ 1.55e+56 -11.790 8984.5/  
TROE/ 0.1980 2278. 6.000e+04 5723./  
H2/ 2.00/ H2O/ 6.00/ CH4/ 2.00/ CO/ 1.50/ CO2/ 2.00/ C2H6/ 3.00/  
AR/ 0.70/

C2H3COOH=>H2O+CO+C2H2 9.4400e+12  
0.250 73083.23 !Same dehydration in butanoic  
PLOG / 9.870000e-02 3.618000e+43 -8.850000e+00 8.838110e+04  
/  
PLOG / 9.870000e-01 4.301000e+32 -5.530000e+00 8.362400e+04  
/  
PLOG / 9.870000e+00 2.220000e+21 -2.190000e+00 7.778320e+04  
/  
PLOG / 9.870000e+01 9.440000e+12 2.500000e-01 7.308320e+04  
/

C2H3COOH=CO2+C2H4 4.1790e+14 -  
0.310 72507.45 !Same decarbonylation in butanoic  
PLOG / 9.870000e-02 1.540000e+43 -8.780000e+00 8.708900e+04  
/

```

PLOG / 9.870000e-01 4.009000e+29 -4.750000e+00 8.001930e+04
/
PLOG / 9.870000e+00 1.258000e+22 -2.490000e+00 7.672780e+04
/
PLOG / 9.870000e+01 4.179000e+14 -3.100000e-01 7.250740e+04
/

```

! R+C2H3COOH=>RH+CO2+C2H3 (same as h-abs on R-OH in butanoic acid)

```

OH+C2H3COOH=>H2O+CO2+C2H3 5.3700e+00
3.440 -761.33

```

```

H+C2H3COOH=>H2+CO2+C2H3 2.1380e+09
1.300 16754.75

```

```

CH3+C2H3COOH=>CO2+CH4+C2H3 2.9430e+04
2.330 13465.19

```

```

HO2+C2H3COOH=>H2O2+CO2+C2H3 8.8980e+03
2.330 23111.92

```

```

O+C2H3COOH=>OH+CO2+C2H3 1.4100e+06
2.000 4691.70

```

```

O2+C2H3COOH=>HO2+CO2+C2H3 1.0200e+06
2.000 48272.65

```

! R+C2H3COOH=>RH+C2H2+HOCO (same as r+c3h6>rh+c3h5-s /2)

```

H+C2H3COOH=>H2+HOCO+C2H2 6.0100e+02
3.234 12357.00

```

```

O2+C2H3COOH=>HO2+HOCO+C2H2 1.0000e+13
0.000 62270.00

```

```

O+C2H3COOH=>OH+HOCO+C2H2 6.0000e+10
0.700 8959.10

```

```

OH+C2H3COOH=>H2O+HOCO+C2H2 9.0000e+04
2.369 2502.00

```

```

HO2+C2H3COOH=>H2O2+HOCO+C2H2 4.8000e+02
3.059 20798.60

```

```

CH3+C2H3COOH=>HOCO+CH4+C2H2 6.5000e-01
3.500 12850.00

```

! R+C2H3COOH=>RH+C2H2+OH+CO (same as r+c3h6>rh+c3h5-T)

```

H+C2H3COOH=>H2+OH+CO+C2H2 7.5000e+01
3.381 8909.50

```

```

O+C2H3COOH=>2OH+CO+C2H2 3.0000e+10
0.700 7632.00

```

```

OH+C2H3COOH=>H2O+OH+CO+C2H2 9.0000e+05
1.979 2235.20

```

HO2+C2H3COOH=>OH+H2O2+CO+C2H2 8.0000e+03  
2.820 24427.90

O2+C2H3COOH=>OH+HO2+CO+C2H2 5.0000e+12  
0.000 58770.00

CH3+C2H3COOH=>OH+CO+CH4+C2H2 4.2000e-01  
3.500 11660.00

! Addition reactions

OH+C2H3COOH=HOCO+CH3CHO 6.9300e+05  
1.490 -536.00 !SAME AS OH+C3H6 in Aramco 2.0  
PLOG / 1.000000e+00 3.160000e-04 4.050000e+00 -1.144000e+03  
/  
PLOG / 1.000000e+01 7.590000e-06 4.490000e+00 -6.800000e+02  
/  
PLOG / 1.000000e+02 5.450000e-05 4.220000e+00 1.141000e+03  
/

O+C2H3COOH=HOCO+CH2CHO 3.0000e+12  
0.000 5000.00 !SAME AS O+C3H6 in Aramco 2.0

!\*\*\*\*\* Ethylketen subset HT  
!\*\*\*\*\*

C2H5CHCO=C2H5+HCCO 2.1233e+17  
0.000 93714.26 !Same as 1-butene

C2H5CHCO=>CO+CH3+C2H3 2.1950e+17  
0.000 73454.15 !Same as 1-butene

! H-abstractions

! (same as r+1-butene>rh+c4h71-3)

OH+C2H5CHCO=>H2O+CO+C3H5-S 7.7690e+05  
2.200 -437.18

HO2+C2H5CHCO=>H2O2+CO+C3H5-S 7.8200e-01  
3.970 11702.00

H+C2H5CHCO=>H2+CO+C3H5-S 2.4200e+03  
3.050 1995.00

O+C2H5CHCO=>OH+CO+C3H5-S 1.7500e+11  
0.700 5884.00

O2+C2H5CHCO=>HO2+CO+C3H5-S 1.0000e+14  
0.000 37190.00

CH3+C2H5CHCO=>CO+CH4+C3H5-S 2.2100e+00  
3.500 5675.00

! (same as r+1-butene>rh+c4h71-4)

OH+C2H5CHCO=>H2O+C2H4+HCCO 8.6000e+06  
2.030 2623.10

$\text{HO}_2 + \text{C}_2\text{H}_5\text{CHCO} \Rightarrow \text{H}_2\text{O}_2 + \text{C}_2\text{H}_4 + \text{HCCO}$  4.0800e+01  
 3.590 17160.00  
 $\text{H} + \text{C}_2\text{H}_5\text{CHCO} \Rightarrow \text{H}_2 + \text{C}_2\text{H}_4 + \text{HCCO}$  3.8400e+04  
 2.870 6611.00  
 $\text{O} + \text{C}_2\text{H}_5\text{CHCO} \Rightarrow \text{OH} + \text{C}_2\text{H}_4 + \text{HCCO}$  1.1300e+14  
 0.000 7850.00  
 $\text{O}_2 + \text{C}_2\text{H}_5\text{CHCO} \Rightarrow \text{HO}_2 + \text{C}_2\text{H}_4 + \text{HCCO}$  6.0000e+13  
 0.000 52340.00  
 $\text{CH}_3 + \text{C}_2\text{H}_5\text{CHCO} \Rightarrow \text{CH}_4 + \text{C}_2\text{H}_4 + \text{HCCO}$  4.5200e-01  
 3.650 7154.00

!\*\*\*\*\*Pentanoic Acid  
 \*\*\*\*\*!

!Molecular Pathways! Cavallotti et al. Proc. Comb. Inst. 2019  
 $\text{C}_4\text{H}_9\text{COOH} = \text{CO}_2 + \text{NC}_4\text{H}_{10}$  4.1790e+14 -  
 0.310 72507.45 !Cavallotti et al. Proc. Comb. Inst. 2019  
 PLOG / 9.870000e-02 1.540000e+43 -8.780000e+00 8.708900e+04  
 /  
 PLOG / 9.870000e-01 4.009000e+29 -4.750000e+00 8.001930e+04  
 /  
 PLOG / 9.870000e+00 1.258000e+22 -2.490000e+00 7.672780e+04  
 /  
 PLOG / 9.870000e+01 4.179000e+14 -3.100000e-01 7.250740e+04  
 /

$\text{C}_4\text{H}_9\text{COOH} \Rightarrow \text{H}_2\text{O} + \text{C}_3\text{H}_7\text{CHCO}$  9.4400e+12  
 0.250 73083.23 !Cavallotti et al. Proc. Comb. Inst. 2019  
 PLOG / 9.870000e-02 3.618000e+43 -8.850000e+00 8.838110e+04  
 /  
 PLOG / 9.870000e-01 4.301000e+32 -5.530000e+00 8.362400e+04  
 /  
 PLOG / 9.870000e+00 2.220000e+21 -2.190000e+00 7.778320e+04  
 /  
 PLOG / 9.870000e+01 9.440000e+12 2.500000e-01 7.308320e+04  
 /

$\text{C}_4\text{H}_9\text{COOH} \Rightarrow \text{OH} + \text{CO} + \text{PC}_4\text{H}_9$  1.0000e+16  
 0.000 105500.00 !Based on BDEs

$\text{C}_4\text{H}_9\text{COOH} = \text{HOCO} + \text{PC}_4\text{H}_9$  7.0560e+36 -  
 5.890 103725.77 ! Same as Cavallotti et al. -2 kcal/mol (butyl vs  
 methyl)  
 PLOG / 9.870000e-02 4.006000e+59 -1.325000e+01 1.111570e+05  
 /  
 PLOG / 9.870000e-01 6.430000e+56 -1.203000e+01 1.120570e+05  
 /  
 PLOG / 9.870000e+00 1.184000e+48 -9.250000e+00 1.092170e+05  
 /  
 PLOG / 9.870000e+01 7.056000e+36 -5.890000e+00 1.037260e+05  
 /

$\text{C}_4\text{H}_9\text{COOH} = \text{NC}_3\text{H}_7 + \text{CH}_2\text{COOH}$  1.0000e+17  
 0.000 80500.00 !Based on BDEs

C4H9COOH=C2H5+CH2CH2COOH	1.0000e+17
0.000 86500.00 !Based on BDEs	
C4H9COOH=CH3+RBUTANOICC	1.0000e+17
0.000 88000.00 !Based on BDEs	
C4H9COOH=>H+CO2+PC4H9	1.0000e+16
0.000 106400.00 !Based on BDEs	
C4H9COOH=H+RPENTANOICA	1.0000e+16
0.000 94300.00 !Based on BDEs	
H+C4H9COOH=OH+C4H9CHO	1.2000e+13
0.000 7000.00	
H+RPENTANOICD=C4H9COOH	5.0000e+13
0.000 0.00	
H+RPENTANOICC=C4H9COOH	5.0000e+13
0.000 0.00	
H+RPENTANOICB=C4H9COOH	5.0000e+13
0.000 0.00	
OH+C4H9COOH=>H2O+CO2+PC4H9	5.3700e+00
3.440 -761.33 !Same as butanoic acid (R+C3H7COOH=RH+CO2+NC3H7)	
H+C4H9COOH=>H2+CO2+PC4H9	2.1380e+09
1.300 16754.75 !Same as butanoic acid (R+C3H7COOH=RH+CO2+NC3H7)	
CH3+C4H9COOH=>CO2+CH4+PC4H9	2.9430e+04
2.330 13465.19 !Same as butanoic acid (R+C3H7COOH=RH+CO2+NC3H7)	
HO2+C4H9COOH=>H2O2+CO2+PC4H9	8.8980e+03
2.330 23111.92 !Same as butanoic acid (R+C3H7COOH=RH+CO2+NC3H7)	
C2H5+C4H9COOH=>CO2+C2H6+PC4H9	1.2000e+04
2.000 9289.16 !Same as butanoic acid (R+C3H7COOH=RH+CO2+NC3H7)	
NC3H7+C4H9COOH=>CO2+C3H8+PC4H9	8.1000e+03
2.000 9289.16 !Same as butanoic acid (R+C3H7COOH=RH+CO2+NC3H7)	
C3H5-A+C4H9COOH=>CO2+C3H6+PC4H9	3.2300e+04
2.000 15810.16 !Same as butanoic acid (R+C3H7COOH=RH+CO2+NC3H7)	
O+C4H9COOH=>OH+CO2+PC4H9	1.4100e+06
2.000 4691.70 !Same as butanoic acid (R+C3H7COOH=RH+CO2+NC3H7)	
O2+C4H9COOH=>HO2+CO2+PC4H9	1.0200e+06
2.000 48272.65 !Same as butanoic acid (R+C3H7COOH=RH+CO2+NC3H7)	
CH3O+C4H9COOH=>CO2+CH3OH+PC4H9	2.5700e+04
2.000 3572.50 !Same as butanoic acid (R+C3H7COOH=RH+CO2+NC3H7)	
OH+C4H9COOH=H2O+RPENTANOICA	1.2600e+01
3.510 -2496.29 !Same as butanoic acid, abstraction from alpha	



H+C4H9COOH=H2+RPENTANOICA			1.3300e+03
3.040	3494.45	!Same as butanoic acid, abstraction from alpha	
CH3+C4H9COOH=CH4+RPENTANOICA			5.8000e+01
3.160	5875.07	!Same as butanoic acid, abstraction from alpha	
HO2+C4H9COOH=H2O2+RPENTANOICA			1.5200e-01
3.830	15250.00	!Same as butanoic acid, abstraction from alpha	
O2+C4H9COOH=HO2+RPENTANOICA			4.4700e+05
2.260	48338.87	!Same as butanoic acid, abstraction from alpha	
C2H5+C4H9COOH=C2H6+RPENTANOICA			2.0000e+04
2.000	6700.00	!Same as butanoic acid, abstraction from alpha	
NC3H7+C4H9COOH=C3H8+RPENTANOICA			1.3500e+04
2.000	6700.00	!Same as butanoic acid, abstraction from alpha	
C3H5-A+C4H9COOH=C3H6+RPENTANOICA			5.4000e+04
2.000	12800.00	!Same as butanoic acid, abstraction from alpha	
O+C4H9COOH=OH+RPENTANOICA			2.3600e+06
2.000	2500.00	!Same as butanoic acid, abstraction from alpha	
CH3O+C4H9COOH=CH3OH+RPENTANOICA			4.0000e+04
2.000	1500.00	!Same as butanoic acid, abstraction from alpha	
H+C4H9COOH=H2+RPENTANOICB			6.0000e+06
2.000	4000.00	!Same as butanoic acid, abstraction from beta	
CH3+C4H9COOH=CH4+RPENTANOICB			6.0000e+04
2.000	5000.00	!Same as butanoic acid, abstraction from beta	
C2H5+C4H9COOH=C2H6+RPENTANOICB			4.0000e+04
2.000	6700.00	!Same as butanoic acid, abstraction from beta	
NC3H7+C4H9COOH=C3H8+RPENTANOICB			2.7000e+04
2.000	6700.00	!Same as butanoic acid, abstraction from beta	
C3H5-A+C4H9COOH=C3H6+RPENTANOICB			1.0800e+05
2.000	12800.00	!Same as butanoic acid, abstraction from beta	
O+C4H9COOH=OH+RPENTANOICB			4.7000e+06
2.000	2500.00	!Same as butanoic acid, abstraction from beta	
O2+C4H9COOH=HO2+RPENTANOICB			3.4000e+06
2.000	44000.00	!Same as butanoic acid, abstraction from beta	
OH+C4H9COOH=H2O+RPENTANOICB			3.0000e+09
1.000	50.00	!Same as butanoic acid, abstraction from beta	
HO2+C4H9COOH=H2O2+RPENTANOICB			1.6000e+06
2.000	16000.00	!Same as butanoic acid, abstraction from beta	
CH3O+C4H9COOH=CH3OH+RPENTANOICB			8.5600e+04
2.000	1500.00	!Same as butanoic acid, abstraction from beta	

H+C4H9COOH=H2+RPENTANOICC	6.0000e+06
2.000 4000.00 !Same as abstraction from beta	
CH3+C4H9COOH=CH4+RPENTANOICC	6.0000e+04
2.000 5000.00 !Same as abstraction from beta	
C2H5+C4H9COOH=C2H6+RPENTANOICC	4.0000e+04
2.000 6700.00 !Same as abstraction from beta	
NC3H7+C4H9COOH=C3H8+RPENTANOICC	2.7000e+04
2.000 6700.00 !Same as abstraction from beta	
C3H5-A+C4H9COOH=C3H6+RPENTANOICC	1.0800e+05
2.000 12800.00 !Same as abstraction from beta	
O+C4H9COOH=OH+RPENTANOICC	4.7000e+06
2.000 2500.00 !Same as abstraction from beta	
O2+C4H9COOH=HO2+RPENTANOICC	3.4000e+06
2.000 44000.00 !Same as abstraction from beta	
OH+C4H9COOH=H2O+RPENTANOICC	3.0000e+09
1.000 50.00 !Same as abstraction from beta	
HO2+C4H9COOH=H2O2+RPENTANOICC	3.2000e+06
2.000 16000.00 !Same as abstraction from beta	
CH3O+C4H9COOH=CH3OH+RPENTANOICC	8.5600e+04
2.000 1500.00 !Same as abstraction from beta	
H+C4H9COOH=H2+RPENTANOICD	1.1200e+07
2.000 6525.60 !Same as abstraction from gamma butanoic acid	
CH3+C4H9COOH=CH4+RPENTANOICD	9.0000e+04
2.000 7443.70 !Same as abstraction from gamma butanoic acid	
C2H5+C4H9COOH=C2H6+RPENTANOICD	6.0000e+04
2.000 9289.16 !Same as abstraction from gamma butanoic acid	
NC3H7+C4H9COOH=C3H8+RPENTANOICD	4.0500e+04
2.000 9289.16 !Same as abstraction from gamma butanoic acid	
C3H5-A+C4H9COOH=C3H6+RPENTANOICD	1.6170e+05
2.000 15810.16 !Same as abstraction from gamma butanoic acid	
O+C4H9COOH=OH+RPENTANOICD	7.0500e+06
2.000 4691.70 !Same as abstraction from gamma butanoic acid	
O2+C4H9COOH=HO2+RPENTANOICD	5.1000e+06
2.000 48272.65 !Same as abstraction from gamma butanoic acid	
OH+C4H9COOH=H2O+RPENTANOICD	4.5000e+09
1.000 1540.75 !Same as abstraction from gamma butanoic acid	
HO2+C4H9COOH=H2O2+RPENTANOICD	1.0400e+06
2.000 15025.60 !Same as abstraction from gamma butanoic acid	

CH3O+C4H9COOH=CH3OH+RPENTANOICD 1.2840e+05  
2.000 3572.50 !Same as abstraction from gamma butanoic acid

RPENTANOICC=CO2+PC4H9 1.0000e+11  
0.000 30600.00 !1-5H transfer p>p Ranzi et al. Int. J. Chem.  
Kin. 2014 +10 kcal/mol

RPENTANOICB=CO2+PC4H9 1.6000e+10  
0.000 25500.00 !1-4H transfer s>p Ranzi et al. Int. J. Chem.  
Kin. 2014 +10 kcal/mol

RPENTANOICD=RPENTANOICA 1.0000e+11  
0.000 19600.00 !1-4H transfer p>s Ranzi et al. Int. J. Chem.  
Kin. 2014 -1 KCAL/MOL

!Alpha radical sub-set

!Based on Cavallotti et al. Proc.Comb.Inst.2019 (+3 kcal to account for  
secondary radical vs primary radical in CH3CO2H)

RPENTANOICA=OH+C3H7CHCO 1.7400e+29 -  
4.370 63089.60  
PLOG / 9.870000e-02 9.770000e+46 -1.039000e+01 6.688170e+04  
/  
PLOG / 9.870000e-01 1.050000e+46 -9.700000e+00 6.868245e+04  
/  
PLOG / 9.870000e+00 4.370000e+39 -7.560000e+00 6.743470e+04  
/  
PLOG / 9.870000e+01 1.740000e+29 -4.370000e+00 6.308960e+04  
/

RPENTANOICA=CO2+PC4H9 5.6200e+20 -  
2.360 49013.60  
PLOG / 9.870000e-02 6.760000e+42 -9.230000e+00 5.741666e+04  
/  
PLOG / 9.870000e-01 1.380000e+37 -7.360000e+00 5.606372e+04  
/  
PLOG / 9.870000e+00 5.620000e+28 -4.770000e+00 5.268970e+04  
/  
PLOG / 9.870000e+01 5.620000e+20 -2.360000e+00 4.901360e+04  
/

H+RPENTANOICA=H2O+C3H7CHCO 1.6200e+18 -  
1.440 11056.50  
PLOG / 9.870000e-02 2.451000e+21 -2.620000e+00 3.165930e+03  
/  
PLOG / 9.870000e-01 2.511000e+25 -3.690000e+00 7.510720e+03  
/  
PLOG / 9.870000e+00 5.245000e+26 -3.940000e+00 1.208940e+04  
/  
PLOG / 9.870000e+01 1.620000e+18 -1.440000e+00 1.105650e+04  
/

H+RPENTANOICA=CO2+NC4H10 5.2450e+18 -  
1.690 10183.10  
PLOG / 9.870000e-02 7.046000e+22 -3.120000e+00 3.588080e+03  
/  
PLOG / 9.870000e-01 3.981000e+26 -4.110000e+00 7.754050e+03  
/

PLOG / 9.870000e+00 6.624000e+26 -4.070000e+00 1.134550e+04  
/  
PLOG / 9.870000e+01 5.245000e+18 -1.690000e+00 1.018310e+04  
/

H+RPENTANOICA=HOCO+PC4H9 2.2400e+22 -  
2.260 16097.74  
PLOG / 9.870000e-02 8.491000e+18 -1.540000e+00 5.894950e+03  
/  
PLOG / 9.870000e-01 3.017000e+22 -2.500000e+00 9.396200e+03  
/  
PLOG / 9.870000e+00 9.093000e+25 -3.390000e+00 1.449440e+04  
/  
PLOG / 9.870000e+01 2.240000e+22 -2.260000e+00 1.609774e+04  
/

H+C4H7COOH-1=RPENTANOICA 1.5000e+13  
0.000 3500.00 !Ranzi et al. Int. J. Chem. Kin. 2014

RPENTANOICA=C2H5+C2H3COOH 3.0000e+13  
0.000 31000.00 !Ranzi et al. Int. J. Chem. Kin. 2014

RPENTANOICB=HOCO+C4H8-1 3.0000e+13  
0.000 30000.00 !Ranzi et al. Int. J. Chem. Kin. 2014

H+C4H7COOH-1=RPENTANOICB 1.5000e+13  
0.000 3500.00 !Ranzi et al. Int. J. Chem. Kin. 2014

RPENTANOICB=CH3+C3H5COOH-1 3.0000e+13  
0.000 31000.00 !Ranzi et al. Int. J. Chem. Kin. 2014

H+C4H7COOH-1=RPENTANOICC 1.5000e+13  
0.000 3500.00 !Ranzi et al. Int. J. Chem. Kin. 2014

RPENTANOICC=C3H6+CH2COOH 3.0000e+13  
0.000 30000.00 !Ranzi et al. Int. J. Chem. Kin. 2014

RPENTANOICD=C2H4+CH2CH2COOH 3.0000e+13  
0.000 30000.00 !Ranzi et al. Int. J. Chem. Kin. 2014

!\*\*\*\*\* Pentanoic Acid LT Lumped  
\*\*\*\*\*!

O2+RPENTANOICA=>RO2PENTANOIC 1.0000e+12  
0.000 0.00

RO2PENTANOIC=>OH+CO2+C3H7CHO 2.0000e+11  
0.000 22500.00

RO2PENTANOIC=>O2+0.22RPENTANOICA+0.15RPENTANOICB+0.5RPENTANOICC+0.13RPENT  
ANOICD 4.0000e+13 0.000 29000.00

O2+RPENTANOICB=>RO2PENTANOIC 1.0000e+12  
0.000 0.00

O2+RPENTANOICC=>RO2PENTANOIC 1.0000e+12  
0.000 0.00

O2+RPENTANOICD=>RO2PENTANOIC 0.000            0.00	1.0000e+12
RO2PENTANOIC=>QPENTANOIC 0.000            21500.00	2.0000e+11
QPENTANOIC=>RO2PENTANOIC 0.000            13500.00	2.5000e+10
QPENTANOIC=>OH+CO2+C4H8O 0.000            17000.00	8.0000e+10
QPENTANOIC=>OH+CH2O+C3H5COOH-1 0.000            15000.00	1.4000e+12
QPENTANOIC=>HO2+C4H7COOH-1 0.000            23400.00	2.0000e+13
O2+QPENTANOIC=>ZPENTANOIC 0.000            0.00	4.0000e+12
ZPENTANOIC=>O2+QPENTANOIC 0.000            29000.00	4.0000e+13
ZPENTANOIC=>OH+KPENTANOIC 0.000            23000.00	3.0000e+11
KPENTANOIC=>OH+HOCO+CH3CHO+CH2CO 0.000            41500.00	2.0000e+15
KPENTANOIC=>OH+CHOCH2CHO+CH2COOH 0.000            41500.00	2.0000e+15
KPENTANOIC=>OH+CO+CH2O+CH2CH2COOH 0.000            41500.00	2.0000e+15
KPENTANOIC=>OH+CO+HOCO+C2H5CHO 0.000            41500.00	2.0000e+15
!***** Pentenoic Acid HT *****!	
H+C4H7COOH-1=RPENTANOICD 0.000            3500.00	1.5000e+13
O2+RPENTANOICA=HO2+C4H7COOH-1 0.000            5000.00	1.0000e+12
O2+RPENTANOICB=HO2+C4H7COOH-1 0.000            5000.00	1.0000e+12
O2+RPENTANOICC=HO2+C4H7COOH-1 0.000            5000.00	1.0000e+12
O2+RPENTANOICD=HO2+C4H7COOH-1 0.000            5000.00	1.0000e+12

C4H7COOH-1=>OH+CO+C4H71-4 1.0000e+16  
 0.000 105500.00

HOCO+C4H71-4 (+M)=C4H7COOH-1 (+M) 1.5000e+13  
 0.000 0.00  
 LOW/ 1.55e+56 -11.790 8984.5/  
 TROE/ 0.1980 2278. 6.000e+04 5723./  
 H2/ 2.00/ H2O/ 6.00/ CH4/ 2.00/ CO/ 1.50/ CO2/ 2.00/ C2H6/ 3.00/  
 AR/ 0.70/

C3H5-A+CH2COOH (+M)=C4H7COOH-1 (+M) 1.0000e+14 -  
 0.320 -262.30  
 LOW/ 3.91e+60 -12.810 6250.0/  
 TROE/ 0.1040 1606. 6.000e+04 6118./  
 H2/ 2.00/ H2O/ 6.00/ CH4/ 2.00/ CO/ 1.50/ CO2/ 2.00/ C2H6/ 3.00/  
 AR/ 0.70/

C4H7COOH-1=C2H3+CH2CH2COOH 5.0000e+16  
 0.000 98000.00

C4H7COOH-1=>H2O+CH2CO+C3H4-P 9.4400e+12  
 0.250 73083.23  
 PLOG / 9.870000e-02 3.618000e+43 -8.850000e+00 8.838110e+04  
 /  
 PLOG / 9.870000e-01 4.301000e+32 -5.530000e+00 8.362400e+04  
 /  
 PLOG / 9.870000e+00 2.220000e+21 -2.190000e+00 7.778320e+04  
 /  
 PLOG / 9.870000e+01 9.440000e+12 2.500000e-01 7.308320e+04  
 /

C4H7COOH-1=CO2+C4H8-1 4.1790e+14 -  
 0.310 72507.45  
 PLOG / 9.870000e-02 1.540000e+43 -8.780000e+00 8.708900e+04  
 /  
 PLOG / 9.870000e-01 4.009000e+29 -4.750000e+00 8.001930e+04  
 /  
 PLOG / 9.870000e+00 1.258000e+22 -2.490000e+00 7.672780e+04  
 /  
 PLOG / 9.870000e+01 4.179000e+14 -3.100000e-01 7.250740e+04  
 /

OH+C4H7COOH-1=>H+H2O+CO2+C4H6 7.7690e+05  
 2.200 -437.18

HO2+C4H7COOH-1=>H+H2O2+CO2+C4H6 7.8200e-01  
 3.970 11702.00

H+C4H7COOH-1=>H2+H+CO2+C4H6 2.4200e+03  
 3.050 1995.00

O+C4H7COOH-1=>H+OH+CO2+C4H6 1.7500e+11  
 0.700 5884.00

O2+C4H7COOH-1=>H+HO2+CO2+C4H6 1.0000e+14  
 0.000 37190.00

CH3+C4H7COOH-1=>H+CO2+CH4+C4H6	2.2100e+00
3.500        5675.00	
OH+C4H7COOH-1=>H2O+CO2+C4H71-3	5.3700e+00
3.440        -761.33	
H+C4H7COOH-1=>H2+CO2+C4H71-3	2.1380e+09
1.300        16754.75	
CH3+C4H7COOH-1=>CO2+CH4+C4H71-3	2.9430e+04
2.330        13465.19	
HO2+C4H7COOH-1=>H2O2+CO2+C4H71-3	8.8980e+03
2.330        23111.92	
O+C4H7COOH-1=>OH+CO2+C4H71-3	1.4100e+06
2.000        4691.70	
O2+C4H7COOH-1=>HO2+CO2+C4H71-3	1.0200e+06
2.000        48272.65	
H+C4H7COOH-1=>H2+HOCO+C2H4+C2H2	1.9000e+04
2.870        6611.00	
OH+C4H7COOH-1=>H2O+HOCO+C2H4+C2H2	4.3000e+06
2.030        2623.10	
HO2+C4H7COOH-1=>H2O2+HOCO+C2H4+C2H2	2.0800e+01
3.590        17160.00	
O+C4H7COOH-1=>OH+HOCO+C2H4+C2H2	6.5000e+13
0.000        7850.00	
O2+C4H7COOH-1=>HO2+HOCO+C2H4+C2H2	3.0000e+13
0.000        52340.00	
CH3+C4H7COOH-1=>HOCO+CH4+C2H4+C2H2	2.2520e-01
3.650        7154.00	
OH+C4H7COOH-1=C2H5CHO+CH2COOH	6.9300e+05
1.490        -536.00	
PLOG / 1.000000e+00    3.160000e-04    4.050000e+00    -1.144000e+03	
/	
PLOG / 1.000000e+01    7.590000e-06    4.490000e+00    -6.800000e+02	
/	
PLOG / 1.000000e+02    5.450000e-05    4.220000e+00    1.141000e+03	
/	
O+C4H7COOH-1=RALD3+CH2COOH	3.0000e+12
0.000        5000.00	
!***** Propyl ketene subset HT	
*****!	
C3H7CHCO=HCCO+NC3H7	2.1233e+17
0.000        93714.26	

C3H7CHCO=>CO+C2H5+C2H3	2.1950e+17
0.000 73454.15	
C3H7CHCO=>CH3+C2H4+HCCO	1.0000e+17
0.000 88000.00	
OH+C3H7CHCO=>H2O+CO+C4H71-3	7.7690e+05
2.200 -437.18	
HO2+C3H7CHCO=>H2O2+CO+C4H71-3	7.8200e-01
3.970 11702.00	
H+C3H7CHCO=>H2+CO+C4H71-3	2.4200e+03
3.050 1995.00	
O+C3H7CHCO=>OH+CO+C4H71-3	1.7500e+11
0.700 5884.00	
O2+C3H7CHCO=>HO2+CO+C4H71-3	1.0000e+14
0.000 37190.00	
CH3+C3H7CHCO=>CO+CH4+C4H71-3	2.2100e+00
3.500 5675.00	
OH+C3H7CHCO=>H2O+HCCO+C3H6	8.6000e+06
2.030 2623.10	
HO2+C3H7CHCO=>H2O2+HCCO+C3H6	4.0800e+01
3.590 17160.00	
H+C3H7CHCO=>H2+HCCO+C3H6	3.8400e+04
2.870 6611.00	
O+C3H7CHCO=>OH+HCCO+C3H6	1.1300e+14
0.000 7850.00	
O2+C3H7CHCO=>HO2+HCCO+C3H6	6.0000e+13
0.000 52340.00	
CH3+C3H7CHCO=>CH4+HCCO+C3H6	4.5200e-01
3.650 7154.00	
H+C3H7CHCO=>H2+CO+C2H4+C2H3	1.1200e+07
2.000 6525.60	
CH3+C3H7CHCO=>CO+CH4+C2H4+C2H3	9.0000e+04
2.000 7443.70	
O+C3H7CHCO=>OH+CO+C2H4+C2H3	7.0500e+06
2.000 4691.70	
O2+C3H7CHCO=>HO2+CO+C2H4+C2H3	5.1000e+06
2.000 48272.65	
OH+C3H7CHCO=>H2O+CO+C2H4+C2H3	4.5000e+09
1.000 1540.75	



HO2+C3H7CHCO=>H2O2+CO+C2H4+C2H3 5.2000e+05  
2.000 15025.60

!\*\*\*\*\*End Acids \*\*\*\*\*!

H2+M=2H+M 4.5770e+19 -  
1.400 104400.00  
H2/ 2.50/ H2O/ 12.00/ CO/ 1.90/ CO2/ 3.80/ HE/ 0.83/ CH4/ 2.00/ C2H6/  
3.00/

H2+O=H+OH 5.0800e+04  
2.670 6292.00

H2+OH=H+H2O 4.3800e+13  
0.000 6990.00

2O+M=O2+M 6.1650e+15 -  
0.500 0.00  
H2/ 2.50/ H2O/ 12.00/ AR/ 0.83/ CO/ 1.90/ CO2/ 3.80/ HE/ 0.83/ CH4/ 2.00/  
C2H6/ 3.00/

H+O2=O+OH 1.1400e+14  
0.000 15286.00

H+OH+M=H2O+M 3.5000e+22 -  
2.000 0.00  
H2/ 0.73/ H2O/ 3.65/ CH4/ 2.00/ C2H6/ 3.00/ AR/ 0.38/

O+H2O=2OH 6.7000e+07  
1.704 14986.80

H+O+M=OH+M 4.7140e+18 -  
1.000 0.00  
H2/ 2.50/ H2O/ 12.00/ AR/ 0.75/ CO/ 1.50/ CO2/ 2.00/ HE/ 0.75/ CH4/ 2.00/  
C2H6/ 3.00/

H2O2 (+M) =2OH (+M) 2.0000e+12  
0.900 48749.00  
LOW/ 2.49e+24 -2.300 48749.0/  
TROE/ 0.4300 1.000e-30 1.000e+30/  
H2O/ 7.65/ CO2/ 1.60/ N2/ 1.50/ O2/ 1.20/ HE/ 0.65/ H2O2/ 7.70/ H2/  
3.70/ CO/ 2.80/

H+H2O2=H2O+OH 2.4100e+13  
0.000 3970.00

H+H2O2=H2+HO2 2.1500e+10  
1.000 6000.00

O+H2O2=OH+HO2 9.5500e+06  
2.000 3970.00

OH+H2O2=H2O+HO2 1.7400e+12  
0.000 318.00  
DUPLICATE

OH+H2O2=H2O+HO2 7.5900e+13  
0.000 7269.00

DUPLICATE

H+HO2=2OH 7.0790e+13  
0.000 295.00

H+HO2=H2+O2 1.1402e+10  
1.083 553.78

O+HO2=O2+OH 3.2500e+13  
0.000 0.00

OH+HO2=O2+H2O 7.0000e+12  
0.000 -1092.96  
DUPLICATE

OH+HO2=O2+H2O 4.5000e+14  
0.000 10929.60  
DUPLICATE

2HO2=O2+H2O2 1.0000e+14  
0.000 11040.88  
DUPLICATE

2HO2=O2+H2O2 1.9000e+11  
0.000 -1408.92  
DUPLICATE

H+O2 (+M) =HO2 (+M) 4.6500e+12  
0.440 0.00  
LOW/ 1.74e+19 -1.230 0.0/  
TROE/ 0.6700 1.000e-30 1.000e+30 1.000e+30/  
H2/ 1.30/ CO/ 1.90/ CO2/ 3.80/ HE/ 0.64/ H2O/ 10.00/ AR/ 0.50/ CH4/  
2.00/ C2H6/ 3.00/

O+CO (+M) =CO2 (+M) 1.3620e+10  
0.000 2384.00  
LOW/ 1.17e+24 -2.790 4191.0/  
H2/ 2.00/ H2O/ 12.00/ CO/ 1.75/ CO2/ 3.60/ AR/ 0.70/ HE/ 0.70/

OH+CO=H+CO2 7.0150e+04  
2.053 -355.70  
DUPLICATE

OH+CO=H+CO2 5.7570e+12 -  
0.664 331.80  
DUPLICATE

HO2+CO=OH+CO2 1.5700e+05  
2.180 17940.00

O2+CO=O+CO2 1.1190e+12  
0.000 47700.00

H+CO2=OCHO 7.5000e+13  
0.000 29000.00

HOCO=OH+CO 6.3000e+32 -  
5.960 32470.00

PLOG /	1.000000e-03	1.550000e-08	2.930000e+00	8.768000e+03
/				
PLOG /	3.000000e-03	1.770000e+03	3.400000e-01	1.807600e+04
/				
PLOG /	2.960000e-02	2.020000e+13	-1.870000e+00	2.275500e+04
/				
PLOG /	9.870000e-02	1.680000e+18	-3.050000e+00	2.432300e+04
/				
PLOG /	2.961000e-01	2.500000e+24	-4.630000e+00	2.706700e+04
/				
PLOG /	9.869000e-01	4.540000e+26	-5.120000e+00	2.757200e+04
/				
PLOG /	2.960700e+00	7.120000e+28	-5.600000e+00	2.853500e+04
/				
PLOG /	9.869000e+00	5.480000e+29	-5.700000e+00	2.889900e+04
/				
PLOG /	2.960700e+01	9.890000e+31	-6.190000e+00	3.051800e+04
/				
PLOG /	9.869000e+01	5.740000e+33	-6.530000e+00	3.206800e+04
/				
PLOG /	2.960700e+02	2.610000e+33	-6.290000e+00	3.223100e+04
/				
PLOG /	9.869000e+02	6.300000e+32	-5.960000e+00	3.247000e+04
/				

HOCO=H+CO2 1.8970e+38 -

8.047	34240.00			
PLOG /	1.000000e-03	4.758000e+18	-3.817000e+00	1.767600e+04
/				
PLOG /	3.000000e-03	2.225000e+20	-4.149000e+00	1.903700e+04
/				
PLOG /	9.900000e-03	7.564000e+21	-4.434000e+00	2.032500e+04
/				
PLOG /	2.960000e-02	9.107000e+24	-5.189000e+00	2.241900e+04
/				
PLOG /	9.870000e-02	3.144000e+29	-6.376000e+00	2.523300e+04
/				
PLOG /	2.961000e-01	1.150000e+32	-7.037000e+00	2.666200e+04
/				
PLOG /	9.869000e-01	1.069000e+36	-8.107000e+00	2.906400e+04
/				
PLOG /	2.960700e+00	2.438000e+36	-8.153000e+00	2.933600e+04
/				
PLOG /	9.869000e+00	6.663000e+35	-7.919000e+00	2.921700e+04
/				
PLOG /	2.960700e+01	1.723000e+38	-8.506000e+00	3.127300e+04
/				
PLOG /	9.869000e+01	3.007000e+41	-9.290000e+00	3.396600e+04
/				
PLOG /	2.960700e+02	6.767000e+36	-7.832000e+00	3.161300e+04
/				
PLOG /	9.869000e+02	1.897000e+38	-8.047000e+00	3.424000e+04
/				

H+CH3 (+M)=CH4 (+M) 1.2700e+16 -

0.630	383.00			
LOW/	2.48e+33	-4.760	2440.0/	
TROE/	0.7830	74.00	2941.	6964./

H2/ 2.00/ H2O/ 6.00/ AR/ 0.70/ CO/ 1.50/ CO2/ 2.00/ CH4/ 2.00/  
C2H6/ 3.00/ HE/ 0.70/

H+CH4=H2+CH3	6.1400e+05
2.500 9587.00	
O+CH4=OH+CH3	1.0200e+09
1.500 8600.00	
OH+CH4=H2O+CH3	5.8300e+04
2.600 2190.00	
HO2+CH4=H2O2+CH3	1.1300e+01
3.740 21010.00	
CH4+CH3O2=CH3+CH3O2H	9.6000e-01
3.770 17810.00	
HO2+CH3=O2+CH4	1.1600e+05
2.230 -3022.00	
CH4+CH2=2CH3	2.4600e+06
2.000 8270.00	
N2+CH2 (S)=N2+CH2	1.5000e+13
0.000 600.00	
AR+CH2 (S)=AR+CH2	9.0000e+12
0.000 600.00	
H2O+CH2 (S)=H2O+CH2	3.0000e+13
0.000 0.00	
CO+CH2 (S)=CO+CH2	9.0000e+12
0.000 0.00	
CO2+CH2 (S)=CO2+CH2	7.0000e+12
0.000 0.00	
O2+CH2 (S)=>H+OH+CO	2.8000e+13
0.000 0.00	
O2+CH2 (S)=H2O+CO	1.2000e+13
0.000 0.00	
O+CH2 (S)=H2+CO	1.5000e+13
0.000 0.00	
O+CH2 (S)=H+HCO	1.5000e+13
0.000 0.00	
H2+CH2 (S)=H+CH3	7.0000e+13
0.000 0.00	
H+CH2 (S)=H2+CH	3.0000e+13
0.000 0.00	

OH+CH2 (S) =H+CH2O	3.0000e+13	
0.000            0.00		
CO2+CH2 (S) =CO+CH2O	1.4000e+13	
0.000            0.00		
H+CH2 (+M) =CH3 (+M)	2.5000e+16	-
0.800            0.00		
LOW/    3.20e+27            -3.140            1230.0/		
TROE/            0.6800    78.00    1995.    5590./		
H2/ 2.00/    H2O/ 6.00/    AR/ 0.70/    CO/ 1.50/    CO2/ 2.00/    CH4/ 2.00/		
C2H6/ 3.00/    HE/ 0.70/		
O2+CH2=OH+HCO	1.0600e+13	
0.000            1500.00		
O2+CH2=>2H+CO2	2.6400e+12	
0.000            1500.00		
O+CH2=>2H+CO	5.0000e+13	
0.000            0.00		
H+CH2=H2+CH	3.0000e+13	
0.000            0.00		
OH+CH2=H2O+CH	1.1300e+07	
2.000            3000.00		
O2+CH=O+HCO	3.3000e+13	
0.000            0.00		
O+CH=H+CO	5.7000e+13	
0.000            0.00		
H+CH=H2+C	1.1000e+14	
0.000            0.00		
OH+CH=H+HCO	3.0000e+13	
0.000            0.00		
H2O+CH=H+CH2O	1.7740e+16	-
1.220            23.80		
CO2+CH=CO+HCO	1.7000e+12	
0.000            685.00		
OH+C=H+CO	5.0000e+13	
0.000            0.00		
O2+C=O+CO	5.0000e+13	
0.000            0.00		
O2+CH3 (+M) =CH3O2 (+M)	7.8120e+09	
0.900            0.00		
LOW/    6.85e+24            -3.000            0.0/		
TROE/            0.6000    1000.    70.00    1700./		

O2+CH3=O+CH3O				7.5460e+12
0.000	28320.00			
O2+CH3=OH+CH2O				2.6410e+00
3.283	8105.00			
O+CH3=H+CH2O				5.5400e+13
0.050	-136.00			
OH+CH3=H2O+CH2 (S)				4.9360e+14 -
0.669	-445.80			
PLOG /	1.000000e-02	4.936000e+14	-6.690000e-01	-4.458000e+02
/				
PLOG /	1.000000e-01	1.207000e+15	-7.780000e-01	-1.756000e+02
/				
PLOG /	1.000000e+00	5.282000e+17	-1.518000e+00	1.772000e+03
/				
PLOG /	1.000000e+01	4.788000e+23	-3.155000e+00	7.003000e+03
/				
PLOG /	1.000000e+02	8.433000e+19	-1.962000e+00	8.244000e+03
/				
OH+CH3=H2+CH2O				3.5020e+05
1.441	-3244.00			
PLOG /	1.000000e-02	3.502000e+05	1.441000e+00	-3.244000e+03
/				
PLOG /	1.000000e-01	8.854000e+05	1.327000e+00	-2.975000e+03
/				
PLOG /	1.000000e+00	1.650000e+07	9.730000e-01	-2.010000e+03
/				
PLOG /	1.000000e+01	5.374000e+09	2.870000e-01	2.800000e+02
/				
PLOG /	1.000000e+02	9.494000e+18	-2.199000e+00	9.769000e+03
/				
OH+CH3=H+CH2OH				1.6210e+10
0.965	3210.00			
PLOG /	1.000000e-02	1.621000e+10	9.650000e-01	3.214000e+03
/				
PLOG /	1.000000e-01	1.807000e+10	9.500000e-01	3.247000e+03
/				
PLOG /	1.000000e+00	4.686000e+10	8.330000e-01	3.566000e+03
/				
PLOG /	1.000000e+01	1.525000e+13	1.340000e-01	5.641000e+03
/				
PLOG /	1.000000e+02	3.590000e+14	-1.860000e-01	8.601000e+03
/				
OH+CH3=H+CH3O				1.1860e+09
1.016	11940.00			
PLOG /	1.000000e-02	1.186000e+09	1.016000e+00	1.194000e+04
/				
PLOG /	1.000000e-01	1.188000e+09	1.016000e+00	1.194000e+04
/				
PLOG /	1.000000e+00	1.230000e+09	1.011000e+00	1.195000e+04
/				
PLOG /	1.000000e+01	1.798000e+09	9.650000e-01	1.206000e+04
/				

PLOG /	1.000000e+02	5.242000e+10	5.510000e-01	1.307000e+04	
/					
OH+CH3=H2O+CH2				4.2930e+04	
2.568	3997.80				
HO2+CH3=OH+CH3O				1.0000e+12	
0.269	-687.50				
O+CH3O2=O2+CH3O				3.6000e+13	
0.000	0.00				
H+CH3O2=OH+CH3O				9.6000e+13	
0.000	0.00				
OH+CH3O2=O2+CH3OH				6.0000e+13	
0.000	0.00				
HO2+CH3O2=O2+CH3O2H				2.4700e+11	
0.000	-1570.00				
H2O2+CH3O2=HO2+CH3O2H				2.4100e+12	
0.000	9936.00				
CH3+CH3O2=2CH3O				5.0800e+12	
0.000	-1411.00				
2CH3O2=>O2+CH3OH+CH2O				3.1100e+14	-
1.610	-1051.00				
2CH3O2=>O2+2CH3O				1.4000e+16	-
1.610	1860.00				
H2+CH3O2=H+CH3O2H				1.5000e+14	
0.000	26030.00				
CH3O2H=OH+CH3O				6.3100e+14	
0.000	42300.00				
CH3OH (+M)=OH+CH3 (+M)				2.0840e+18	-
0.615	92540.60				
LOW/	1.50e+43	-6.995	97992.2/		
TROE/	-0.4748	3.558e+04	1116.	9023./	
CH3OH (+M)=H2O+CH2 (S) (+M)				3.1210e+18	-
1.017	91712.00				
LOW/	1.43e+47	-8.227	99417.1/		
TROE/	2.545	3290.	4.732e+04	4.711e+04/	
CH3OH (+M)=H+CH2OH (+M)				7.8960e-03	
5.038	84467.40				
LOW/	3.39e+42	-7.244	105230.3/		
TROE/	-73.91	3.705e+04	4.150e+04	5220./	
H+CH3OH=H2+CH3O				1.9900e+05	
2.560	10300.00				

H+CH3OH=H2+CH2OH 2.550        5440.00	3.0700e+05	
O+CH3OH=OH+CH3O 2.500        3080.00	3.8800e+04	
O+CH3OH=OH+CH2OH 2.500        3080.00	3.8800e+05	
OH+CH3OH=H2O+CH3O 3.030        -763.00	1.5000e+02	
OH+CH3OH=H2O+CH2OH 2.650        -806.70	3.0800e+04	
O2+CH3OH=HO2+CH3O 2.270        42764.50	3.5800e+04	
O2+CH3OH=HO2+CH2OH 2.270        42764.50	3.5800e+05	
HO2+CH3OH=H2O2+CH3O 0.000        20070.70	1.2200e+12	
HO2+CH3OH=H2O2+CH2OH 0.000        18782.20	3.2600e+13	
CH3+CH3OH=CH4+CH2OH 3.953        7055.10	2.1300e-01	
CH3+CH3OH=CH4+CH3O 2.425        8579.50	3.2200e+03	
CH3OH+HCO=CH2OH+CH2O 2.900        13110.00	1.8000e+03	
CH3OH+CH3O=CH3OH+CH2OH 0.000        4074.00	3.0000e+11	
CH3O2+CH3OH=CH3O2H+CH2OH 0.000        13710.00	1.8100e+12	
O2+CH2OH=HO2+CH2O 1.000        0.00 DUPLICATE	1.5100e+15	-
O2+CH2OH=HO2+CH2O 0.000        5017.00 DUPLICATE	2.4100e+14	
H+CH2OH=H2+CH2O 0.000        0.00	6.0000e+12	
HO2+CH2OH=H2O2+CH2O 0.000        0.00	1.2000e+13	
CH2OH+HCO=2CH2O 0.000        0.00	1.8000e+14	



CH2OH+HCO=CO+CH3OH 0.000            0.00	1.0000e+13
CH3O+CH2OH=CH3OH+CH2O 0.000            0.00	2.4000e+13
OH+CH2OH=H2O+CH2O 0.000            0.00	2.4000e+13
O+CH2OH=OH+CH2O 0.000            0.00	4.2000e+13
2CH2OH=CH3OH+CH2O 0.000            0.00	3.0000e+12
O2+CH3O=HO2+CH2O 9.500           -5501.00	4.3800e-19
H+CH3O=H2+CH2O 0.000            0.00	2.0000e+13
HO2+CH3O=H2O2+CH2O 0.000            0.00	3.0100e+11
CH3+CH3O=CH4+CH2O 0.000            0.00	1.2000e+13
2CH3O=CH3OH+CH2O 0.000            0.00	6.0300e+13
H+HCO (+M) =CH2O (+M) 0.480           -260.00 LOW/    1.35e+24           -2.570           1425.0/ TROE/                    0.7824    271.0    2755.    6570./ H2/ 2.00/    H2O/ 6.00/    AR/ 0.70/    CO/ 1.50/    CO2/ 2.00/    CH4/ 2.00/ C2H6/ 3.00/    HE/ 0.70/	1.0900e+12
H2+CO (+M) =CH2O (+M) 1.500           79600.00 LOW/    5.07e+27           -3.420           84348.0/ TROE/                    0.9320    197.0    1540.    1.030e+04/ H2/ 2.00/    H2O/ 6.00/    AR/ 0.70/    CO/ 1.50/    CO2/ 2.00/    CH4/ 2.00/ C2H6/ 3.00/    HE/ 0.70/	4.3000e+07
O2+CH2O=HO2+HCO 0.000           53420.00	8.0700e+15
O+CH2O=OH+HCO 1.150           2260.00	6.2600e+09
H+CH2O=H2+HCO 1.900           2740.00	5.7400e+07
OH+CH2O=H2O+HCO 1.630           -1055.00	7.8200e+07

HO2+CH2O=H2O2+HCO	1.8800e+04
2.700      11520.00	
CH3+CH2O=CH4+HCO	3.8300e+01
3.360      4312.00	
CH2O+OCHO=HCO+HOCHO	5.6000e+12
0.000      13600.00	
CH3O+CH2O=CH3OH+HCO	6.6200e+11
0.000      2294.00	
CH3O2+CH2O=CH3O2H+HCO	1.9900e+12
0.000      11660.00	
HCO+M=H+CO+M	5.7000e+11
0.660      14870.00	
H2/ 2.00/ H2O/ 6.00/ CO/ 1.50/ CO2/ 2.00/ CH4/ 2.00/ C2H6/ 3.00/	
O2+HCO=HO2+CO	7.5800e+12
0.000      410.00	
O+HCO=OH+CO	3.0200e+13
0.000      0.00	
H+HCO=H2+CO	7.3400e+13
0.000      0.00	
OH+HCO=H2O+CO	3.0110e+13
0.000      0.00	
CH3+HCO=CO+CH4	2.6500e+13
0.000      0.00	
2HCO=CO+CH2O	1.8000e+13
0.000      0.00	
O+HCO=H+CO2	3.0000e+13
0.000      0.00	
HO2+HCO=>H+OH+CO2	3.0000e+13
0.000      0.00	
2HCO=>H2+2CO	3.0000e+12
0.000      0.00	
H+CH2O (+M) =CH2OH (+M)	5.4000e+11
0.454      3600.00	
LOW/    1.27e+32      -4.820      6530.0/	
TROE/            0.7187    103.0    1291.    4160./	
H2/ 2.00/ H2O/ 6.00/ CO/ 1.50/ CO2/ 2.00/ CH4/ 2.00/ C2H6/ 3.00/	
CH3O (+M) =H+CH2O (+M)	6.8000e+13
0.000      26170.00	
LOW/    1.87e+25      -3.000      24307.0/	
TROE/            0.9000    2500.    1300.    1.000e+99/	
H2/ 2.00/ H2O/ 6.00/ CO/ 1.50/ CO2/ 2.00/ CH4/ 2.00/ C2H6/ 3.00/	

HOCHO=H2O+CO	2.4500e+12	
0.000 60470.00		
HOCHO=H2+CO2	2.9500e+09	
0.000 48520.00		
HO2+OCHO=O2+HOCHO	3.5000e+10	
0.000 -3275.00		
H2O2+OCHO=HO2+HOCHO	2.4000e+12	
0.000 10000.00		
H+HOCHO=>H2+H+CO2	4.2400e+06	
2.100 4868.00		
H+HOCHO=>H2+OH+CO	6.0300e+13	-
0.350 2988.00		
O+HOCHO=>2OH+CO	1.7700e+18	-
1.900 2975.00		
OH+HOCHO=>H+H2O+CO2	2.6200e+06	
2.060 916.00		
OH+HOCHO=>H2O+OH+CO	1.8500e+07	
1.510 -962.00		
CH3+HOCHO=>OH+CO+CH4	3.9000e-07	
5.800 2200.00		
HO2+HOCHO=>OH+H2O2+CO	1.0000e+12	
0.000 11920.00		
OH+OCHO=HO2CHO	2.0000e+13	
0.000 0.00		
2CH3 (+M)=C2H6 (+M)	2.2770e+15	-
0.690 174.90		
LOW/ 8.05e+31 -3.750 981.6/		
TROE/ 0.0000 570.0 1.000e+30 1.000e+30/		
H2O/ 5.00/ CO/ 2.00/ CO2/ 3.00/		
H+C2H5 (+M)=C2H6 (+M)	5.2100e+17	-
0.990 1580.00		
LOW/ 1.99e+41 -7.080 6685.0/		
TROE/ 0.8420 125.0 2219. 6882./		
H2/ 2.00/ H2O/ 6.00/ AR/ 0.70/ CO/ 1.50/ CO2/ 2.00/ CH4/ 2.00/		
C2H6/ 3.00/ HE/ 0.70/		
O2+C2H6=HO2+C2H5	6.0300e+13	
0.000 51870.00		
O+C2H6=OH+C2H5	3.5500e+06	
2.400 5830.00		
H+C2H6=H2+C2H5	1.1500e+08	
1.900 7530.00		

OH+C2H6=H2O+C2H5	1.4800e+07
1.900        950.00	
HO2+C2H6=H2O2+C2H5	3.4600e+01
3.610        16920.00	
CH+C2H6=CH2+C2H5	1.1000e+14
0.000        -260.00	
CH2 (S) +C2H6=CH3+C2H5	1.2000e+14
0.000        0.00	
CH3+C2H6=CH4+C2H5	5.5500e-04
4.720        3231.00	
CH3O+C2H6=CH3OH+C2H5	2.4100e+11
0.000        7090.00	
CH3O2+C2H6=CH3O2H+C2H5	1.9400e+01
3.640        17100.00	
C2H6+C2H5O2=C2H5+C2H5O2H	8.6000e+00
3.760        17200.00	
H+C2H4 (+M)=C2H5 (+M)	9.5690e+08
1.463        1355.00	
LOW/    1.42e+39        -6.642        5769.0/	
TROE/                -0.5690    299.0        -9147.    152.4/	
H2/ 2.00/    H2O/ 6.00/    CH4/ 2.00/    CO/ 1.50/    CO2/ 2.00/    C2H6/ 3.00/	
AR/ 0.70/	
H+C2H5=H2+C2H4	2.0000e+12
0.000        0.00	
2C2H4=C2H5+C2H3	4.8200e+14
0.000        71530.00	
CH3+C2H5=CH4+C2H4	1.1800e+04
2.450        -2921.00	
O+C2H5=H+CH3CHO	1.1000e+14
0.000        0.00	
HO2+C2H5=OH+C2H5O	1.1000e+13
0.000        0.00	
CH3O2+C2H5=CH3O+C2H5O	8.0000e+12
0.000        -1000.00	
2CH3=H+C2H5	4.7400e+12
0.105        10664.30	
PLOG /    1.000000e-02        4.740000e+12        1.050000e-01        1.066430e+04	
/	
PLOG /    1.000000e-01        2.570000e+13        -9.600000e-02        1.140610e+04	
/	
PLOG /    1.000000e+00        3.100000e+14        -3.620000e-01        1.337250e+04	
/	

PLOG /	1.000000e+01	2.150000e+10	8.850000e-01	1.353250e+04
/				
PLOG /	1.000000e+02	1.032000e+02	3.230000e+00	1.123610e+04
/				
O2+C2H5=C2H5O2				3.3980e+53 -
13.900	9279.00			
PLOG /	4.000000e-02	3.398000e+53	-1.390000e+01	9.279000e+03
/				
PLOG /	1.000000e+00	9.362000e+59	-1.528000e+01	1.424000e+04
/				
PLOG /	1.000000e+01	1.262000e+60	-1.491000e+01	1.624000e+04
/				
O2+C2H5=C2H4O2H				2.1030e+34 -
9.010	5444.00			
PLOG /	4.000000e-02	2.103000e+34	-9.010000e+00	5.444000e+03
/				
PLOG /	1.000000e+00	4.884000e+33	-8.310000e+00	7.710000e+03
/				
PLOG /	1.000000e+01	1.705000e+45	-1.149000e+01	1.459000e+04
/				
O2+C2H5=HO2+C2H4				2.0940e+09
0.490	-391.40			
PLOG /	4.000000e-02	2.094000e+09	4.900000e-01	-3.914000e+02
/				
PLOG /	1.000000e+00	1.843000e+07	1.130000e+00	-7.206000e+02
/				
PLOG /	1.000000e+01	7.561000e+14	-1.010000e+00	4.749000e+03
/				
O2+C2H5=OH+C2H4O1-2				1.3030e+03
1.930	-502.70			
PLOG /	4.000000e-02	1.303000e+03	1.930000e+00	-5.027000e+02
/				
PLOG /	1.000000e+00	2.438000e+02	2.180000e+00	-6.250000e+01
/				
PLOG /	1.000000e+01	4.621000e+09	1.500000e-01	5.409000e+03
/				
O2+C2H5=OH+CH3CHO				4.9080e-06
4.760	254.30			
PLOG /	4.000000e-02	4.908000e-06	4.760000e+00	2.543000e+02
/				
PLOG /	1.000000e+00	6.803000e-02	3.570000e+00	2.643000e+03
/				
PLOG /	1.000000e+01	8.265000e+02	2.410000e+00	5.285000e+03
/				
C2H4O2H=C2H5O2				2.6530e-16
6.960	2396.00			
PLOG /	4.000000e-02	2.653000e-16	6.960000e+00	2.396000e+03
/				
PLOG /	1.000000e+00	1.064000e+41	-1.010000e+01	2.603000e+04
/				
PLOG /	1.000000e+01	1.203000e+36	-8.130000e+00	2.702000e+04
/				

C2H5O2=OH+CH3CHO				1.2370e+35	-
9.420	36360.00				
PLOG /	4.000000e-02	1.237000e+35	-9.420000e+00	3.636000e+04	
/					
PLOG /	1.000000e+00	1.687000e+36	-9.220000e+00	3.870000e+04	
/					
PLOG /	1.000000e+01	2.520000e+41	-1.020000e+01	4.371000e+04	
/					
C2H5O2=HO2+C2H4				1.7820e+32	-
7.100	32840.00				
PLOG /	4.000000e-02	1.782000e+32	-7.100000e+00	3.284000e+04	
/					
PLOG /	1.000000e+00	2.701000e+37	-8.470000e+00	3.584000e+04	
/					
PLOG /	1.000000e+01	1.980000e+38	-8.460000e+00	3.790000e+04	
/					
C2H5O2=OH+C2H4O1-2				5.7780e+45	-
11.900	4112.00				
PLOG /	4.000000e-02	5.778000e+45	-1.190000e+01	4.112000e+03	
/					
PLOG /	1.000000e+00	1.916000e+43	-1.075000e+01	4.240000e+04	
/					
PLOG /	1.000000e+01	3.965000e+43	-1.046000e+01	4.558000e+04	
/					
C2H4O2H=OH+C2H4O1-2				8.9590e+38	-
9.400	20660.00				
PLOG /	4.000000e-02	8.959000e+38	-9.400000e+00	2.066000e+04	
/					
PLOG /	1.000000e+00	1.224000e+37	-8.320000e+00	2.146000e+04	
/					
PLOG /	1.000000e+01	8.848000e+30	-6.080000e+00	2.066000e+04	
/					
C2H4O2H=HO2+C2H4				3.9180e+40	-
10.200	22250.00				
PLOG /	4.000000e-02	3.918000e+40	-1.020000e+01	2.225000e+04	
/					
PLOG /	1.000000e+00	6.825000e+40	-9.610000e+00	2.384000e+04	
/					
PLOG /	1.000000e+01	3.980000e+34	-7.250000e+00	2.325000e+04	
/					
C2H4O2H=OH+CH3CHO				5.8190e+26	-
7.970	20860.00				
PLOG /	4.000000e-02	5.819000e+26	-7.970000e+00	2.086000e+04	
/					
PLOG /	1.000000e+00	5.520000e+34	-9.880000e+00	2.623000e+04	
/					
PLOG /	1.000000e+01	1.188000e+34	-9.020000e+00	2.921000e+04	
/					
H2+C2H5O2=H+C2H5O2H				1.5000e+14	
0.000	26030.00				

HO2+C2H5O2=O2+C2H5O2H	1.7500e+10
0.000        -3275.00	
CH2O+C2H5O2=HCO+C2H5O2H	1.9900e+12
0.000        11660.00	
CH4+C2H5O2=CH3+C2H5O2H	1.8100e+11
0.000        18480.00	
CH3OH+C2H5O2=CH2OH+C2H5O2H	1.8100e+12
0.000        13710.00	
C2H5O2H=OH+C2H5O	6.3100e+14
0.000        42300.00	
C2H4O1-2=CH3+HCO	3.6300e+13
0.000        57200.00	
C2H4O1-2=CH3CHO	2.2207e+13
0.000        53800.00	
H+C2H4O1-2=H2+C2H3O1-2	8.0000e+13
0.000        9680.00	
OH+C2H4O1-2=H2O+C2H3O1-2	1.7800e+13
0.000        3610.00	
HO2+C2H4O1-2=H2O2+C2H3O1-2	1.1300e+13
0.000        30430.00	
CH3+C2H4O1-2=CH4+C2H3O1-2	1.0700e+12
0.000        11830.00	
CH3O+C2H4O1-2=CH3OH+C2H3O1-2	1.2000e+11
0.000        6750.00	
CH3O2+C2H4O1-2=CH3O2H+C2H3O1-2	1.1300e+13
0.000        30430.00	
C2H5O2+C2H4O1-2=C2H5O2H+C2H3O1-2	1.1300e+13
0.000        30430.00	
C2H3O1-2=CH3CO	8.5000e+14
0.000        14000.00	
C2H3O1-2=CH2CHO	1.0000e+14
0.000        14000.00	
H+C2H3 (+M)=C2H4 (+M)	6.0800e+12
0.270        280.00	
LOW/    1.40e+30        -3.860        3320.0/	
TROE/            0.7820    207.5    2663.    6095./	
H2/ 2.00/    H2O/ 6.00/    AR/ 0.70/    CO/ 1.50/    CO2/ 2.00/    CH4/ 2.00/	
C2H6/ 3.00/    HE/ 0.70/	
C2H4+M=H2+C2H2+M	2.6100e+16
0.000        67823.00	

H2/ 2.00/ H2O/ 6.00/ CH4/ 2.00/ CO/ 1.50/ CO2/ 2.00/ C2H6/ 3.00/ AR/  
0.70/

O2+C2H4=HO2+C2H3 4.2200e+13  
0.000 57623.10

H+C2H4=H2+C2H3 5.0700e+07  
1.930 12950.00

OH+C2H4=H2O+C2H3 2.2300e+04  
2.745 2215.50

CH3O+C2H4=CH3OH+C2H3 1.2000e+11  
0.000 6750.00

CH3O2+C2H4=CH3O2H+C2H3 8.5900e+00  
3.754 27132.00

C2H5O2+C2H4=C2H5O2H+C2H3 8.5900e+00  
3.754 27132.00

CH3+C2H4=CH4+C2H3 9.7600e+02  
2.947 15148.00  
DUPLICATE

CH3+C2H4=CH4+C2H3 8.1300e-05  
4.417 8835.80  
DUPLICATE

O+C2H4=CH3+HCO 7.4530e+06  
1.880 183.00

O+C2H4=H+CH2CHO 6.0980e+06  
1.880 183.00

CH4+CH=H+C2H4 6.0000e+13  
0.000 0.00

CH3+CH2(S)=H+C2H4 2.0000e+13  
0.000 0.00

OH+C2H4=CH3+CH2O 5.3500e+00  
2.920 -1732.70  
PLOG / 1.000000e-02 5.350000e+00 2.920000e+00 -1.732700e+03  
/  
PLOG / 2.500000e-02 3.190000e+01 2.710000e+00 -1.172300e+03  
/  
PLOG / 1.000000e-01 5.550000e+02 2.360000e+00 -1.808000e+02  
/  
PLOG / 1.000000e+00 1.780000e+05 1.680000e+00 2.060500e+03  
/  
PLOG / 1.000000e+01 2.370000e+09 5.600000e-01 6.006700e+03  
/  
PLOG / 1.000000e+02 2.760000e+13 -5.000000e-01 1.145510e+04  
/

OH+C2H4=H+CH3CHO 2.3700e-07  
5.300 -2050.60



PLOG /	1.000000e-02	2.370000e-07	5.300000e+00	-2.050600e+03
/				
PLOG /	2.500000e-02	8.730000e-05	4.570000e+00	-6.180000e+02
/				
PLOG /	1.000000e-01	4.030000e-01	3.540000e+00	1.881700e+03
/				
PLOG /	1.000000e+00	2.380000e-02	3.910000e+00	1.722700e+03
/				
PLOG /	1.000000e+01	8.250000e+08	1.010000e+00	1.050730e+04
/				
PLOG /	1.000000e+02	6.800000e+09	8.100000e-01	1.386730e+04
/				

OH+C2H4=PC2H4OH 1.7400e+43 -

10.461 7698.70

PLOG /	1.000000e-02	1.740000e+43	-1.046100e+01	7.698700e+03
/				
PLOG /	2.500000e-02	3.250000e+37	-8.629000e+00	5.214700e+03
/				
PLOG /	1.000000e-01	1.840000e+35	-7.750000e+00	4.908900e+03
/				
PLOG /	1.000000e+00	2.560000e+36	-7.752000e+00	6.946100e+03
/				
PLOG /	1.000000e+01	3.700000e+33	-6.573000e+00	7.605900e+03
/				
PLOG /	1.000000e+02	1.120000e+26	-4.101000e+00	5.757000e+03
/				

HO2+C2H4=OH+C2H4O1-2 1.6700e+12

0.000 17190.00

CH3O2+C2H4=CH3O+C2H4O1-2 2.8200e+12

0.000 17110.00

C2H5O2+C2H4=C2H5O+C2H4O1-2 2.8200e+12

0.000 17110.00

H+C2H2 (+M)=C2H3 (+M) 1.7100e+10

1.266 2709.00

LOW/ 6.35e+31 -4.664 3780.0/

TROE/ 0.7880 -1.020e+04 1.000e-30/

H2/ 2.00/ H2O/ 6.00/ AR/ 0.70/ CO/ 1.50/ CO2/ 2.00/ CH4/ 2.00/

C2H6/ 3.00/ HE/ 0.70/

O2+C2H3=O+CH2CHO 1.7600e+12

0.150 4205.00

DUPLICATE

PLOG /	1.000000e-02	7.880000e+20	-2.670000e+00	6.742000e+03
/				
PLOG /	1.000000e-01	7.720000e+20	-2.670000e+00	6.713000e+03
/				
PLOG /	3.160000e-01	9.870000e+20	-2.700000e+00	6.724000e+03
/				
PLOG /	1.000000e+00	7.100000e+20	-2.650000e+00	6.489000e+03
/				
PLOG /	3.160000e+00	4.500000e+20	-2.530000e+00	6.406000e+03
/				

PLOG /	1.000000e+01	1.760000e+23	-3.220000e+00	8.697000e+03
/				
PLOG /	3.160000e+01	3.140000e+25	-3.770000e+00	1.153000e+04
/				
PLOG /	1.000000e+02	1.020000e+26	-3.800000e+00	1.391000e+04
/				
O2+C2H3=O+CH2CHO				1.7600e+12
0.150	4205.00			
DUPLICATE				
PLOG /	1.000000e-02	1.360000e+10	6.200000e-01	-2.776000e+02
/				
PLOG /	1.000000e-01	1.420000e+10	6.200000e-01	-2.477000e+02
/				
PLOG /	3.160000e-01	1.660000e+10	6.000000e-01	-1.625000e+02
/				
PLOG /	1.000000e+00	2.020000e+10	5.800000e-01	3.840000e+01
/				
PLOG /	3.160000e+00	9.750000e+09	6.700000e-01	2.480000e+02
/				
PLOG /	1.000000e+01	7.340000e+09	7.200000e-01	7.781000e+02
/				
PLOG /	3.160000e+01	1.570000e+09	9.200000e-01	1.219000e+03
/				
PLOG /	1.000000e+02	7.850000e+07	1.280000e+00	1.401000e+03
/				
O2+C2H3=HO2+C2H2				6.4900e+06
1.500	5218.00			
DUPLICATE				
PLOG /	1.000000e-02	1.080000e+07	1.280000e+00	3.322000e+03
/				
PLOG /	1.000000e-01	7.750000e+06	1.330000e+00	3.216000e+03
/				
PLOG /	3.160000e-01	1.210000e+07	1.270000e+00	3.311000e+03
/				
PLOG /	1.000000e+00	2.150000e+07	1.190000e+00	3.367000e+03
/				
PLOG /	3.160000e+00	1.130000e+08	1.000000e+00	3.695000e+03
/				
PLOG /	1.000000e+01	1.310000e+11	1.200000e-01	5.872000e+03
/				
PLOG /	3.160000e+01	1.190000e+09	8.200000e-01	5.617000e+03
/				
PLOG /	1.000000e+02	1.060000e+17	-1.450000e+00	1.223000e+04
/				
O2+C2H3=HO2+C2H2				6.4900e+06
1.500	5218.00			
DUPLICATE				
PLOG /	1.000000e-02	4.760000e+01	2.750000e+00	-7.964000e+02
/				
PLOG /	1.000000e-01	5.160000e+01	2.730000e+00	-7.683000e+02
/				
PLOG /	3.160000e-01	5.550000e+01	2.730000e+00	-6.585000e+02
/				
PLOG /	1.000000e+00	4.600000e+01	2.760000e+00	-4.928000e+02
/				

PLOG /	3.160000e+00	3.750000e+00	3.070000e+00	-6.010000e+02
/				
PLOG /	1.000000e+01	5.480000e+00	3.070000e+00	8.570000e+01
/				
PLOG /	3.160000e+01	4.470000e+08	0.000000e+00	9.550000e+02
/				
PLOG /	1.000000e+02	2.020000e+01	2.940000e+00	1.847000e+03
/				

O2+C2H3=OH+CH2CO 1.1700e+03

2.430 7074.00

DUPLICATE

PLOG /	1.000000e-02	8.660000e+02	2.410000e+00	6.061000e+03
/				
PLOG /	1.000000e-01	8.910000e+02	2.410000e+00	6.078000e+03
/				
PLOG /	3.160000e-01	9.430000e+02	2.400000e+00	6.112000e+03
/				
PLOG /	1.000000e+00	1.060000e+03	2.390000e+00	6.180000e+03
/				
PLOG /	3.160000e+00	1.090000e+03	2.380000e+00	6.179000e+03
/				
PLOG /	1.000000e+01	1.390000e+03	2.360000e+00	6.074000e+03
/				
PLOG /	3.160000e+01	2.490000e+06	1.420000e+00	8.480000e+03
/				
PLOG /	1.000000e+02	1.660000e+10	3.600000e-01	1.201000e+04
/				

O2+C2H3=OH+CH2CO 1.1700e+03

2.430 7074.00

DUPLICATE

PLOG /	1.000000e-02	1.820000e-01	3.120000e+00	1.331000e+03
/				
PLOG /	1.000000e-01	2.070000e-01	3.110000e+00	1.383000e+03
/				
PLOG /	3.160000e-01	2.710000e-01	3.080000e+00	1.496000e+03
/				
PLOG /	1.000000e+00	5.260000e-01	3.010000e+00	1.777000e+03
/				
PLOG /	3.160000e+00	1.370000e+00	2.900000e+00	2.225000e+03
/				
PLOG /	1.000000e+01	4.190000e-01	2.930000e+00	2.052000e+03
/				
PLOG /	3.160000e+01	1.190000e-04	4.210000e+00	2.043000e+03
/				
PLOG /	1.000000e+02	1.300000e-03	3.970000e+00	3.414000e+03
/				

O2+C2H3=CH2O+HCO 1.1600e+16 -

1.130 3791.00

DUPLICATE

PLOG /	1.000000e-02	2.490000e+36	-7.600000e+00	1.264000e+04
/				
PLOG /	1.000000e-01	2.430000e+36	-7.600000e+00	1.261000e+04
/				
PLOG /	3.160000e-01	1.950000e+36	-7.570000e+00	1.249000e+04
/				

PLOG /	1.000000e+00	2.730000e+35	-7.320000e+00	1.182000e+04
/				
PLOG /	3.160000e+00	1.430000e+36	-7.470000e+00	1.246000e+04
/				
PLOG /	1.000000e+01	5.180000e+35	-7.200000e+00	1.343000e+04
/				
PLOG /	3.160000e+01	3.190000e+20	-2.570000e+00	5.578000e+03
/				
PLOG /	1.000000e+02	2.730000e+33	-6.280000e+00	1.600000e+04
/				

O2+C2H3=CH2O+HCO 1.1600e+16 -  
 1.130 3791.00

DUPLICATE

PLOG /	1.000000e-02	4.540000e+15	-1.280000e+00	5.153000e+02
/				
PLOG /	1.000000e-01	4.590000e+15	-1.280000e+00	5.130000e+02
/				
PLOG /	3.160000e-01	4.810000e+15	-1.290000e+00	5.206000e+02
/				
PLOG /	1.000000e+00	6.080000e+15	-1.310000e+00	6.457000e+02
/				
PLOG /	3.160000e+00	9.450000e+15	-1.360000e+00	1.066000e+03
/				
PLOG /	1.000000e+01	2.560000e+15	-1.180000e+00	1.429000e+03
/				
PLOG /	3.160000e+01	1.030000e+69	-1.923000e+01	1.476000e+04
/				
PLOG /	1.000000e+02	4.210000e+10	1.900000e-01	8.306000e+02
/				

O2+C2H3=>H+CO+CH2O 1.1600e+16 -  
 1.130 3791.00

DUPLICATE

PLOG /	1.000000e-02	5.820000e+36	-7.600000e+00	1.264000e+04
/				
PLOG /	1.000000e-01	5.660000e+36	-7.600000e+00	1.261000e+04
/				
PLOG /	3.160000e-01	4.550000e+36	-7.570000e+00	1.249000e+04
/				
PLOG /	1.000000e+00	6.360000e+35	-7.320000e+00	1.182000e+04
/				
PLOG /	3.160000e+00	3.350000e+36	-7.470000e+00	1.246000e+04
/				
PLOG /	1.000000e+01	1.210000e+36	-7.200000e+00	1.343000e+04
/				
PLOG /	3.160000e+01	7.430000e+20	-2.570000e+00	5.578000e+03
/				
PLOG /	1.000000e+02	6.360000e+33	-6.280000e+00	1.600000e+04
/				

O2+C2H3=>H+CO+CH2O 1.1600e+16 -  
 1.130 3791.00

DUPLICATE

PLOG /	1.000000e-02	1.060000e+16	-1.280000e+00	5.153000e+02
/				
PLOG /	1.000000e-01	1.070000e+16	-1.280000e+00	5.130000e+02
/				

PLOG /	3.160000e-01	1.130000e+16	-1.290000e+00	5.206000e+02
/				
PLOG /	1.000000e+00	1.420000e+16	-1.310000e+00	6.457000e+02
/				
PLOG /	3.160000e+00	2.200000e+16	-1.360000e+00	1.066000e+03
/				
PLOG /	1.000000e+01	5.980000e+15	-1.180000e+00	1.429000e+03
/				
PLOG /	3.160000e+01	2.390000e+69	-1.923000e+01	1.476000e+04
/				
PLOG /	1.000000e+02	9.810000e+10	1.900000e-01	8.306000e+02
/				

O2+C2H3=CO+CH3O 3.0900e+13 -  
0.890 3682.00

DUPLICATE

PLOG /	1.000000e-02	8.190000e+18	-2.660000e+00	3.201000e+03
/				
PLOG /	1.000000e-01	4.060000e+14	-1.320000e+00	8.858000e+02
/				
PLOG /	3.160000e-01	4.340000e+14	-1.330000e+00	9.006000e+02
/				
PLOG /	1.000000e+00	1.030000e+11	-3.300000e-01	-7.478000e+02
/				
PLOG /	3.160000e+00	1.890000e+12	-3.000000e+00	-8.995000e+03
/				
PLOG /	1.000000e+01	1.930000e+24	-5.630000e+00	1.800000e+00
/				
PLOG /	3.160000e+01	1.100000e+18	-2.220000e+00	5.178000e+03
/				
PLOG /	1.000000e+02	5.790000e+32	-6.450000e+00	1.681000e+04
/				

O2+C2H3=CO+CH3O 3.0900e+13 -  
0.890 3682.00

DUPLICATE

PLOG /	1.000000e-02	1.290000e+09	1.800000e-01	-1.717000e+03
/				
PLOG /	1.000000e-01	5.990000e+11	-2.930000e+00	-9.564000e+03
/				
PLOG /	3.160000e-01	2.910000e+11	-2.930000e+00	-1.012000e+04
/				
PLOG /	1.000000e+00	5.770000e+21	-3.540000e+00	4.772000e+03
/				
PLOG /	3.160000e+00	4.990000e+15	-1.620000e+00	1.849000e+03
/				
PLOG /	1.000000e+01	9.330000e+16	-1.960000e+00	3.324000e+03
/				
PLOG /	3.160000e+01	1.020000e+72	-2.069000e+01	1.586000e+04
/				
PLOG /	1.000000e+02	1.100000e+09	3.100000e-01	1.024000e+03
/				

O2+C2H3=CO2+CH3 6.1600e+13 -  
1.050 3743.00

DUPLICATE

PLOG /	1.000000e-02	2.370000e+35	-7.760000e+00	1.263000e+04
/				

PLOG /	1.000000e-01	1.730000e+35	-7.720000e+00	1.252000e+04	
/					
PLOG /	3.160000e-01	4.470000e+34	-7.550000e+00	1.214000e+04	
/					
PLOG /	1.000000e+00	7.250000e+31	-6.700000e+00	1.044000e+04	
/					
PLOG /	3.160000e+00	3.630000e+35	-7.750000e+00	1.283000e+04	
/					
PLOG /	1.000000e+01	2.090000e+35	-7.530000e+00	1.405000e+04	
/					
PLOG /	3.160000e+01	3.840000e+18	-2.440000e+00	5.408000e+03	
/					
PLOG /	1.000000e+02	1.210000e+32	-6.320000e+00	1.619000e+04	
/					
O2+C2H3=CO2+CH3				6.1600e+13	-
1.050	3743.00				
DUPLICATE					
PLOG /	1.000000e-02	6.270000e+13	-1.160000e+00	4.063000e+02	
/					
PLOG /	1.000000e-01	6.240000e+13	-1.160000e+00	4.014000e+02	
/					
PLOG /	3.160000e-01	6.120000e+13	-1.160000e+00	3.970000e+02	
/					
PLOG /	1.000000e+00	5.320000e+13	-1.140000e+00	4.467000e+02	
/					
PLOG /	3.160000e+00	1.450000e+14	-1.260000e+00	9.877000e+02	
/					
PLOG /	1.000000e+01	5.020000e+13	-1.110000e+00	1.409000e+03	
/					
PLOG /	3.160000e+01	1.400000e+70	-2.011000e+01	1.543000e+04	
/					
PLOG /	1.000000e+02	9.210000e+08	2.500000e-01	8.553000e+02	
/					
H+C2H3=H2+C2H2				9.6353e+13	
0.000	0.00				
OH+C2H3=H2O+C2H2				3.0110e+13	
0.000	0.00				
CH3+C2H3=CH4+C2H2				3.9200e+11	
0.000	0.00				
2C2H3=C2H4+C2H2				9.6000e+11	
0.000	0.00				
H+C2H(+M)=C2H2(+M)				1.0000e+17	-
1.000	0.00				
LOW/	3.75e+33	-4.800	1900.0/		
TROE/	0.6460	132.0	1315. 5566./		
H2/	2.00/	H2O/ 6.00/	AR/ 0.70/	CO/ 1.50/	CO2/ 2.00/
C2H6/	3.00/	HE/ 0.70/		CH4/ 2.00/	
O+C2H2=CO+CH2				7.3950e+08	
1.280	2472.00				

O+C2H2=H+HCCO					2.9580e+09
1.280	2472.00				
HO2+C2H2=OH+CH2CO					6.0300e+09
0.000	7949.00				
HCO+C2H2=CO+C2H3					1.0000e+07
2.000	6000.00				
CH2+C2H2=H+C3H3					1.2000e+13
0.000	6620.00				
CH2(S)+C2H2=H+C3H3					2.0000e+13
0.000	0.00				
C2H2+HCCO=CO+C3H3					1.0000e+11
0.000	3000.00				
OH+C2H2=H2O+C2H					2.6320e+06
2.140	17060.00				
OH+C2H2=H+CH2CO					1.5780e+03
2.560	-844.50				
PLOG /	1.000000e-02	1.578000e+03	2.560000e+00	-8.445000e+02	
/					
PLOG /	2.500000e-02	1.518000e+04	2.280000e+00	-2.921000e+02	
/					
PLOG /	1.000000e-01	3.017000e+05	1.920000e+00	5.981000e+02	
/					
PLOG /	1.000000e+00	7.528000e+06	1.550000e+00	2.106000e+03	
/					
PLOG /	1.000000e+01	5.101000e+06	1.650000e+00	3.400000e+03	
/					
PLOG /	1.000000e+02	1.457000e+04	2.450000e+00	4.477000e+03	
/					
OH+C2H2=CO+CH3					4.7570e+05
1.680	-329.80				
PLOG /	1.000000e-02	4.757000e+05	1.680000e+00	-3.298000e+02	
/					
PLOG /	2.500000e-02	4.372000e+06	1.400000e+00	2.265000e+02	
/					
PLOG /	1.000000e-01	7.648000e+07	1.050000e+00	1.115000e+03	
/					
PLOG /	1.000000e+00	1.277000e+09	7.300000e-01	2.579000e+03	
/					
PLOG /	1.000000e+01	4.312000e+08	9.200000e-01	3.736000e+03	
/					
PLOG /	1.000000e+02	8.250000e+05	1.770000e+00	4.697000e+03	
/					
O2+C2H=CO+HCO					5.0000e+13
0.000	1500.00				
O+C2H=CO+CH					5.0000e+13
0.000	0.00				

H2+C2H=H+C2H2					4.9000e+05	
2.500	560.00					
OH+C2H=H+HCCO					2.0000e+13	
0.000	0.00					
CH3CHO (+M)=CH3+HCO (+M)					2.4500e+22	-
1.740	86355.00					
LOW/	1.03e+59	-11.300	95912.5/			
TROE/	0.002490	718.1	6.089	3780./		
CH3CHO (+M)=CO+CH4 (+M)					2.7200e+21	-
1.740	86355.00					
LOW/	1.14e+58	-11.300	95912.5/			
TROE/	0.002490	718.1	6.089	3780./		
O2+CH3CHO=HO2+CH3CO					3.0100e+13	
0.000	39150.00					
O+CH3CHO=OH+CH3CO					5.9400e+12	
0.000	1868.00					
OH+CH3CHO=H2O+CH3CO					3.3700e+12	
0.000	-619.00					
HO2+CH3CHO=H2O2+CH3CO					1.0000e+12	
0.000	11920.00					
CH3O2+CH3CHO=CH3O2H+CH3CO					1.0000e+12	
0.000	11920.00					
H+CH3CHO=H2+CH2CHO					2.7200e+03	
3.100	5210.00					
OH+CH3CHO=H2O+CH2CHO					1.7200e+05	
2.400	815.00					
OH+CH3CHO=CH3+HOCHO					3.0000e+15	-
1.076	0.00					
CH3CO=CO+CH3					1.0700e+12	
0.630	16895.50					
PLOG /	1.000000e-01	1.960000e+16	-2.090000e+00	1.519660e+04		
/						
PLOG /	1.000000e+00	6.450000e+18	-2.520000e+00	1.643650e+04		
/						
PLOG /	1.000000e+01	8.180000e+19	-2.550000e+00	1.726310e+04		
/						
PLOG /	1.000000e+02	1.260000e+20	-2.320000e+00	1.801210e+04		
/						
O2+CH3CO=CH3CO3					2.6500e+12	
0.000	0.00					
PLOG /	1.000000e-01	3.410000e+69	-1.890000e+01	1.440000e+04		
/						
PLOG /	1.000000e+00	5.790000e+61	-1.607000e+01	1.340000e+04		
/						



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PLOG / 1.000000e+01 5.070000e+52 -1.296000e+01 1.156000e+04
/

O2+CH3CO=HO2+CH2CO 3.6000e+10
0.544 3721.00
PLOG / 1.000000e-01 1.300000e+08 1.986000e+00 2.280000e+02
/
PLOG / 1.000000e+00 3.600000e+10 5.440000e-01 3.721000e+03
/
PLOG / 1.000000e+01 7.700000e+13 -3.350000e-01 7.510000e+03
/

CH3CO (+M)=H+CH2CO (+M) 9.4130e+07
1.917 44987.20
LOW/ 1.52e+51 -10.270 55390.0/
TROE/ 0.6009 8.103e+09 667.7 5.000e+09/

H+CH3CO=H2+CH2CO 2.0000e+13
0.000 0.00

O+CH3CO=OH+CH2CO 2.0000e+13
0.000 0.00

CH3+CH3CO=CH4+CH2CO 5.0000e+13
0.000 0.00

CH2CHO (+M)=H+CH2CO (+M) 1.4300e+15 -
0.150 45600.00
LOW/ 6.00e+29 -3.800 43423.9/
TROE/ 0.9850 393.0 9.800e+09 5.000e+09/

CH2CHO (+M)=CO+CH3 (+M) 2.9300e+12
0.290 40300.00
LOW/ 9.52e+33 -5.070 41300.0/
TROE/ 7.130e-17 1150. 4.990e+09 1.790e+09/

CH2CO (+M)=CO+CH2 (+M) 3.0000e+13
0.000 71000.00
LOW/ 3.00e+15 0.000 57000.0/
H2/ 2.00/ H2O/ 6.00/ AR/ 0.70/ CO/ 1.50/ CO2/ 2.00/ CH4/ 2.00/
C2H6/ 3.00/ HE/ 0.70/

O+C2H3=H+CH2CO 3.0000e+13
0.000 0.00

H+CH2CO=CO+CH3 7.7700e+08
1.450 2780.00

CH3+HCO=H2+CH2CO 4.9000e+08
0.750 842.00
PLOG / 5.000000e-02 6.100000e+06 1.240000e+00 -1.733000e+03
/
PLOG / 1.000000e-01 1.100000e+07 1.180000e+00 -1.303000e+03
/
PLOG / 1.000000e+00 4.900000e+08 7.500000e-01 8.420000e+02
/
PLOG / 1.000000e+01 1.600000e+11 1.090000e-01 4.387000e+03
/

```

CH+CH2O=H+CH2CO				9.4600e+13	
0.000	-515.00				
O+CH2CO=CO2+CH2				1.7500e+12	
0.000	1350.00				
OH+CH2CO=CO+CH2OH				2.0000e+12	
0.000	-1010.00				
CH2 (S) +CH2CO=CO+C2H4				2.0000e+13	
0.000	-526.00				
CH3+CH2CO=CO+C2H5				4.7690e+04	
2.312	9468.00				
OH+HCCO=>H2+2CO				1.0000e+14	
0.000	0.00				
O+HCCO=>H+2CO				8.0000e+13	
0.000	0.00				
CO+CH+M=HCCO+M				7.5700e+22	-
1.900	0.00				
H+HCCO=CO+CH2 (S)				1.0000e+14	
0.000	0.00				
O2+HCCO=>OH+2CO				1.9100e+11	-
0.020	1020.00				
O2+HCCO=>H+CO+CO2				4.7800e+12	-
0.142	1150.00				
CH+HCCO=CO+C2H2				5.0000e+13	
0.000	0.00				
C2H5OH=H2O+C2H4				3.4100e+59	-
14.200	83672.60				
PLOG /	1.000000e-03	3.410000e+59	-1.420000e+01	8.367260e+04	
/					
PLOG /	1.000000e-02	2.620000e+57	-1.330000e+01	8.526220e+04	
/					
PLOG /	1.000000e-01	1.650000e+52	-1.150000e+01	8.474560e+04	
/					
PLOG /	1.000000e+00	5.230000e+43	-8.900000e+00	8.150670e+04	
/					
PLOG /	1.000000e+01	4.590000e+32	-5.600000e+00	7.606240e+04	
/					
PLOG /	1.000000e+02	3.840000e+20	-2.060000e+00	6.946550e+04	
/					
C2H5OH=CH3+CH2OH				1.2000e+54	-
12.900	100005.70				
PLOG /	1.000000e-03	1.200000e+54	-1.290000e+01	1.000057e+05	
/					
PLOG /	1.000000e-02	5.180000e+59	-1.400000e+01	9.990640e+04	
/					

PLOG /	1.000000e-01	1.620000e+66	-1.530000e+01	1.053905e+05
/				
PLOG /	1.000000e+00	5.550000e+64	-1.450000e+01	1.061830e+05
/				
PLOG /	1.000000e+01	1.550000e+58	-1.230000e+01	1.057680e+05
/				
PLOG /	1.000000e+02	1.780000e+47	-8.960000e+00	1.010588e+05
/				
C2H5OH=OH+C2H5				8.1000e+46 -
11.300	111053.40			
PLOG /	1.000000e-03	8.100000e+46	-1.130000e+01	1.110534e+05
/				
PLOG /	1.000000e-02	1.860000e+56	-1.350000e+01	1.072384e+05
/				
PLOG /	1.000000e-01	4.650000e+63	-1.500000e+01	1.096228e+05
/				
PLOG /	1.000000e+00	4.460000e+65	-1.490000e+01	1.123450e+05
/				
PLOG /	1.000000e+01	2.790000e+61	-1.340000e+01	1.130802e+05
/				
PLOG /	1.000000e+02	6.170000e+51	-1.030000e+01	1.099407e+05
/				
O+C2H5OH=OH+C2H5O				1.4600e-03
4.730	1727.00			
OH+C2H5OH=H2O+C2H5O				5.8100e-03
4.280	-3560.00			
H+C2H5OH=H2+C2H5O				9.4500e+02
3.140	8701.10			
HO2+C2H5OH=H2O2+C2H5O				6.4700e-07
5.300	10533.10			
CH3+C2H5OH=CH4+C2H5O				2.0350e+00
3.570	7721.00			
CH3O2+C2H5OH=CH3O2H+C2H5O				3.2360e-07
5.300	10533.10			
C2H5+C2H5OH=C2H6+PC2H4OH				5.0000e+10
0.000	13400.00			
O2+C2H5OH=HO2+SC2H4OH				1.5000e+13
0.000	50150.00			
O+C2H5OH=OH+SC2H4OH				1.4500e+05
2.470	876.00			
H+C2H5OH=H2+SC2H4OH				8.7900e+04
2.680	2910.00			
OH+C2H5OH=H2O+SC2H4OH				7.5200e+04
2.490	-1474.10			

HO2+C2H5OH=H2O2+SC2H4OH					2.4500e-05
5.260	7475.10				
CH3+C2H5OH=CH4+SC2H4OH					1.9930e+01
3.370	7634.00				
CH3O2+C2H5OH=CH3O2H+SC2H4OH					1.2250e-05
5.260	7475.10				
C2H5+C2H5OH=C2H6+SC2H4OH					5.0000e+10
0.000	10400.00				
O2+C2H5OH=HO2+PC2H4OH					2.0000e+13
0.000	52800.00				
O+C2H5OH=OH+PC2H4OH					9.6900e+02
3.230	4658.00				
H+C2H5OH=H2+PC2H4OH					5.3100e+04
2.810	7490.00				
OH+C2H5OH=H2O+PC2H4OH					3.7600e+03
2.780	-1810.20				
HO2+C2H5OH=H2O2+PC2H4OH					3.9860e-02
4.300	15333.00				
CH3+C2H5OH=CH4+PC2H4OH					3.3000e+02
3.300	12290.00				
CH3O2+C2H5OH=CH3O2H+PC2H4OH					1.9950e-02
4.300	15333.00				
SC2H4OH=H+CH3CHO					5.6900e+52 -
13.380	45049.00				
PLOG /	1.000000e-03	5.690000e+52	-1.338000e+01	4.504900e+04	
/					
PLOG /	1.000000e-02	3.290000e+56	-1.412000e+01	4.812900e+04	
/					
PLOG /	1.000000e-01	8.580000e+57	-1.416000e+01	5.074300e+04	
/					
PLOG /	1.000000e+00	5.360000e+55	-1.315000e+01	5.188600e+04	
/					
PLOG /	1.000000e+01	1.660000e+48	-1.064000e+01	5.029700e+04	
/					
PLOG /	2.000000e+01	8.260000e+44	-9.590000e+00	4.921800e+04	
/					
PLOG /	5.000000e+01	1.010000e+40	-8.060000e+00	4.743900e+04	
/					
PLOG /	1.000000e+02	1.100000e+36	-6.840000e+00	4.589900e+04	
/					
SC2H4OH=C2H5O					5.4800e+45 -
11.630	44328.00				
PLOG /	1.000000e-03	5.480000e+45	-1.163000e+01	4.432800e+04	
/					
PLOG /	1.000000e-02	2.540000e+49	-1.237000e+01	4.644500e+04	
/					

PLOG /	1.000000e-01	1.650000e+54	-1.340000e+01	5.033000e+04	
/					
PLOG /	1.000000e+00	1.810000e+55	-1.331000e+01	5.313200e+04	
/					
PLOG /	1.000000e+01	4.580000e+49	-1.132000e+01	5.271400e+04	
/					
PLOG /	2.000000e+01	4.110000e+46	-1.033000e+01	5.183400e+04	
/					
PLOG /	5.000000e+01	6.680000e+41	-8.830000e+00	5.020200e+04	
/					
PLOG /	1.000000e+02	6.540000e+37	-7.580000e+00	4.869700e+04	
/					
SC2H4OH=PC2H4OH				2.6500e+36	-
8.860	51019.00				
PLOG /	1.000000e-03	2.650000e+36	-8.860000e+00	5.101900e+04	
/					
PLOG /	1.000000e-02	3.560000e+37	-8.890000e+00	5.111400e+04	
/					
PLOG /	1.000000e-01	4.140000e+39	-9.190000e+00	5.191200e+04	
/					
PLOG /	1.000000e+00	5.820000e+44	-1.034000e+01	5.529600e+04	
/					
PLOG /	1.000000e+01	4.260000e+48	-1.106000e+01	5.945800e+04	
/					
PLOG /	2.000000e+01	8.840000e+47	-1.074000e+01	5.990100e+04	
/					
PLOG /	5.000000e+01	2.230000e+45	-9.840000e+00	5.960400e+04	
/					
PLOG /	1.000000e+02	1.700000e+42	-8.830000e+00	5.873700e+04	
/					
CH3+CH2O=C2H5O				3.0000e+11	
0.000	6336.00				
H+CH3CHO=C2H5O				4.6100e+07	
1.710	7090.00				
O2+C2H5O=HO2+CH3CHO				4.2800e+10	
0.000	1097.00				
O2+SC2H4OH=HO2+CH3CHO				5.2600e+17	-
1.638	869.00				
PLOG /	1.000000e-02	5.260000e+17	-1.637000e+00	8.380000e+02	
/					
PLOG /	1.000000e-01	5.260000e+17	-1.637000e+00	8.380000e+02	
/					
PLOG /	1.000000e+00	5.280000e+17	-1.638000e+00	8.390000e+02	
/					
PLOG /	1.000000e+01	1.540000e+18	-1.771000e+00	1.120000e+03	
/					
PLOG /	1.000000e+02	3.780000e+20	-2.429000e+00	3.090000e+03	
/					
C3H8 (+M)=CH3+C2H5 (+M)				1.2900e+37	-
5.840	97380.00				
LOW/	5.64e+74	-15.740	98714.0/		
TROE/	0.3100	50.00	3000. 9000./		

H2/ 2.00/ H2O/ 6.00/ AR/ 0.70/ CO/ 1.50/ CO2/ 2.00/ CH4/ 2.00/  
C2H6/ 3.00/ HE/ 0.70/

H+NC3H7=C3H8 1.0000e+14  
0.000 0.00

H+IC3H7=C3H8 1.0000e+14  
0.000 0.00

C3H8+IC3H7=C3H8+NC3H7 3.0000e+10  
0.000 12900.00

O2+C3H8=HO2+IC3H7 2.0000e+13  
0.000 49640.00

H+C3H8=H2+IC3H7 6.5000e+05  
2.400 4471.00

H+C3H8=H2+NC3H7 1.7500e+05  
2.690 6450.00

O+C3H8=OH+IC3H7 5.4900e+05  
2.500 3140.00

OH+C3H8=H2O+IC3H7 4.6700e+07  
1.610 -35.00

HO2+C3H8=H2O2+IC3H7 6.3200e+01  
3.370 13720.00

CH3+C3H8=CH4+IC3H7 6.4000e+04  
2.170 7520.00

C2H3+C3H8=C2H4+IC3H7 1.0000e+11  
0.000 10400.00

C2H5+C3H8=C2H6+IC3H7 1.0000e+11  
0.000 10400.00

C3H8+C3H5-A=IC3H7+C3H6 7.9400e+11  
0.000 16200.00

CH3O+C3H8=CH3OH+IC3H7 3.0000e+11  
0.000 7000.00

CH3O2+C3H8=CH3O2H+IC3H7 1.0190e+01  
3.580 14810.00

C2H5O2+C3H8=C2H5O2H+IC3H7 1.0190e+01  
3.580 14810.00

O2+C3H8=HO2+NC3H7 6.0000e+13  
0.000 52290.00

O+C3H8=OH+NC3H7 3.7100e+06  
2.400 5505.00

OH+C3H8=H2O+NC3H7	1.0540e+10
0.970 1586.00	
HO2+C3H8=H2O2+NC3H7	4.0800e+01
3.590 17160.00	
CH3+C3H8=CH4+NC3H7	9.0400e-01
3.650 7154.00	
C2H3+C3H8=C2H4+NC3H7	1.0000e+11
0.000 10400.00	
C2H5+C3H8=C2H6+NC3H7	1.0000e+11
0.000 10400.00	
C3H8+C3H5-A=NC3H7+C3H6	7.9400e+11
0.000 20500.00	
CH3O+C3H8=CH3OH+NC3H7	3.0000e+11
0.000 7000.00	
CH3O2+C3H8=CH3O2H+NC3H7	1.3860e+00
3.970 18280.00	
C2H5O2+C3H8=C2H5O2H+NC3H7	1.3860e+00
3.970 18280.00	
H+IC3H7=CH3+C2H5	2.0000e+13
0.000 0.00	
OH+IC3H7=H2O+C3H6	2.4100e+13
0.000 0.00	
O+IC3H7=H+CH3COCH3	4.8180e+13
0.000 0.00	
O+IC3H7=CH3+CH3CHO	4.8180e+13
0.000 0.00	
HO2+NC3H7=>OH+CH2O+C2H5	7.0000e+12
0.000 -1000.00	
CH3O2+NC3H7=>CH3O+CH2O+C2H5	7.0000e+12
0.000 -1000.00	
HO2+IC3H7=>OH+CH3+CH3CHO	7.0000e+12
0.000 -1000.00	
CH3O2+IC3H7=>CH3+CH3O+CH3CHO	7.0000e+12
0.000 -1000.00	
CH3+C2H3 (+M)=C3H6 (+M)	2.5000e+13
0.000 0.00	
LOW/ 4.27e+58 -11.940 9769.8/	
TROE/ 0.1750 1341. 6.000e+04 1.014e+04/	
CH2 (S)+C2H4=C3H6	4.8200e+57 -
14.300 17100.00	

DUPLICATE				
PLOG /	1.000000e-02	4.820000e+57	-1.430000e+01	1.710000e+04
/				
PLOG /	1.000000e-01	3.840000e+59	-1.440000e+01	1.840000e+04
/				
PLOG /	1.000000e+00	2.130000e+58	-1.350000e+01	2.040000e+04
/				
PLOG /	1.000000e+01	8.480000e+52	-1.160000e+01	2.070000e+04
/				
PLOG /	1.000000e+02	6.070000e+47	-9.850000e+00	2.210000e+04
/				
CH2 (S)+C2H4=C3H6				1.1500e+45 -
11.100	6145.20			
DUPLICATE				
PLOG /	1.000000e-02	1.150000e+45	-1.110000e+01	6.145200e+03
/				
PLOG /	1.000000e-01	1.830000e+45	-1.070000e+01	6.638500e+03
/				
PLOG /	1.000000e+00	1.300000e+40	-8.770000e+00	5.863800e+03
/				
PLOG /	1.000000e+01	2.270000e+32	-6.140000e+00	4.317900e+03
/				
PLOG /	1.000000e+02	1.280000e+24	-3.490000e+00	2.529900e+03
/				
CH2 (S)+C2H4=H+C3H5-A				8.2000e+19 -
2.060	1150.00			
DUPLICATE				
PLOG /	1.000000e-02	8.200000e+19	-2.060000e+00	1.150000e+03
/				
PLOG /	1.000000e-01	2.270000e+21	-2.440000e+00	2.650000e+03
/				
PLOG /	1.000000e+00	4.440000e+35	-6.550000e+00	1.390000e+04
/				
PLOG /	1.000000e+01	1.180000e+28	-4.090000e+00	1.400000e+04
/				
PLOG /	1.000000e+02	6.510000e+26	-3.580000e+00	1.890000e+04
/				
CH2 (S)+C2H4=H+C3H5-A				1.0800e+07
1.620	-3174.60			
DUPLICATE				
PLOG /	1.000000e-02	1.080000e+07	1.620000e+00	-3.174600e+03
/				
PLOG /	1.000000e-01	1.370000e+05	2.150000e+00	-3.799200e+03
/				
PLOG /	1.000000e+00	3.890000e+14	-4.200000e-01	1.237600e+03
/				
PLOG /	1.000000e+01	2.450000e+10	6.700000e-01	7.509300e+02
/				
PLOG /	1.000000e+02	1.810000e+02	2.970000e+00	-7.460300e+02
/				
CH2 (S)+C2H4=CH3+C2H3				1.7700e+19 -
1.940	6790.00			
DUPLICATE				



PLOG /	1.000000e-02	1.770000e+19	-1.940000e+00	6.790000e+03
/				
PLOG /	1.000000e-01	1.680000e+19	-1.800000e+00	4.310000e+03
/				
PLOG /	1.000000e+00	4.160000e+24	-3.190000e+00	9.760000e+03
/				
PLOG /	1.000000e+01	7.890000e+24	-3.070000e+00	1.390000e+04
/				
PLOG /	1.000000e+02	7.360000e+29	-4.280000e+00	2.380000e+04
/				
CH2(S)+C2H4=CH3+C2H3				4.3000e+12
0.190	-110.41			
DUPLICATE				
PLOG /	1.000000e-02	4.300000e+12	1.900000e-01	-1.104100e+02
/				
PLOG /	1.000000e-01	2.260000e+11	5.400000e-01	4.781000e+01
/				
PLOG /	1.000000e+00	4.920000e+09	1.020000e+00	5.997700e+02
/				
PLOG /	1.000000e+01	1.470000e+08	1.330000e+00	1.228400e+03
/				
PLOG /	1.000000e+02	8.110000e+10	5.500000e-01	5.506500e+03
/				
CH3+C2H3=H+C3H5-A				4.1200e+29 -
4.950	8000.00			
DUPLICATE				
PLOG /	1.000000e-02	4.120000e+29	-4.950000e+00	8.000000e+03
/				
PLOG /	1.000000e-01	4.860000e+30	-5.030000e+00	1.130000e+04
/				
PLOG /	1.000000e+00	5.300000e+29	-4.570000e+00	1.440000e+04
/				
PLOG /	1.000000e+01	1.320000e+30	-4.540000e+00	1.930000e+04
/				
PLOG /	1.000000e+02	5.160000e+28	-4.030000e+00	2.380000e+04
/				
CH3+C2H3=H+C3H5-A				5.7300e+15 -
0.770	1195.90			
DUPLICATE				
PLOG /	1.000000e-02	5.730000e+15	-7.700000e-01	1.195900e+03
/				
PLOG /	1.000000e-01	2.060000e+13	-7.400000e-02	1.428700e+03
/				
PLOG /	1.000000e+00	4.480000e+10	6.000000e-01	1.421600e+03
/				
PLOG /	1.000000e+01	4.100000e+06	1.710000e+00	1.056900e+03
/				
PLOG /	1.000000e+02	1.370000e-01	3.910000e+00	-3.535500e+02
/				
C3H6=CH3+C2H3				1.8800e+78 -
18.700	130000.00			
DUPLICATE				
PLOG /	1.000000e-02	1.880000e+78	-1.870000e+01	1.300000e+05
/				

PLOG /	1.000000e-01	8.730000e+76	-1.790000e+01	1.320000e+05
/				
PLOG /	1.000000e+00	5.800000e+75	-1.720000e+01	1.340000e+05
/				
PLOG /	1.000000e+01	8.120000e+71	-1.580000e+01	1.360000e+05
/				
PLOG /	1.000000e+02	2.150000e+64	-1.340000e+01	1.350000e+05
/				

C3H6=CH3+C2H3 1.6900e+59 -  
 13.600 113290.00  
 DUPLICATE

PLOG /	1.000000e-02	1.690000e+59	-1.360000e+01	1.132900e+05
/				
PLOG /	1.000000e-01	2.000000e+60	-1.370000e+01	1.148900e+05
/				
PLOG /	1.000000e+00	6.700000e+54	-1.180000e+01	1.138400e+05
/				
PLOG /	1.000000e+01	1.060000e+47	-9.270000e+00	1.115100e+05
/				
PLOG /	1.000000e+02	7.290000e+38	-6.700000e+00	1.087400e+05
/				

C3H6=H+C3H5-A 9.1600e+74 -  
 17.600 120000.00  
 DUPLICATE

PLOG /	1.000000e-02	9.160000e+74	-1.760000e+01	1.200000e+05
/				
PLOG /	1.000000e-01	1.730000e+70	-1.600000e+01	1.200000e+05
/				
PLOG /	1.000000e+00	1.080000e+71	-1.590000e+01	1.248600e+05
/				
PLOG /	1.000000e+01	6.400000e+65	-1.420000e+01	1.250000e+05
/				
PLOG /	1.000000e+02	8.050000e+56	-1.150000e+01	1.220000e+05
/				

C3H6=H+C3H5-A 2.9800e+54 -  
 12.300 101200.00  
 DUPLICATE

PLOG /	1.000000e-02	2.980000e+54	-1.230000e+01	1.012000e+05
/				
PLOG /	1.000000e-01	1.370000e+43	-8.870000e+00	9.636500e+04
/				
PLOG /	1.000000e+00	6.280000e+42	-8.510000e+00	9.800400e+04
/				
PLOG /	1.000000e+01	4.730000e+35	-6.260000e+00	9.564400e+04
/				
PLOG /	1.000000e+02	4.340000e+28	-4.060000e+00	9.311400e+04
/				

H+C3H5-T=C3H6 4.9600e+60 -  
 15.200 18000.00  
 DUPLICATE

PLOG /	1.000000e-02	4.960000e+60	-1.520000e+01	1.800000e+04
/				
PLOG /	1.000000e-01	3.200000e+62	-1.510000e+01	2.010000e+04
/				

PLOG /	1.000000e+00	2.310000e+60	-1.400000e+01	2.190000e+04	
/					
PLOG /	1.000000e+01	3.690000e+54	-1.200000e+01	2.210000e+04	
/					
PLOG /	1.000000e+02	1.150000e+50	-1.040000e+01	2.330000e+04	
/					
H+C3H5-T=C3H6				1.4900e+48	-
12.000	7203.30				
DUPLICATE					
PLOG /	1.000000e-02	1.490000e+48	-1.200000e+01	7.203300e+03	
/					
PLOG /	1.000000e-01	6.760000e+46	-1.110000e+01	7.629900e+03	
/					
PLOG /	1.000000e+00	1.090000e+40	-8.660000e+00	6.447800e+03	
/					
PLOG /	1.000000e+01	2.380000e+31	-5.730000e+00	4.506000e+03	
/					
PLOG /	1.000000e+02	5.690000e+25	-3.830000e+00	3.250400e+03	
/					
H+C3H5-T=H+C3H5-A				2.1100e+17	-
1.080	1290.00				
DUPLICATE					
PLOG /	1.000000e-02	2.110000e+17	-1.080000e+00	1.290000e+03	
/					
PLOG /	1.000000e-01	9.050000e+29	-4.910000e+00	8.540000e+03	
/					
PLOG /	1.000000e+00	2.980000e+30	-4.790000e+00	1.200000e+04	
/					
PLOG /	1.000000e+01	8.220000e+28	-4.140000e+00	1.540000e+04	
/					
PLOG /	1.000000e+02	2.280000e+29	-4.120000e+00	2.090000e+04	
/					
H+C3H5-T=H+C3H5-A				6.4100e+03	
2.610	-3778.40				
DUPLICATE					
PLOG /	1.000000e-02	6.410000e+03	2.610000e+00	-3.778400e+03	
/					
PLOG /	1.000000e-01	5.190000e+14	-3.000000e-01	1.090400e+03	
/					
PLOG /	1.000000e+00	8.170000e+11	4.900000e-01	1.184600e+03	
/					
PLOG /	1.000000e+01	2.790000e+09	1.090000e+00	1.187500e+03	
/					
PLOG /	1.000000e+02	6.750000e+03	2.700000e+00	3.738000e+02	
/					
H+C3H5-T=CH3+C2H3				3.3100e+16	-
0.690	5200.00				
DUPLICATE					
PLOG /	1.000000e-02	3.310000e+16	-6.900000e-01	5.200000e+03	
/					
PLOG /	1.000000e-01	9.040000e+16	-8.100000e-01	4.800000e+03	
/					
PLOG /	1.000000e+00	2.010000e+24	-2.860000e+00	1.090000e+04	
/					

PLOG /	1.000000e+01	2.750000e+26	-3.310000e+00	1.580000e+04	
/					
PLOG /	1.000000e+02	3.150000e+32	-4.830000e+00	2.600000e+04	
/					
H+C3H5-T=CH3+C2H3				8.0400e+13	-
0.140	1150.00				
DUPLICATE					
PLOG /	1.000000e-02	8.040000e+13	-1.400000e-01	1.150000e+03	
/					
PLOG /	1.000000e-01	7.170000e+10	6.700000e-01	6.738000e+02	
/					
PLOG /	1.000000e+00	9.970000e+08	1.360000e+00	1.596400e+03	
/					
PLOG /	1.000000e+01	7.410000e+07	1.570000e+00	2.108800e+03	
/					
PLOG /	1.000000e+02	2.700000e+12	3.200000e-01	6.791800e+03	
/					
C3H6=H+C3H5-S				7.7100e+69	-
16.090	140000.00				
H+C3H6=H2+C3H5-A				3.6440e+05	
2.455	4361.20				
O2+C3H6=HO2+C3H5-A				1.2000e+20	-
1.670	46192.10				
O+C3H6=OH+C3H5-A				5.2400e+11	
0.700	5884.00				
OH+C3H6=H2O+C3H5-A				4.4600e+06	
2.072	1050.80				
HO2+C3H6=H2O2+C3H5-A				3.0700e-02	
4.403	13547.20				
CH3+C3H6=CH4+C3H5-A				2.2100e+00	
3.500	5675.00				
CH3O+C3H6=CH3OH+C3H5-A				8.4000e+10	
0.000	2600.00				
CH3O2+C3H6=CH3O2H+C3H5-A				7.6800e-02	
4.403	13547.20				
C2H5+C3H6=C2H6+C3H5-A				1.0000e+11	
0.000	9800.00				
C2H5O2+C3H6=C2H5O2H+C3H5-A				7.6800e-02	
4.403	13547.20				
H+C3H6=H2+C3H5-T				1.4980e+02	
3.381	8909.50				
O+C3H6=OH+C3H5-T				6.0300e+10	
0.700	7632.00				

OH+C3H6=H2O+C3H5-T				1.8000e+06
1.979	2235.20			
HO2+C3H6=H2O2+C3H5-T				1.5600e+04
2.820	24427.90			
O2+C3H6=HO2+C3H5-T				1.0000e+13
0.000	58770.00			
CH3+C3H6=CH4+C3H5-T				8.4000e-01
3.500	11660.00			
H+C3H6=H2+C3H5-S				5.1010e+02
3.234	12357.00			
DUPLICATE				
H+C3H6=H2+C3H5-S				3.9690e+02
3.252	12007.00			
DUPLICATE				
O2+C3H6=HO2+C3H5-S				2.0000e+13
0.000	62270.00			
O+C3H6=OH+C3H5-S				1.2000e+11
0.700	8959.10			
OH+C3H6=H2O+C3H5-S				1.8600e+05
2.369	2502.00			
HO2+C3H6=H2O2+C3H5-S				9.5700e+02
3.059	20798.60			
CH3+C3H6=CH4+C3H5-S				1.3480e+00
3.500	12850.00			
O+C3H6=HCO+C2H5				7.4500e+06
1.880	183.00			
O+C3H6=>H+CH3+CH2CO				3.0500e+06
1.880	183.00			
O+C3H6=>2H+CH3CHCO				3.0500e+06
1.880	183.00			
H+C3H6=NC3H7				1.0000e+00
1.000	0.00			
DUPLICATE				
PLOG /	1.300000e-03	7.990000e+81	-2.316100e+01	2.223900e+04
/				
PLOG /	4.000000e-02	4.240000e+68	-1.842700e+01	1.966500e+04
/				
PLOG /	1.000000e+00	1.040000e+49	-1.150000e+01	1.535900e+04
/				
PLOG /	1.000000e+01	6.200000e+41	-8.892000e+00	1.463700e+04
/				
PLOG /	1.000000e+02	1.000000e-10	0.000000e+00	0.000000e+00
/				

H+C3H6=NC3H7 1.0000e+00  
 1.000 0.00  
 DUPLICATE  
 PLOG / 1.300000e-03 1.850000e+26 -5.830000e+00 3.865800e+03  
 /  
 PLOG / 4.000000e-02 2.820000e+30 -6.490000e+00 5.470800e+03  
 /  
 PLOG / 1.000000e+00 3.780000e+28 -5.570000e+00 5.625100e+03  
 /  
 PLOG / 1.000000e+01 1.460000e+25 -4.280000e+00 5.247800e+03  
 /  
 PLOG / 1.000000e+02 4.220000e+27 -4.390000e+00 9.345800e+03  
 /

H+C3H6=CH3+C2H4 1.0000e+00  
 1.000 1.00  
 DUPLICATE  
 PLOG / 1.300000e-03 1.540000e+09 1.350000e+00 2.542000e+03  
 /  
 PLOG / 4.000000e-02 7.880000e+10 8.700000e-01 3.599600e+03  
 /  
 PLOG / 1.000000e+00 2.670000e+12 4.700000e-01 5.431100e+03  
 /  
 PLOG / 1.000000e+01 9.250000e+22 -2.600000e+00 1.289800e+04  
 /  
 PLOG / 1.000000e+02 1.320000e+23 -2.420000e+00 1.650000e+04  
 /

H+C3H6=CH3+C2H4 1.0000e+00  
 1.000 1.00  
 DUPLICATE  
 PLOG / 1.300000e-03 1.000000e-10 0.000000e+00 0.000000e+00  
 /  
 PLOG / 4.000000e-02 1.000000e-10 0.000000e+00 0.000000e+00  
 /  
 PLOG / 1.000000e+00 1.000000e-10 0.000000e+00 0.000000e+00  
 /  
 PLOG / 1.000000e+01 1.240000e+05 2.520000e+00 3.679100e+03  
 /  
 PLOG / 1.000000e+02 2.510000e+03 2.910000e+00 3.980900e+03  
 /

H+C3H6=IC3H7 1.0000e+00  
 1.000 1.00  
 DUPLICATE  
 PLOG / 1.300000e-03 1.350000e+44 -1.068000e+01 8.196400e+03  
 /  
 PLOG / 4.000000e-02 2.110000e+57 -1.423000e+01 1.514700e+04  
 /  
 PLOG / 1.000000e+00 3.260000e+61 -1.494000e+01 2.016100e+04  
 /  
 PLOG / 1.000000e+01 5.300000e+56 -1.312000e+01 2.066700e+04  
 /  
 PLOG / 1.000000e+02 1.110000e+50 -1.080000e+01 2.020200e+04  
 /

H+C3H6=IC3H7 1.0000e+00  
 1.000 1.00

DUPLICATE				
PLOG /	1.300000e-03	2.170000e+130	-3.258000e+01	1.361400e+05
/				
PLOG /	4.000000e-02	2.250000e+29	-5.840000e+00	4.241900e+03
/				
PLOG /	1.000000e+00	1.060000e+30	-5.630000e+00	5.613400e+03
/				
PLOG /	1.000000e+01	6.110000e+26	-4.440000e+00	5.182300e+03
/				
PLOG /	1.000000e+02	2.730000e+23	-3.260000e+00	4.597000e+03
/				
CH3+C2H4=NC3H7				1.0000e+00
1.000	1.00			
DUPLICATE				
PLOG /	1.300000e-03	8.670000e+48	-1.254000e+01	1.820600e+04
/				
PLOG /	4.000000e-02	1.060000e+49	-1.204000e+01	2.000100e+04
/				
PLOG /	1.000000e+00	7.670000e+47	-1.117000e+01	2.236600e+04
/				
PLOG /	1.000000e+01	1.810000e+45	-1.003000e+01	2.376900e+04
/				
PLOG /	1.000000e+02	2.040000e+40	-8.250000e+00	2.421400e+04
/				
CH3+C2H4=NC3H7				1.0000e+00
1.000	1.00			
DUPLICATE				
PLOG /	1.300000e-03	1.120000e+43	-1.130000e+01	1.308000e+04
/				
PLOG /	4.000000e-02	7.280000e+39	-9.880000e+00	1.316400e+04
/				
PLOG /	1.000000e+00	2.600000e+33	-7.460000e+00	1.241600e+04
/				
PLOG /	1.000000e+01	3.850000e+27	-5.380000e+00	1.145500e+04
/				
PLOG /	1.000000e+02	1.660000e+21	-3.170000e+00	1.024100e+04
/				
HO2+C3H6=O2+IC3H7				8.8700e+22
3.090	26586.00			-
PLOG /	1.300000e-02	1.020000e+07	1.160000e+00	1.027300e+04
/				
PLOG /	9.869000e-01	1.310000e+20	-2.580000e+00	1.907800e+04
/				
PLOG /	9.870000e+00	4.140000e+28	-4.920000e+00	2.621200e+04
/				
PLOG /	9.869000e+01	8.870000e+22	-3.090000e+00	2.658600e+04
/				
H+C3H5-A=H2+C3H4-A				1.2320e+03
3.035	2582.00			
OH+C3H5-A=H2O+C3H4-A				6.0000e+12
0.000	0.00			

CH3+C3H5-A=CH4+C3H4-A 0.320            -131.00				3.0000e+12	-
C2H5+C3H5-A=C2H6+C3H4-A 0.000            0.00				4.0000e+11	
C2H3+C3H5-A=C2H4+C3H4-A 0.000            0.00				1.0000e+12	
2C3H4-A=C3H5-A+C3H3 0.000            64746.70				5.0000e+14	
H+C3H5-S=H2+C3H4-A 0.000            0.00				3.3330e+12	
CH3+C3H5-S=CH4+C3H4-A 0.000            0.00				1.0000e+11	
H+C3H5-S=H2+C3H4-P 0.000            0.00				3.3400e+12	
CH3+C3H5-S=CH4+C3H4-P 0.000            0.00				1.0000e+11	
H+C3H5-T=H2+C3H4-P 0.000            0.00				3.3400e+12	
CH3+C3H5-T=CH4+C3H4-P 0.000            0.00				1.0000e+11	
2C3H5-A=C3H6+C3H4-A 9.300            12470.00				9.5500e+40	-
/ PLOG /	1.000000e+00	4.770000e+40	-9.300000e+00	1.247000e+04	
/ PLOG /	4.000000e+00	3.970000e+32	-6.800000e+00	9.180000e+03	
/ PLOG /	1.000000e+01	1.460000e+28	-5.500000e+00	7.410000e+03	
/					
C2H5+C3H5-A=C2H4+C3H6 0.000            0.00				4.0000e+11	
HCO+C3H5-A=CO+C3H6 0.000            0.00				6.0000e+13	
HCO+C3H5-S=CO+C3H6 0.000            0.00				9.0000e+13	
HCO+C3H5-T=CO+C3H6 0.000            0.00				9.0000e+13	
O+C3H5-S=HCO+C2H4 0.000            0.00				6.0000e+13	
OH+C3H5-S=>H+HCO+C2H4 0.000            0.00				5.0000e+12	



HO2+C3H5-S=>OH+HCO+C2H4				2.0000e+13	
0.000	0.00				
O+C3H5-T=CH3+CH2CO				6.0000e+13	
0.000	0.00				
OH+C3H5-T=>H+CH3+CH2CO				5.0000e+12	
0.000	0.00				
HO2+C3H5-T=>OH+CH3+CH2CO				2.0000e+13	
0.000	0.00				
OH+C3H5-A=>2H+C2H3CHO				5.3000e+37	-
6.710	29306.00				
PLOG /	1.000000e-01	5.300000e+37	-6.710000e+00	2.930600e+04	
/					
PLOG /	1.000000e+00	4.200000e+32	-5.160000e+00	3.012600e+04	
/					
PLOG /	1.000000e+01	1.600000e+20	-1.560000e+00	2.633000e+04	
/					
O2+C3H5-A=HO2+C3H4-A				4.9900e+15	-
1.400	22428.00				
PLOG /	1.000000e+00	4.990000e+15	-1.400000e+00	2.242800e+04	
/					
PLOG /	1.000000e+01	2.180000e+21	-2.850000e+00	3.075500e+04	
/					
O2+C3H5-A=CH2O+CH3CO				1.1900e+15	-
1.010	20128.00				
PLOG /	1.000000e+00	1.190000e+15	-1.010000e+00	2.012800e+04	
/					
PLOG /	1.000000e+01	7.140000e+15	-1.210000e+00	2.104600e+04	
/					
O2+C3H5-A=OH+C2H3CHO				1.8200e+13	-
0.410	22859.00				
PLOG /	1.000000e+00	1.820000e+13	-4.100000e-01	2.285900e+04	
/					
PLOG /	1.000000e+01	2.470000e+13	-4.500000e-01	2.301700e+04	
/					
O2+C3H5-S=HCO+CH3CHO				3.1000e+31	-
5.944	5748.40				
O2+C3H5-S=O+CH3CHCHO				5.3800e+18	-
2.140	5142.90				
O2+C3H5-S=OH+C2H3CHO				2.7000e+19	-
2.140	5142.90				
O2+C3H5-T=O+CH3COCH2				9.8600e+25	-
3.751	11255.40				
O2+C3H5-T=CH2O+CH3CO				2.5500e+20	-
2.608	1565.70				

O2+C3H5-T=HO2+C3H4-A				3.5900e+10	-
0.270	-413.60				
HO2+C3H5-A=OH+C3H5O				1.0000e+11	
0.000	0.00				
PLOG /	1.000000e-02	1.020000e+13	-1.580000e-01	-1.417000e+03	
/					
PLOG /	1.000000e-01	4.980000e+14	-6.420000e-01	-3.491000e+02	
/					
PLOG /	1.000000e+00	7.770000e+17	-1.520000e+00	2.379200e+03	
/					
PLOG /	1.000000e+01	2.930000e+15	-6.840000e-01	3.615300e+03	
/					
PLOG /	1.000000e+02	1.640000e+04	2.740000e+00	1.144400e+03	
/					
HO2+C3H5-A=AC3H5OOH				1.0000e+11	
0.000	0.00				
PLOG /	1.000000e-02	1.910000e+31	-7.230000e+00	1.336200e+03	
/					
PLOG /	1.000000e-01	6.310000e+42	-1.030000e+01	5.568900e+03	
/					
PLOG /	1.000000e+00	1.030000e+45	-1.060000e+01	7.851500e+03	
/					
PLOG /	1.000000e+01	2.790000e+37	-7.920000e+00	6.497900e+03	
/					
PLOG /	1.000000e+02	1.440000e+32	-6.010000e+00	6.053600e+03	
/					
HO2+C3H5-A=H2O+C2H3CHO				1.0000e+11	
0.000	0.00				
PLOG /	1.000000e-02	1.090000e+00	3.010000e+00	-3.421100e+03	
/					
PLOG /	1.000000e-01	6.350000e+01	2.500000e+00	-2.341400e+03	
/					
PLOG /	1.000000e+00	6.050000e+05	1.390000e+00	5.951000e+02	
/					
PLOG /	1.000000e+01	3.100000e+05	1.590000e+00	2.677600e+03	
/					
PLOG /	1.000000e+02	5.070000e-05	4.590000e+00	9.275000e+02	
/					
AC3H5OOH=H2O+C2H3CHO				1.0000e+11	
0.000	0.00				
PLOG /	1.000000e-02	1.990000e+50	-1.270000e+01	5.353190e+04	
/					
PLOG /	1.000000e-01	4.720000e+47	-1.150000e+01	5.436090e+04	
/					
PLOG /	1.000000e+00	1.500000e+40	-8.840000e+00	5.317920e+04	
/					
PLOG /	1.000000e+01	2.540000e+28	-5.000000e+00	4.991940e+04	
/					
PLOG /	1.000000e+02	1.480000e+16	-1.120000e+00	4.594930e+04	
/					
AC3H5OOH=OH+C3H5O				1.0000e+11	
0.000	0.00				

PLOG /	1.000000e-02	1.490000e+58	-1.390000e+01	5.426690e+04
/				
PLOG /	1.000000e-01	1.800000e+54	-1.240000e+01	5.419380e+04
/				
PLOG /	1.000000e+00	3.360000e+46	-9.810000e+00	5.246850e+04
/				
PLOG /	1.000000e+01	2.390000e+36	-6.540000e+00	4.942900e+04
/				
PLOG /	1.000000e+02	1.280000e+27	-3.610000e+00	4.633310e+04
/				

C3H5O=CH2O+C2H3 1.0000e+11

0.000	0.00			
PLOG /	1.000000e-03	7.260000e+06	1.820000e-01	1.781550e+04
/				
PLOG /	1.000000e-02	6.970000e+16	-2.500000e+00	2.087870e+04
/				
PLOG /	1.000000e-01	6.640000e+23	-4.230000e+00	2.356500e+04
/				
PLOG /	1.000000e+00	1.070000e+26	-4.560000e+00	2.462290e+04
/				
PLOG /	1.000000e+01	6.500000e+29	-5.370000e+00	2.664500e+04
/				
PLOG /	1.000000e+02	4.630000e+31	-5.590000e+00	2.891530e+04
/				
PLOG /	1.000000e+03	8.520000e+25	-3.610000e+00	2.786340e+04
/				

C3H5O=CH2CH2CHO 1.0000e+11

0.000	0.00			
PLOG /	1.000000e-03	5.250000e-49	1.550000e+01	-1.563990e+04
/				
PLOG /	1.000000e-01	4.440000e-22	8.380000e+00	-3.819000e+03
/				
PLOG /	1.000000e+00	6.230000e+12	-1.440000e+00	1.082920e+04
/				
PLOG /	1.000000e+01	3.480000e+42	-9.910000e+00	2.529790e+04
/				
PLOG /	1.000000e+02	1.880000e+38	-8.160000e+00	2.597450e+04
/				
PLOG /	1.000000e+03	1.670000e+21	-2.740000e+00	2.033770e+04
/				

C3H5O=H+C2H3CHO 1.0000e+11

0.000	0.00			
PLOG /	1.000000e-03	3.000000e+15	-2.310000e+00	1.466790e+04
/				
PLOG /	1.000000e-02	1.500000e+22	-3.960000e+00	1.828300e+04
/				
PLOG /	1.000000e-01	1.950000e+23	-3.990000e+00	1.914330e+04
/				
PLOG /	1.000000e+00	1.150000e+25	-4.240000e+00	2.031120e+04
/				
PLOG /	1.000000e+01	1.760000e+28	-4.890000e+00	2.276520e+04
/				
PLOG /	1.000000e+02	1.410000e+27	-4.280000e+00	2.377060e+04
/				

PLOG / 1.000000e+03 2.570000e+20 -2.060000e+00 2.204010e+04  
/

C3H5O=HCO+C2H4 1.0000e+11

0.000 0.00

PLOG / 1.000000e-03 6.620000e+16 -2.840000e+00 1.319700e+04  
/

PLOG / 1.000000e-02 1.260000e+20 -3.530000e+00 1.546920e+04  
/

PLOG / 1.000000e-01 2.130000e+21 -3.640000e+00 1.658450e+04  
/

PLOG / 1.000000e+00 1.070000e+24 -4.160000e+00 1.898500e+04  
/

PLOG / 1.000000e+01 8.420000e+25 -4.400000e+00 2.238260e+04  
/

PLOG / 1.000000e+02 1.860000e+21 -2.730000e+00 2.365880e+04  
/

PLOG / 1.000000e+03 4.750000e+08 1.140000e+00 2.092250e+04  
/

CH2CH2CHO=CH2O+C2H3 1.0000e+11

0.000 0.00

PLOG / 1.000000e-03 6.890000e-69 2.150000e+01 2.638000e+03  
/

PLOG / 1.000000e-02 5.340000e-33 1.110000e+01 1.674910e+04  
/

PLOG / 1.000000e-01 6.110000e+26 -6.010000e+00 4.411670e+04  
/

PLOG / 1.000000e+00 8.040000e+35 -8.310000e+00 4.691970e+04  
/

PLOG / 1.000000e+01 5.520000e+40 -9.190000e+00 5.050870e+04  
/

PLOG / 1.000000e+02 5.850000e+35 -7.180000e+00 5.203840e+04  
/

PLOG / 1.000000e+03 1.930000e+19 -1.940000e+00 4.844000e+04  
/

CH2CH2CHO=H+C2H3CHO 1.0000e+11

0.000 0.00

PLOG / 1.000000e-03 1.610000e+10 -1.240000e+00 3.237130e+04  
/

PLOG / 1.000000e-02 5.840000e+15 -2.610000e+00 3.287840e+04  
/

PLOG / 1.000000e-01 3.640000e+23 -4.600000e+00 3.427530e+04  
/

PLOG / 1.000000e+00 7.580000e+31 -6.630000e+00 3.789540e+04  
/

PLOG / 1.000000e+01 2.860000e+32 -6.300000e+00 3.999070e+04  
/

PLOG / 1.000000e+02 1.570000e+23 -3.140000e+00 3.801170e+04  
/

PLOG / 1.000000e+03 4.520000e+12 2.140000e-01 3.457050e+04  
/

CH2CH2CHO=HCO+C2H4 1.0000e+11

0.000 0.00

PLOG / 1.000000e-03 2.900000e+32 -7.240000e+00 2.568750e+04  
/

PLOG /	1.000000e-02	5.300000e+33	-7.280000e+00	2.710060e+04
/				
PLOG /	1.000000e-01	2.000000e+35	-7.410000e+00	2.902730e+04
/				
PLOG /	1.000000e+00	1.010000e+34	-6.700000e+00	3.001810e+04
/				
PLOG /	1.000000e+01	9.760000e+27	-4.630000e+00	2.892390e+04
/				
PLOG /	1.000000e+02	2.110000e+19	-1.850000e+00	2.623980e+04
/				
PLOG /	1.000000e+03	1.590000e+13	6.300000e-02	2.408630e+04
/				

CH2O+C2H3=H+C2H3CHO 1.0000e+11

0.000	0.00			
PLOG /	1.000000e-03	2.600000e+04	2.260000e+00	1.510300e+03
/				
PLOG /	1.000000e-02	5.130000e+04	2.170000e+00	1.675500e+03
/				
PLOG /	1.000000e-01	3.990000e+05	1.910000e+00	2.218300e+03
/				
PLOG /	1.000000e+00	1.750000e+07	1.450000e+00	3.428000e+03
/				
PLOG /	1.000000e+01	1.350000e+09	9.330000e-01	5.173000e+03
/				
PLOG /	1.000000e+02	2.240000e+11	3.570000e-01	8.001300e+03
/				
PLOG /	1.000000e+03	6.010000e+05	2.090000e+00	7.895600e+03
/				

CH2O+C2H3=HCO+C2H4 1.0000e+11

0.000	0.00			
PLOG /	1.000000e-03	1.110000e+07	1.090000e+00	1.807200e+03
/				
PLOG /	1.000000e-02	2.470000e+07	9.930000e-01	1.994900e+03
/				
PLOG /	1.000000e-01	2.470000e+08	7.040000e-01	2.596200e+03
/				
PLOG /	1.000000e+00	1.420000e+10	2.090000e-01	3.934200e+03
/				
PLOG /	1.000000e+01	3.450000e+13	-7.260000e-01	6.944300e+03
/				
PLOG /	1.000000e+02	3.310000e+14	-8.660000e-01	1.096570e+04
/				
PLOG /	1.000000e+03	1.650000e+01	3.170000e+00	9.399800e+03
/				

CH3O2+C3H5-A=CH3O+C3H5O 1.0000e+11

0.000	0.00			
PLOG /	1.000000e-02	3.330000e+12	-1.580000e-01	-1.417000e+03
/				
PLOG /	1.000000e-01	1.660000e+14	-6.420000e-01	-3.491000e+02
/				
PLOG /	1.000000e+00	2.595000e+17	-1.520000e+00	2.379200e+03
/				
PLOG /	1.000000e+01	9.780000e+14	-6.840000e-01	3.615300e+03
/				

PLOG / 1.000000e+02 5.470000e+03 2.740000e+00 1.144400e+03  
/

CH3O2+C3H5-A=AC4H7OOH 1.0000e+11  
0.000 0.00

PLOG / 1.000000e-02 1.910000e+31 -7.230000e+00 1.336200e+03  
/

PLOG / 1.000000e-01 6.310000e+42 -1.030000e+01 5.568900e+03  
/

PLOG / 1.000000e+00 1.030000e+45 -1.060000e+01 7.851500e+03  
/

PLOG / 1.000000e+01 2.790000e+37 -7.920000e+00 6.497900e+03  
/

PLOG / 1.000000e+02 3.400000e+29 -5.280000e+00 4.539800e+03  
/

AC4H7OOH=CH3O+C3H5O 1.0000e+11  
0.000 0.00

PLOG / 1.000000e-02 1.490000e+58 -1.390000e+01 5.426690e+04  
/

PLOG / 1.000000e-01 1.800000e+54 -1.240000e+01 5.419380e+04  
/

PLOG / 1.000000e+00 3.360000e+46 -9.810000e+00 5.246850e+04  
/

PLOG / 1.000000e+01 2.390000e+36 -6.540000e+00 4.942900e+04  
/

PLOG / 1.000000e+02 2.560000e+27 -3.610000e+00 4.633310e+04  
/

OH+C3H6=H+C3H5OH 2.2900e+13  
0.070 10580.00

PLOG / 1.300000e-03 2.670000e+13 5.000000e-02 1.061100e+04  
/

PLOG / 1.000000e-02 2.750000e+13 5.000000e-02 1.062300e+04  
/

PLOG / 1.300000e-02 2.870000e+13 4.000000e-02 1.063400e+04  
/

PLOG / 2.500000e-02 1.590000e+14 -1.600000e-01 1.112500e+04  
/

PLOG / 1.000000e-01 3.100000e+14 -2.200000e-01 1.140700e+04  
/

PLOG / 1.315000e-01 3.780000e+14 -2.400000e-01 1.145800e+04  
/

PLOG / 1.000000e+00 9.150000e+07 1.420000e+00 1.008700e+04  
/

PLOG / 1.000000e+01 3.660000e+05 2.140000e+00 1.041000e+04  
/

PLOG / 1.000000e+02 8.190000e+02 2.840000e+00 1.048100e+04  
/

OH+C3H6=H+CH3COCH3 2.8700e+00  
2.920 625.00

PLOG / 1.300000e-03 2.870000e+00 2.920000e+00 6.250000e+02  
/

PLOG / 1.000000e-02 4.840000e-01 2.980000e+00 7.040000e+02  
/

PLOG / 1.300000e-02 3.130000e-01 3.040000e+00 7.210000e+02  
/

PLOG /	2.500000e-02	9.330000e-03	3.620000e+00	6.770000e+02
/				
PLOG /	1.000000e-01	4.640000e-05	4.480000e+00	6.870000e+02
/				
PLOG /	1.315000e-01	2.710000e-05	4.560000e+00	7.070000e+02
/				
PLOG /	1.000000e+00	7.650000e-07	5.050000e+00	8.740000e+02
/				
PLOG /	1.000000e+01	2.640000e+15	-8.000000e-01	1.272800e+04
/				
PLOG /	1.000000e+02	4.870000e-04	4.320000e+00	4.020000e+03
/				

OH+C3H6=H+SC3H5OH 2.8700e+00  
2.920      625.00

PLOG /	1.300000e-03	3.470000e+06	1.530000e+00	4.288000e+03
/				
PLOG /	1.000000e-02	1.080000e+07	1.340000e+00	4.576000e+03
/				
PLOG /	1.300000e-02	9.760000e+06	1.330000e+00	4.589000e+03
/				
PLOG /	2.500000e-02	5.140000e+06	1.360000e+00	4.594000e+03
/				
PLOG /	1.000000e-01	3.130000e+05	1.690000e+00	4.603000e+03
/				
PLOG /	1.315000e-01	1.390000e+05	1.800000e+00	4.603000e+03
/				
PLOG /	1.000000e+00	1.030000e+02	2.830000e+00	4.530000e+03
/				
PLOG /	1.000000e+01	3.400000e-02	3.890000e+00	4.390000e+03
/				
PLOG /	1.000000e+02	4.460000e-06	5.030000e+00	4.132000e+03
/				

OH+C3H6=CH3+CH3CHO 6.9300e+05  
1.490      -536.00

PLOG /	1.300000e-03	6.930000e+05	1.490000e+00	-5.360000e+02
/				
PLOG /	1.000000e-02	5.940000e+03	2.010000e+00	-5.600000e+02
/				
PLOG /	1.300000e-02	1.100000e+03	2.220000e+00	-6.800000e+02
/				
PLOG /	2.500000e-02	1.070000e+02	2.500000e+00	-7.590000e+02
/				
PLOG /	1.000000e-01	7.830000e-01	3.100000e+00	-9.190000e+02
/				
PLOG /	1.315000e-01	3.070000e-01	3.220000e+00	-9.460000e+02
/				
PLOG /	1.000000e+00	3.160000e-04	4.050000e+00	-1.144000e+03
/				
PLOG /	1.000000e+01	7.590000e-06	4.490000e+00	-6.800000e+02
/				
PLOG /	1.000000e+02	5.450000e-05	4.220000e+00	1.141000e+03
/				

OH+C3H6=C3H6OH1-2 5.1000e+54 -  
20.700      32402.00  
DUPLICATE

PLOG /	1.300000e-03	2.300000e+78	-2.070000e+01	3.240200e+04
/				
PLOG /	1.000000e-02	2.740000e+77	-2.000000e+01	3.387400e+04
/				
PLOG /	1.300000e-02	1.070000e+76	-1.958000e+01	3.287400e+04
/				
PLOG /	2.500000e-02	3.680000e+73	-1.879000e+01	3.136100e+04
/				
PLOG /	1.000000e-01	1.040000e+68	-1.701000e+01	2.790900e+04
/				
PLOG /	1.315000e-01	7.230000e+66	-1.664000e+01	2.716200e+04
/				
PLOG /	1.000000e+00	1.950000e+59	-1.417000e+01	2.307900e+04
/				
PLOG /	1.000000e+01	7.580000e+53	-1.223000e+01	2.297600e+04
/				
PLOG /	1.000000e+02	1.430000e+48	-1.023000e+01	2.377200e+04
/				

OH+C3H6=C3H6OH1-2 1.4200e+36 -  
 15.840 11594.00

DUPLICATE

PLOG /	1.300000e-03	6.410000e+59	-1.584000e+01	1.159400e+04
/				
PLOG /	1.000000e-02	7.280000e+59	-1.551000e+01	1.289800e+04
/				
PLOG /	1.300000e-02	2.790000e+59	-1.534000e+01	1.291300e+04
/				
PLOG /	2.500000e-02	2.650000e+58	-1.493000e+01	1.293600e+04
/				
PLOG /	1.000000e-01	1.350000e+56	-1.404000e+01	1.294500e+04
/				
PLOG /	1.315000e-01	3.980000e+55	-1.385000e+01	1.288700e+04
/				
PLOG /	1.000000e+00	1.550000e+50	-1.204000e+01	1.149300e+04
/				
PLOG /	1.000000e+01	6.410000e+41	-9.350000e+00	8.921000e+03
/				
PLOG /	1.000000e+02	2.300000e+32	-6.310000e+00	6.088000e+03
/				

OH+C3H6=C3H6OH2-1 5.1000e+54 -  
 20.700 32402.00

DUPLICATE

PLOG /	1.300000e-03	2.140000e+59	-1.584000e+01	1.159400e+04
/				
PLOG /	1.000000e-02	2.430000e+59	-1.551000e+01	1.289800e+04
/				
PLOG /	1.300000e-02	9.300000e+58	-1.534000e+01	1.291300e+04
/				
PLOG /	2.500000e-02	8.830000e+57	-1.493000e+01	1.293600e+04
/				
PLOG /	1.000000e-01	4.500000e+55	-1.404000e+01	1.294500e+04
/				
PLOG /	1.315000e-01	1.330000e+55	-1.385000e+01	1.288700e+04
/				
PLOG /	1.000000e+00	5.180000e+49	-1.204000e+01	1.149300e+04
/				



PLOG /	1.000000e+01	2.140000e+41	-9.350000e+00	8.921000e+03
/				
PLOG /	1.000000e+02	7.650000e+31	-6.310000e+00	6.088000e+03
/				
OH+C3H6=C3H6OH2-1				1.4200e+36 -
15.840	11594.00			
DUPLICATE				
PLOG /	1.300000e-03	7.680000e+77	-2.070000e+01	3.240200e+04
/				
PLOG /	1.000000e-02	9.130000e+76	-2.000000e+01	3.387400e+04
/				
PLOG /	1.300000e-02	3.550000e+75	-1.958000e+01	3.287400e+04
/				
PLOG /	2.500000e-02	1.230000e+73	-1.879000e+01	3.136100e+04
/				
PLOG /	1.000000e-01	3.450000e+67	-1.701000e+01	2.790900e+04
/				
PLOG /	1.315000e-01	2.410000e+66	-1.664000e+01	2.716200e+04
/				
PLOG /	1.000000e+00	6.500000e+58	-1.417000e+01	2.307900e+04
/				
PLOG /	1.000000e+01	2.530000e+53	-1.223000e+01	2.297600e+04
/				
PLOG /	1.000000e+02	4.780000e+47	-1.023000e+01	2.377200e+04
/				
H+CH3COCH3=C3H6OH2-1				8.0000e+12
0.000	9500.00			
H+C2H5CHO=C3H6OH1-2				8.0000e+12
0.000	9500.00			
OH+C3H5-T=CH3COCH3				5.0000e+13
0.000	0.00			
O2+C3H6OH1-2=HO2+C2H5CHO				7.5000e+11
0.000	5000.00			
O2+C3H6OH1-2=HOC3H6O2				1.2000e+11
0.000	-1100.00			
O2+C3H6OH2-1=HOC3H6O2				1.2000e+11
0.000	-1100.00			
HOC3H6O2=>OH+CH2O+CH3CHO				1.2500e+10
0.000	18900.00			
SC3H5OH=C2H5CHO				8.5900e+11
0.318	55900.00			
O2+SC3H5OH=>H+HO2+C2H3CHO				3.0000e+13
0.000	39100.00			
OH+SC3H5OH=>H+H2O+C2H3CHO				3.1000e+06
2.000	-298.00			

H+SC3H5OH=>H2+H+C2H3CHO	1.7300e+05
2.500        2492.00	
O+SC3H5OH=>H+OH+C2H3CHO	1.7500e+12
0.700        5884.00	
HO2+SC3H5OH=>H+H2O2+C2H3CHO	9.6000e+03
2.600        13900.00	
CH3+SC3H5OH=>H+CH4+C2H3CHO	2.2100e+00
3.500        5675.00	
CH3O2+SC3H5OH=>H+CH3O2H+C2H3CHO	9.6000e+03
2.600        13900.00	
CH3O+SC3H5OH=>H+CH3OH+C2H3CHO	8.3000e+10
0.000        2600.00	
HO2+SC3H5OH=HO2+C2H5CHO	1.4900e+05
1.670        6810.00	
HOCHO+SC3H5OH=HOCHO+C2H5CHO	2.8100e-02
3.286        -4509.00	
C3H4-P+C3H3=C3H4-A+C3H3	6.1400e+06
1.740        10450.00	
O2+C3H4-P=HO2+C3H3	3.0000e+13
0.000        42630.00	
O+C3H4-P=OH+C3H3	7.6500e+08
1.500        8600.00	
H+C3H4-P=H2+C3H3	3.5720e+04
2.825        4821.00	
OH+C3H4-P=H2O+C3H3	2.0000e+07
2.000        5000.00	
OH+C3H4-P=>0.15CO+0.15C2H5+0.85CH3COCH2	1.6000e+12
0.000        1000.00	
HO2+C3H4-P=H2O2+C3H3	9.5500e-02
4.170        9632.80	
CH3+C3H4-P=CH4+C3H3	1.8000e+12
0.000        7700.00	
CH3O2+C3H4-P=CH3O2H+C3H3	9.5500e-02
4.170        9632.80	
C2H+C3H4-P=C2H2+C3H3	1.0000e+13
0.000        0.00	
C2H3+C3H4-P=C2H4+C3H3	1.0000e+12
0.000        7700.00	

C3H5-A+C3H4-P=C3H6+C3H3					3.0000e+12
0.000	7700.00				
H+C3H4-A=H2+C3H3					6.6250e+03
3.095	5522.00				
O2+C3H4-A=HO2+C3H3					4.0000e+13
0.000	41320.00				
OH+C3H4-A=H2O+C3H3					2.0000e+07
2.000	5000.00				
CH3+C3H4-A=CH4+C3H3					1.3000e+12
0.000	7700.00				
HO2+C3H4-A=H2O2+C3H3					3.5800e-02
4.170	9632.80				
CH3O2+C3H4-A=CH3O2H+C3H3					7.1610e-02
4.170	9632.80				
C3H5-A+C3H4-A=C3H6+C3H3					2.0000e+11
0.000	7700.00				
H+C3H4-A=H+C3H4-P					2.4400e+10
1.040	2159.00				
DUPLICATE					
PLOG /	1.000000e-03	8.490000e+10	8.900000e-01	2.503000e+03	
/					
PLOG /	3.900000e-02	1.480000e+13	2.600000e-01	4.103000e+03	
/					
PLOG /	1.000000e+00	2.480000e+15	-3.300000e-01	6.436000e+03	
/					
PLOG /	1.000000e+01	2.350000e+25	-3.230000e+00	1.316500e+04	
/					
PLOG /	1.000000e+02	1.020000e+24	-2.670000e+00	1.555200e+04	
/					
H+C3H4-A=H+C3H4-P					2.4400e+10
1.040	2159.00				
DUPLICATE					
PLOG /	1.000000e-03	1.000000e-10	0.000000e+00	0.000000e+00	
/					
PLOG /	3.900000e-02	1.000000e-10	0.000000e+00	0.000000e+00	
/					
PLOG /	1.000000e+00	1.000000e-10	0.000000e+00	0.000000e+00	
/					
PLOG /	1.000000e+01	1.790000e+07	1.980000e+00	4.521000e+03	
/					
PLOG /	1.000000e+02	4.630000e+04	2.620000e+00	4.466000e+03	
/					
H+C3H4-A=C3H5-A					2.2100e+61 -
15.250	20076.00				
DUPLICATE					
PLOG /	1.000000e-03	2.210000e+61	-1.525000e+01	2.007600e+04	
/					

PLOG /	3.900000e-02	1.240000e+52	-1.202000e+01	1.783900e+04
/				
PLOG /	1.000000e+00	4.670000e+51	-1.145000e+01	2.134000e+04
/				
PLOG /	1.000000e+01	3.750000e+48	-1.027000e+01	2.251100e+04
/				
PLOG /	1.000000e+02	4.230000e+43	-8.610000e+00	2.252200e+04
/				

H+C3H4-A=C3H5-A 2.2100e+61 -  
 15.250      20076.00

DUPLICATE

PLOG /	1.000000e-03	2.800000e+38	-8.670000e+00	8.035000e+03
/				
PLOG /	3.900000e-02	9.330000e+36	-8.190000e+00	7.462000e+03
/				
PLOG /	1.000000e+00	3.320000e+30	-5.780000e+00	6.913000e+03
/				
PLOG /	1.000000e+01	2.290000e+26	-4.320000e+00	6.163000e+03
/				
PLOG /	1.000000e+02	4.380000e+21	-2.710000e+00	5.187000e+03
/				

H+C3H4-A=C3H5-S 1.7600e+10  
 1.090      3949.00

DUPLICATE

PLOG /	4.000000e-02	3.380000e+49	-1.275000e+01	1.407200e+04
/				
PLOG /	1.000000e+00	1.370000e+51	-1.255000e+01	1.542800e+04
/				
PLOG /	1.000000e+01	3.880000e+50	-1.190000e+01	1.691500e+04
/				
PLOG /	1.000000e+02	2.170000e+49	-1.110000e+01	1.874600e+04
/				

H+C3H4-A=C3H5-S 1.7600e+10  
 1.090      3949.00

DUPLICATE

PLOG /	4.000000e-02	2.980000e+43	-1.143000e+01	8.046000e+03
/				
PLOG /	1.000000e+00	5.750000e+39	-9.510000e+00	7.458000e+03
/				
PLOG /	1.000000e+01	4.330000e+40	-9.600000e+00	6.722000e+03
/				
PLOG /	1.000000e+02	3.440000e+34	-7.360000e+00	6.150000e+03
/				

H+C3H4-A=C3H5-T 6.4400e+102 -  
 27.510      51768.00

DUPLICATE

PLOG /	1.000000e-03	6.440000e+102	-2.751000e+01	5.176800e+04
/				
PLOG /	3.900000e-02	1.550000e+53	-1.310000e+01	1.447200e+04
/				
PLOG /	1.000000e+00	1.900000e+53	-1.259000e+01	1.672600e+04
/				
PLOG /	1.000000e+01	7.950000e+51	-1.182000e+01	1.828600e+04
/				

PLOG /	1.000000e+02	4.210000e+52	-1.164000e+01	2.226200e+04	
/					
H+C3H4-A=C3H5-T				6.4400e+102	-
27.510	51768.00				
DUPLICATE					
PLOG /	1.000000e-03	1.100000e+54	-1.429000e+01	1.080900e+04	
/					
PLOG /	3.900000e-02	9.880000e+44	-1.121000e+01	8.212000e+03	
/					
PLOG /	1.000000e+00	2.810000e+40	-9.420000e+00	7.850000e+03	
/					
PLOG /	1.000000e+01	2.600000e+35	-7.570000e+00	7.147000e+03	
/					
PLOG /	1.000000e+02	9.880000e+29	-5.530000e+00	6.581000e+03	
/					
H+C3H4-A=CH3+C2H2				3.7400e+01	
3.350	57.80				
DUPLICATE					
PLOG /	1.000000e-03	1.230000e+08	1.530000e+00	4.737000e+03	
/					
PLOG /	3.900000e-02	2.720000e+09	1.200000e+00	6.834000e+03	
/					
PLOG /	1.000000e+00	1.260000e+20	-1.830000e+00	1.500300e+04	
/					
PLOG /	1.000000e+01	1.680000e+16	-6.000000e-01	1.475400e+04	
/					
PLOG /	1.000000e+02	1.370000e+17	-7.900000e-01	1.760300e+04	
/					
H+C3H4-A=CH3+C2H2				3.7400e+01	
3.350	57.80				
DUPLICATE					
PLOG /	1.000000e-03	1.000000e-10	0.000000e+00	0.000000e+00	
/					
PLOG /	3.900000e-02	1.000000e-10	0.000000e+00	0.000000e+00	
/					
PLOG /	1.000000e+00	1.230000e+04	2.680000e+00	6.335000e+03	
/					
PLOG /	1.000000e+01	3.310000e+08	1.140000e+00	8.886000e+03	
/					
PLOG /	1.000000e+02	1.280000e+06	1.710000e+00	9.774000e+03	
/					
H+C3H4-P=C3H5-T				8.8500e+51	-
13.040	12325.00				
DUPLICATE					
PLOG /	1.000000e-03	8.850000e+51	-1.304000e+01	1.232500e+04	
/					
PLOG /	3.900000e-02	3.170000e+52	-1.269000e+01	1.422600e+04	
/					
PLOG /	1.000000e+00	2.870000e+53	-1.251000e+01	1.685300e+04	
/					
PLOG /	1.000000e+01	9.510000e+51	-1.174000e+01	1.833100e+04	
/					
PLOG /	1.000000e+02	4.510000e+52	-1.158000e+01	2.220700e+04	
/					

H+C3H4-P=C3H5-T				8.8500e+51	-
13.040	12325.00				
DUPLICATE					
PLOG /	1.000000e-03	1.970000e+46	-1.191000e+01	7.456000e+03	
/					
PLOG /	3.900000e-02	2.590000e+45	-1.123000e+01	8.046000e+03	
/					
PLOG /	1.000000e+00	6.930000e+39	-9.110000e+00	7.458000e+03	
/					
PLOG /	1.000000e+01	6.800000e+34	-7.290000e+00	6.722000e+03	
/					
PLOG /	1.000000e+02	5.650000e+29	-5.390000e+00	6.150000e+03	
/					
H+C3H4-P=C3H5-S				3.3800e+49	-
12.750	14072.00				
DUPLICATE					
PLOG /	1.000000e-03	1.000000e-10	0.000000e+00	0.000000e+00	
/					
PLOG /	3.900000e-02	3.380000e+49	-1.275000e+01	1.407200e+04	
/					
PLOG /	1.000000e+00	1.370000e+51	-1.255000e+01	1.542800e+04	
/					
PLOG /	1.000000e+01	3.880000e+50	-1.190000e+01	1.691500e+04	
/					
PLOG /	1.000000e+02	2.170000e+49	-1.110000e+01	1.874600e+04	
/					
H+C3H4-P=C3H5-S				3.3800e+49	-
12.750	14072.00				
DUPLICATE					
PLOG /	1.000000e-03	1.490000e+38	-1.011000e+01	7.458000e+03	
/					
PLOG /	3.900000e-02	2.980000e+43	-1.143000e+01	8.736000e+03	
/					
PLOG /	1.000000e+00	5.750000e+39	-9.510000e+00	8.772000e+03	
/					
PLOG /	1.000000e+01	4.330000e+40	-9.600000e+00	9.401000e+03	
/					
PLOG /	1.000000e+02	3.440000e+34	-7.360000e+00	8.558000e+03	
/					
H+C3H4-P=CH3+C2H2				2.1200e+10	
1.060	3945.00				
PLOG /	1.000000e-03	2.440000e+10	1.040000e+00	3.980000e+03	
/					
PLOG /	3.900000e-02	3.890000e+10	9.890000e-01	4.114000e+03	
/					
PLOG /	1.000000e+00	3.460000e+12	4.420000e-01	5.463000e+03	
/					
PLOG /	1.000000e+01	1.720000e+14	-1.000000e-02	7.134000e+03	
/					
PLOG /	1.000000e+02	1.900000e+15	-2.900000e-01	8.306000e+03	
/					
H+C3H4-P=C3H5-A				1.1000e+60	-
14.560	28100.00				

PLOG /	1.000000e-01	1.100000e+60	-1.456000e+01	2.810000e+04
/				
PLOG /	1.000000e+00	4.910000e+60	-1.437000e+01	3.164400e+04
/				
PLOG /	2.000000e+00	3.040000e+60	-1.419000e+01	3.264200e+04
/				
PLOG /	5.000000e+00	9.020000e+59	-1.389000e+01	3.395300e+04
/				
PLOG /	1.000000e+01	2.200000e+59	-1.361000e+01	3.490000e+04
/				
PLOG /	1.000000e+02	1.600000e+55	-1.207000e+01	3.750000e+04
/				

C3H5-A=C3H5-T				3.9000e+59	-
15.420	75400.00				
PLOG /	1.000000e-01	3.900000e+59	-1.542000e+01	7.540000e+04	
/					
PLOG /	1.000000e+00	7.060000e+56	-1.408000e+01	7.586800e+04	
/					
PLOG /	2.000000e+00	4.800000e+55	-1.359000e+01	7.594900e+04	
/					
PLOG /	5.000000e+00	4.860000e+53	-1.281000e+01	7.588300e+04	
/					
PLOG /	1.000000e+01	6.400000e+51	-1.212000e+01	7.570000e+04	
/					
PLOG /	1.000000e+02	2.800000e+43	-9.270000e+00	7.400000e+04	
/					

C3H5-A=C3H5-S				1.3000e+55	-
14.530	73800.00				
PLOG /	1.000000e-01	1.300000e+55	-1.453000e+01	7.380000e+04	
/					
PLOG /	1.000000e+00	5.000000e+51	-1.302000e+01	7.330000e+04	
/					
PLOG /	1.000000e+01	9.700000e+48	-1.173000e+01	7.370000e+04	
/					
PLOG /	1.000000e+02	4.860000e+44	-9.840000e+00	7.340000e+04	
/					

CH3+C2H2=C3H5-T				6.8000e+20	-
4.160	18000.00				
PLOG /	1.000000e-01	6.800000e+20	-4.160000e+00	1.800000e+04	
/					
PLOG /	1.000000e+00	4.990000e+22	-4.390000e+00	1.885000e+04	
/					
PLOG /	2.000000e+00	6.000000e+23	-4.600000e+00	1.957100e+04	
/					
PLOG /	5.000000e+00	7.310000e+25	-5.060000e+00	2.115000e+04	
/					
PLOG /	1.000000e+01	9.300000e+27	-5.550000e+00	2.290000e+04	
/					
PLOG /	1.000000e+02	3.800000e+36	-7.580000e+00	3.130000e+04	
/					

C3H5-T=C3H5-S				1.6000e+44	-
12.160	52200.00				
PLOG /	1.000000e-01	1.600000e+44	-1.216000e+01	5.220000e+04	
/					

PLOG /	1.000000e+00	1.500000e+48	-1.271000e+01	5.390000e+04
/				
PLOG /	1.000000e+01	5.100000e+52	-1.337000e+01	5.720000e+04
/				
PLOG /	1.000000e+02	5.800000e+51	-1.243000e+01	5.920000e+04
/				
CH3+C2H2=C3H5-A				8.2000e+53 -
13.320	33200.00			
PLOG /	1.000000e-01	8.200000e+53	-1.332000e+01	3.320000e+04
/				
PLOG /	1.000000e+00	2.680000e+53	-1.282000e+01	3.573000e+04
/				
PLOG /	2.000000e+00	3.640000e+52	-1.246000e+01	3.612700e+04
/				
PLOG /	5.000000e+00	1.040000e+51	-1.189000e+01	3.647600e+04
/				
PLOG /	1.000000e+01	4.400000e+49	-1.140000e+01	3.670000e+04
/				
PLOG /	1.000000e+02	3.800000e+44	-9.630000e+00	3.760000e+04
/				
CH3+C2H2=C3H5-S				1.7800e+42 -
10.400	13647.00			
DUPLICATE				
PLOG /	1.000000e-03	1.780000e+42	-1.040000e+01	1.364700e+04
/				
PLOG /	3.900000e-02	1.520000e+44	-1.073000e+01	1.525600e+04
/				
PLOG /	1.000000e+00	1.190000e+44	-1.019000e+01	1.872800e+04
/				
PLOG /	1.000000e+01	6.020000e+43	-9.740000e+00	2.056100e+04
/				
PLOG /	1.000000e+02	1.420000e+42	-8.910000e+00	2.223500e+04
/				
CH3+C2H2=C3H5-S				1.7800e+42 -
10.400	13647.00			
DUPLICATE				
PLOG /	1.000000e-03	1.000000e-10	0.000000e+00	0.000000e+00
/				
PLOG /	3.900000e-02	1.000000e-10	0.000000e+00	0.000000e+00
/				
PLOG /	1.000000e+00	8.490000e+35	-8.430000e+00	1.235600e+04
/				
PLOG /	1.000000e+01	3.040000e+32	-7.010000e+00	1.235700e+04
/				
PLOG /	1.000000e+02	1.690000e+27	-5.070000e+00	1.169000e+04
/				
O+C3H4-P=CH3+HCCO				7.3000e+12
0.000	2250.00			
O+C3H4-P=CO+C2H4				1.0000e+13
0.000	2250.00			
O+C3H4-P=HCO+C2H3				3.2000e+12
0.000	2010.00			



O+C3H4-A=CO+C2H4					2.0000e+07
1.800	1000.00				
O+C3H4-A=CH2O+C2H2					3.0000e-03
4.610	-4243.00				
HO2+C3H4-P=>OH+CO+C2H4					3.0000e+12
0.000	19000.00				
HO2+C3H4-A=>OH+CO+C2H4					1.0000e+11
0.000	14000.00				
HO2+C3H4-A=>OH+CH2+CH2CO					4.0000e+12
0.000	19000.00				
C2H+C3H4-A=C2H2+C3H3					1.0000e+13
0.000	0.00				
OH+C3H4-A=CH2CCH2OH					1.1100e+12
0.000	-304.00				
CH2CCH2OH=CH2OH+C2H2					2.1630e+40
8.310	45110.00				-
CH2CCH2OH=CH2O+C2H3					9.2400e+10
0.870	30460.00				
CH2CCH2OH=H+C2H3CHO					1.1100e+11
0.480	36770.00				
CH2CCH2OH=HCO+C2H4					9.2400e+10
0.870	30460.00				
CH3CHCHO=H+C2H3CHO					1.0000e+00
1.000	1.00				
PLOG /	1.000000e-02	1.740000e+50	-1.173000e+01	5.287000e+04	
/					
PLOG /	1.000000e-01	1.130000e+47	-1.057000e+01	5.047900e+04	
/					
PLOG /	1.000000e+00	2.940000e+43	-9.290000e+00	4.881000e+04	
/					
PLOG /	2.500000e+00	1.160000e+42	-8.780000e+00	4.838200e+04	
/					
PLOG /	5.000000e+00	9.480000e+40	-8.400000e+00	4.809500e+04	
/					
PLOG /	1.000000e+01	7.190000e+39	-8.010000e+00	4.781800e+04	
/					
PLOG /	2.500000e+01	2.130000e+38	-7.490000e+00	4.743800e+04	
/					
PLOG /	5.000000e+01	1.420000e+37	-7.090000e+00	4.712800e+04	
/					
CH3CHCHO=H+CH3CHCO					8.3280e+12
0.020	32410.00				-
O+C3H3=CH2O+C2H					2.0000e+13
0.000	0.00				

HO2+C3H3=>OH+CO+C2H3					8.0000e+11
0.000	0.00				
HCO+C3H3=CO+C3H4-A					2.5000e+13
0.000	0.00				
HCO+C3H3=CO+C3H4-P					2.5000e+13
0.000	0.00				
C2H5+C2H=CH3+C3H3					1.8100e+13
0.000	0.00				
O2+C3H3=HCO+CH2CO					1.7000e+05
1.700	1500.00				
H+C3H3=H2+C3H2					2.1400e+05
2.520	7453.00				
OH+C3H3=H2O+C3H2					2.0000e+13
0.000	8000.00				
OH+C3H3=CH2O+C2H2					2.0000e+12
0.000	0.00				
OH+C3H3=HCO+C2H3					1.0000e+13
0.000	0.00				
OH+C3H3=CO+C2H4					1.0000e+13
0.000	0.00				
2C3H3=H+C6H5					1.0467e+54 -
11.880	28757.00				
PLOG /	3.947000e-02	1.046700e+54	-1.188000e+01	2.875700e+04	
/					
PLOG /	1.000000e+00	1.697500e+48	-9.977000e+00	3.675500e+04	
/					
PLOG /	1.000000e+01	3.671200e+26	-3.879000e+00	2.896300e+04	
/					
2C3H3=C6H6					1.8189e+74 -
18.140	31896.00				
PLOG /	3.947000e-02	1.640000e+66	-1.590200e+01	2.752900e+04	
/					
PLOG /	1.000000e+00	3.160900e+55	-1.255000e+01	2.226400e+04	
/					
PLOG /	1.000000e+01	3.888800e+50	-1.101000e+01	2.032000e+04	
/					
2C3H3=FULVENE					6.3069e+76 -
19.070	31542.00				
PLOG /	3.947000e-02	7.250000e+65	-1.601500e+01	2.503500e+04	
/					
PLOG /	1.000000e+00	1.379800e+66	-1.566000e+01	2.826000e+04	
/					
PLOG /	1.000000e+01	1.258400e+56	-1.261000e+01	2.351500e+04	
/					

C3H5-A+C3H3=>2H+FULVENE					3.2600e+29	-
5.397	3390.00					
C3H4-A+C3H3=H+C6H6					1.4000e+12	
0.000	9990.40					
OH+CH3CHCO=CO2+C2H5					1.7300e+12	
0.000	-1010.00					
OH+CH3CHCO=CO+SC2H4OH					2.0000e+12	
0.000	-1010.00					
H+CH3CHCO=CO+C2H5					4.4000e+12	
0.000	1459.00					
O+CH3CHCO=CO+CH3CHO					3.2000e+12	
0.000	-437.00					
CH3COCH3=CH3+CH3CO					2.0500e+58	-
12.796	100030.10					
PLOG /	1.000000e-02	2.050000e+58	-1.279600e+01	1.000301e+05		
/						
PLOG /	1.000000e-01	3.300000e+51	-1.057400e+01	9.822120e+04		
/						
PLOG /	1.000000e+00	1.310000e+42	-7.657000e+00	9.466060e+04		
/						
PLOG /	1.000000e+01	2.160000e+33	-4.989000e+00	9.091650e+04		
/						
PLOG /	1.000000e+02	9.400000e+28	-3.669000e+00	8.902280e+04		
/						
H+CH3COCH2=CH3COCH3					1.0000e+13	
0.000	0.00					
OH+CH3COCH3=H2O+CH3COCH2					1.2500e+05	
2.483	445.00					
H+CH3COCH3=H2+CH3COCH2					9.8000e+05	
2.430	5160.00					
O+CH3COCH3=OH+CH3COCH2					5.1300e+11	
0.211	4890.00					
CH3+CH3COCH3=CH4+CH3COCH2					3.9600e+11	
0.000	9784.00					
CH3O+CH3COCH3=CH3OH+CH3COCH2					4.3400e+11	
0.000	6460.00					
O2+CH3COCH3=HO2+CH3COCH2					6.0300e+13	
0.000	48500.00					
HO2+CH3COCH3=H2O2+CH3COCH2					1.7000e+13	
0.000	20460.00					
CH3O2+CH3COCH3=CH3O2H+CH3COCH2					1.7000e+13	
0.000	20460.00					

HCO+C2H3=C2H3CHO					1.8100e+13	
0.000	0.00					
NC4H10 (+M)=2C2H5 (+M)					1.3550e+37	-
6.036	92929.00					
LOW/	4.72e+18	0.000	49578.0/			
TROE/	0.07998	1.000e-20	3.243e+04	4858./		
NC4H10 (+M)=CH3+NC3H7 (+M)					6.6000e+52	-
10.626	100330.00					
LOW/	5.34e+17	0.000	42959.0/			
TROE/	0.09502	1.000e-20	5348.	4326./		
NC4H10=H+PC4H9					4.8000e+40	-
7.060	115302.00					
PLOG /	1.000000e-02	4.450000e+90	-2.191000e+01	1.405640e+05		
/						
PLOG /	1.000000e-01	4.630000e+76	-1.764000e+01	1.346690e+05		
/						
PLOG /	1.000000e+00	4.940000e+58	-1.232000e+01	1.254350e+05		
/						
PLOG /	1.000000e+01	4.800000e+40	-7.060000e+00	1.153020e+05		
/						
PLOG /	1.000000e+02	1.490000e+27	-3.150000e+00	1.073230e+05		
/						
NC4H10=H+SC4H9					8.5200e+38	-
6.580	110556.00					
PLOG /	1.000000e-02	3.100000e+88	-2.124000e+01	1.363550e+05		
/						
PLOG /	1.000000e-01	4.340000e+73	-1.676000e+01	1.295900e+05		
/						
PLOG /	1.000000e+00	7.390000e+55	-1.152000e+01	1.201990e+05		
/						
PLOG /	1.000000e+01	8.520000e+38	-6.580000e+00	1.105560e+05		
/						
PLOG /	1.000000e+02	5.400000e+26	-3.050000e+00	1.033130e+05		
/						
H+NC4H10=H2+PC4H9					1.7500e+05	
2.690	6450.00					
H+NC4H10=H2+SC4H9					1.3000e+06	
2.400	4471.00					
OH+NC4H10=H2O+PC4H9					1.0540e+10	
0.970	1586.00					
OH+NC4H10=H2O+SC4H9					9.3400e+07	
1.610	-35.00					
O2+NC3H7=HO2+C3H6					5.0000e+11	
0.000	3000.00					
O2+PC4H9=HO2+C4H8-1					5.0000e+11	
0.000	3000.00					

O2+SC4H9=HO2+C4H8-1	5.0000e+11	
0.000 3000.00		
O2+SC4H9=HO2+C4H8-2	5.0000e+11	
0.000 3000.00		
IC4H10 (+M)=CH3+IC3H7 (+M)	2.5200e+31	-
4.102 91495.00		
LOW/ 2.41e+19 0.000 52576.0/		
TROE/ 0.3662 815.3 60.79 1.000e+20/		
IC4H10=H+TC4H9	2.5100e+98	-
23.810 145300.00		
IC4H10=H+IC4H9	9.8500e+95	-
23.110 147600.00		
CH3+IC4H10=CH4+IC4H9	1.3600e+00	
3.650 7154.00		
H+IC4H10=H2+IC4H9	1.8100e+06	
2.540 6756.00		
OH+IC4H10=H2O+IC4H9	6.6540e+04	
2.665 -168.90		
C2H5+IC4H10=C2H6+IC4H9	1.5100e+12	
0.000 10400.00		
HO2+IC4H10=H2O2+IC4H9	6.1200e+01	
3.590 17160.00		
O+IC4H10=OH+IC4H9	4.0460e+07	
2.034 5136.00		
CH3O+IC4H10=CH3OH+IC4H9	4.8000e+11	
0.000 7000.00		
O2+IC4H10=HO2+IC4H9	9.0000e+13	
0.000 52290.00		
CH3O2+IC4H10=CH3O2H+IC4H9	2.0790e+00	
3.970 18280.00		
C2H5O2+IC4H10=C2H5O2H+IC4H9	2.5500e+13	
0.000 20460.00		
H+IC4H10=H2+TC4H9	6.0200e+05	
2.400 2583.00		
CH3+IC4H10=CH4+TC4H9	9.0400e-01	
3.460 4598.00		
OH+IC4H10=H2O+TC4H9	2.9250e+04	
2.531 -1659.00		
C2H5+IC4H10=C2H6+TC4H9	1.0000e+11	
0.000 7900.00		

HO2+IC4H10=H2O2+TC4H9					4.3320e+02
3.010	12090.00				
O+IC4H10=OH+TC4H9					1.9680e+05
2.402	1150.00				
CH3O+IC4H10=CH3OH+TC4H9					1.9000e+10
0.000	2800.00				
O2+IC4H10=HO2+TC4H9					1.0000e+13
0.000	48200.00				
CH3O2+IC4H10=CH3O2H+TC4H9					1.3660e+02
3.120	13190.00				
C2H5O2+IC4H10=C2H5O2H+TC4H9					2.8000e+12
0.000	16000.00				
IC4H10+IC4H9=IC4H10+TC4H9					2.5000e+10
0.000	7900.00				
IC4H9=TC4H9					3.5600e+10
0.880	34600.00				
IC4H9=CH3+C3H6					1.0000e+00
1.000	1.00				
PLOG /	1.000000e-01	3.150000e+41	-9.500000e+00	3.348600e+04	
/					
PLOG /	1.000000e+00	6.750000e+44	-1.007000e+01	3.720900e+04	
/					
PLOG /	1.000000e+01	7.790000e+44	-9.700000e+00	3.975100e+04	
/					
PLOG /	1.000000e+02	3.610000e+39	-7.780000e+00	3.958300e+04	
/					
IC4H8=CH3+C3H5-T					1.4200e+93 -
22.790	133825.00				
PLOG /	1.000000e-01	1.260000e+94	-2.299000e+01	1.340240e+05	
/					
PLOG /	1.000000e+00	6.760000e+93	-2.251000e+01	1.379330e+05	
/					
PLOG /	3.500000e+00	3.140000e+90	-2.137000e+01	1.378660e+05	
/					
PLOG /	1.000000e+01	9.200000e+85	-1.994000e+01	1.364980e+05	
/					
PLOG /	3.500000e+01	6.050000e+78	-1.776000e+01	1.334370e+05	
/					
PLOG /	1.000000e+02	4.870000e+71	-1.565000e+01	1.299190e+05	
/					
IC4H8=H+IC4H7					4.6600e+92 -
22.450	129059.00				
PLOG /	1.000000e-01	7.510000e+95	-2.338000e+01	1.292140e+05	
/					
PLOG /	1.000000e+00	3.590000e+88	-2.099000e+01	1.278130e+05	
/					

PLOG /	3.500000e+00	2.960000e+82	-1.912000e+01	1.254560e+05
/				
PLOG /	1.000000e+01	2.130000e+76	-1.727000e+01	1.226290e+05
/				
PLOG /	3.500000e+01	1.130000e+68	-1.482000e+01	1.184160e+05
/				
PLOG /	1.000000e+02	4.730000e+60	-1.266000e+01	1.144040e+05
/				
OH+IC4H8=H2O+IC4H7				4.3950e+04
2.678	-827.10			
O2+IC4H8=HO2+IC4H7				3.1200e+13
0.000	37450.00			
H+IC4H8=H2+IC4H7				7.2900e+05
2.455	4361.20			
O+IC4H8=OH+IC4H7				1.0500e+12
0.700	5884.00			
HO2+IC4H8=H2O2+IC4H7				2.9200e-01
4.120	12802.00			
CH3+IC4H8=CH4+IC4H7				3.2000e+12
0.000	10000.00			
CH3O+IC4H8=CH3OH+IC4H7				1.6800e+11
0.000	2600.00			
C3H5-A+IC4H8=C3H6+IC4H7				7.9400e+11
0.000	20500.00			
C3H5-S+IC4H8=C3H6+IC4H7				7.9400e+11
0.000	20500.00			
C3H5-T+IC4H8=C3H6+IC4H7				7.9400e+11
0.000	20500.00			
CH3O2+IC4H8=CH3O2H+IC4H7				1.5400e-01
4.403	13547.20			
CH3+C3H4-A=IC4H7				4.0210e+04
2.500	8847.50			
HO2+IC4H7=OH+IC4H7O				1.0000e+11
0.000	0.00			
PLOG /	1.000000e-02	1.020000e+13	-1.580000e-01	-1.417000e+03
/				
PLOG /	1.000000e-01	4.980000e+14	-6.420000e-01	-3.491000e+02
/				
PLOG /	1.000000e+00	7.770000e+17	-1.520000e+00	2.379200e+03
/				
PLOG /	1.000000e+01	2.930000e+15	-6.840000e-01	3.615300e+03
/				
PLOG /	1.000000e+02	1.640000e+04	2.740000e+00	1.144400e+03
/				

IC4H7O=CH2O+C3H5-T 1.0000e+11  
 0.000 0.00  
 PLOG / 1.000000e-03 7.260000e+06 1.820000e-01 1.781550e+04  
 /  
 PLOG / 1.000000e-02 6.970000e+16 -2.500000e+00 2.087870e+04  
 /  
 PLOG / 1.000000e-01 6.640000e+23 -4.230000e+00 2.356500e+04  
 /  
 PLOG / 1.000000e+00 1.070000e+26 -4.560000e+00 2.462290e+04  
 /  
 PLOG / 1.000000e+01 6.500000e+29 -5.370000e+00 2.664500e+04  
 /  
 PLOG / 1.000000e+02 4.630000e+31 -5.590000e+00 2.891530e+04  
 /  
 PLOG / 1.000000e+03 8.520000e+25 -3.610000e+00 2.786340e+04  
 /

IC4H7O=HCO+C3H6 1.0000e+11  
 0.000 0.00  
 PLOG / 1.000000e-03 6.620000e+16 -2.840000e+00 1.319700e+04  
 /  
 PLOG / 1.000000e-02 1.260000e+20 -3.530000e+00 1.546920e+04  
 /  
 PLOG / 1.000000e-01 2.130000e+21 -3.640000e+00 1.658450e+04  
 /  
 PLOG / 1.000000e+00 1.070000e+24 -4.160000e+00 1.898500e+04  
 /  
 PLOG / 1.000000e+01 8.420000e+25 -4.400000e+00 2.238260e+04  
 /  
 PLOG / 1.000000e+02 1.860000e+21 -2.730000e+00 2.365880e+04  
 /  
 PLOG / 1.000000e+03 4.750000e+08 1.140000e+00 2.092250e+04  
 /

CH2O+C3H5-T=HCO+C3H6 1.0000e+11  
 0.000 0.00  
 PLOG / 1.000000e-03 1.110000e+07 1.090000e+00 1.807200e+03  
 /  
 PLOG / 1.000000e-02 2.470000e+07 9.930000e-01 1.994900e+03  
 /  
 PLOG / 1.000000e-01 2.470000e+08 7.040000e-01 2.596200e+03  
 /  
 PLOG / 1.000000e+00 1.420000e+10 2.090000e-01 3.934200e+03  
 /  
 PLOG / 1.000000e+01 3.450000e+13 -7.260000e-01 6.944300e+03  
 /  
 PLOG / 1.000000e+02 3.310000e+14 -8.660000e-01 1.096570e+04  
 /  
 PLOG / 1.000000e+03 1.650000e+01 3.170000e+00 9.399800e+03  
 /

CH3O2+IC4H7=CH3O+IC4H7O 1.0000e+11  
 0.000 0.00  
 PLOG / 1.000000e-02 3.330000e+12 -1.580000e-01 -1.417000e+03  
 /  
 PLOG / 1.000000e-01 1.660000e+14 -6.420000e-01 -3.491000e+02  
 /



PLOG /	1.000000e+00	2.595000e+17	-1.520000e+00	2.379200e+03
/				
PLOG /	1.000000e+01	9.780000e+14	-6.840000e-01	3.615300e+03
/				
PLOG /	1.000000e+02	5.470000e+03	2.740000e+00	1.144400e+03
/				

H+IC4H8=IC4H9 1.0000e+00  
 1.000            0.00

DUPLICATE				
PLOG /	1.300000e-03	7.990000e+81	-2.316100e+01	2.223900e+04
/				
PLOG /	4.000000e-02	4.240000e+68	-1.842700e+01	1.966500e+04
/				
PLOG /	1.000000e+00	1.040000e+49	-1.150000e+01	1.535900e+04
/				
PLOG /	1.000000e+01	6.200000e+41	-8.892000e+00	1.463700e+04
/				

H+IC4H8=IC4H9 1.0000e+00  
 1.000            0.00

DUPLICATE				
PLOG /	1.300000e-03	1.850000e+26	-5.830000e+00	3.865800e+03
/				
PLOG /	4.000000e-02	2.820000e+30	-6.490000e+00	5.470800e+03
/				
PLOG /	1.000000e+00	3.780000e+28	-5.570000e+00	5.625100e+03
/				
PLOG /	1.000000e+01	1.460000e+25	-4.280000e+00	5.247800e+03
/				
PLOG /	1.000000e+02	4.220000e+27	-4.390000e+00	9.345800e+03
/				

H+IC4H8=TC4H9 1.0000e+00  
 1.000            1.00

DUPLICATE				
PLOG /	1.300000e-03	1.350000e+44	-1.068000e+01	8.196400e+03
/				
PLOG /	4.000000e-02	2.110000e+57	-1.423000e+01	1.514700e+04
/				
PLOG /	1.000000e+00	3.260000e+61	-1.494000e+01	2.016100e+04
/				
PLOG /	1.000000e+01	5.300000e+56	-1.312000e+01	2.066700e+04
/				
PLOG /	1.000000e+02	1.110000e+50	-1.080000e+01	2.020200e+04
/				

H+IC4H8=TC4H9 1.0000e+00  
 1.000            1.00

DUPLICATE				
PLOG /	1.300000e-03	2.170000e+130	-3.258000e+01	1.361400e+05
/				
PLOG /	4.000000e-02	2.250000e+29	-5.840000e+00	4.241900e+03
/				
PLOG /	1.000000e+00	1.060000e+30	-5.630000e+00	5.613400e+03
/				
PLOG /	1.000000e+01	6.110000e+26	-4.440000e+00	5.182300e+03
/				

PLOG / 1.000000e+02 2.730000e+23 -3.260000e+00 4.597000e+03  
/

H+IC4H8=CH3+C3H6 1.0000e+00  
1.000 1.00

DUPLICATE

PLOG / 1.300000e-03 5.130000e+08 1.350000e+00 2.542000e+03  
/

PLOG / 4.000000e-02 2.630000e+10 8.700000e-01 3.599600e+03  
/

PLOG / 1.000000e+00 8.900000e+11 4.700000e-01 5.431100e+03  
/

PLOG / 1.000000e+01 3.080000e+22 -2.600000e+00 1.289800e+04  
/

PLOG / 1.000000e+02 4.400000e+22 -2.420000e+00 1.650000e+04  
/

H+IC4H8=CH3+C3H6 1.0000e+00  
1.000 1.00

DUPLICATE

PLOG / 1.300000e-03 7.700000e+02 1.350000e+00 2.542000e+03  
/

PLOG / 4.000000e-02 3.940000e+04 8.700000e-01 3.599600e+03  
/

PLOG / 1.000000e+00 1.340000e+06 4.700000e-01 5.431100e+03  
/

PLOG / 1.000000e+01 4.130000e+04 2.520000e+00 3.679100e+03  
/

PLOG / 1.000000e+02 8.370000e+02 2.910000e+00 3.980900e+03  
/

OH+IC4H8=CH3+CH3COCH3 6.9300e+05  
1.490 -536.00

PLOG / 1.300000e-03 6.930000e+05 1.490000e+00 -5.360000e+02  
/

PLOG / 1.000000e-02 5.940000e+03 2.010000e+00 -5.600000e+02  
/

PLOG / 1.300000e-02 1.100000e+03 2.220000e+00 -6.800000e+02  
/

PLOG / 2.500000e-02 1.070000e+02 2.500000e+00 -7.590000e+02  
/

PLOG / 1.000000e-01 7.830000e-01 3.100000e+00 -9.190000e+02  
/

PLOG / 1.315000e-01 3.070000e-01 3.220000e+00 -9.460000e+02  
/

PLOG / 1.000000e+00 3.160000e-04 4.050000e+00 -1.144000e+03  
/

PLOG / 1.000000e+01 7.590000e-06 4.490000e+00 -6.800000e+02  
/

PLOG / 1.000000e+02 5.450000e-05 4.220000e+00 1.141000e+03  
/

CH3+C3H5-A(+M)=C4H8-1(+M) 1.0000e+14 -  
0.320 -262.30

LOW/ 3.91e+60 -12.810 6250.0/

TROE/ 0.1040 1606. 6.000e+04 6118./

H2/ 2.00/ H2O/ 6.00/ CH4/ 2.00/ CO/ 1.50/ CO2/ 2.00/ C2H6/ 3.00/

AR/ 0.70/

C2H5+C2H3 (+M)=C4H8-1 (+M)	1.5000e+13
0.000            0.00	
LOW/    1.55e+56    -11.790            8984.5/	
TROE/            0.1980    2278.    6.000e+04    5723./	
H2/ 2.00/    H2O/ 6.00/    CH4/ 2.00/    CO/ 1.50/    CO2/ 2.00/    C2H6/ 3.00/	
AR/ 0.70/	
H+C4H71-4 (+M)=C4H8-1 (+M)	3.6000e+13
0.000            0.00	
LOW/    3.01e+48            -9.320            5833.6/	
TROE/            0.4980    1314.    1314.    5.000e+04/	
H2/ 2.00/    H2O/ 6.00/    CH4/ 2.00/    CO/ 1.50/    CO2/ 2.00/    C2H6/ 3.00/	
AR/ 0.70/	
H+C4H71-3=C4H8-1	5.0000e+13
0.000            5000.00	
CH3+C3H5-S (+M)=C4H8-2 (+M)	5.0000e+13
0.000            0.00	
LOW/    8.54e+58            -11.940            9769.8/	
TROE/            0.1750    1341.    6.000e+04    1.014e+04/	
H2/ 2.00/    H2O/ 6.00/    CH4/ 2.00/    CO/ 1.50/    CO2/ 2.00/    C2H6/ 3.00/	
AR/ 0.70/    C2H2/ 3.00/    C2H4/ 3.00/	
C4H8-2=CH3+C3H5-A	7.5000e+65 -
15.600            97300.00	
C4H8-2=H+C4H71-3	4.6000e+84 -
20.030            132787.00	
OH+C4H8-1=H2O+C4H71-3	7.7690e+05
2.200            -437.18	
OH+C4H8-1=H2O+C4H71-4	8.6000e+06
2.030            2623.10	
OH+C4H8-2=H2O+C4H71-3	4.4600e+06
2.072            1050.80	
HO2+C4H8-1=H2O2+C4H71-3	7.8200e-01
3.970            11702.00	
HO2+C4H8-2=H2O2+C4H71-3	6.9000e-01
4.000            12103.00	
HO2+C4H8-1=H2O2+C4H71-4	4.0800e+01
3.590            17160.00	
H+C4H8-1=H2+C4H71-4	3.8400e+04
2.870            6611.00	
H+C4H8-1=H2+C4H71-3	2.4200e+03
3.050            1995.00	
H+C4H8-2=H2+C4H71-3	5.6200e+02
3.500            1627.00	

O+C4H8-1=OH+C4H71-3	1.7500e+11
0.700        5884.00	
O+C4H8-2=OH+C4H71-3	2.1900e+11
0.810        7550.00	
O+C4H8-1=OH+C4H71-4	1.1300e+14
0.000        7850.00	
O2+C4H8-1=HO2+C4H71-3	1.0000e+14
0.000        37190.00	
O2+C4H8-2=HO2+C4H71-3	2.0000e+14
0.000        39390.00	
O2+C4H8-1=HO2+C4H71-4	6.0000e+13
0.000        52340.00	
CH3+C4H8-1=CH4+C4H71-3	2.2100e+00
3.500        5675.00	
CH3+C4H8-1=CH4+C4H71-4	4.5200e-01
3.650        7154.00	
CH3+C4H8-2=CH4+C4H71-3	7.1400e+00
3.570        7642.00	
CH3O2+C4H8-1=CH3O2H+C4H71-3	2.7000e+04
0.700        5884.00	
CH3O2+C4H8-1=CH3O2H+C4H71-4	2.3800e+03
2.550        16490.00	
CH3O+C4H8-1=CH3OH+C4H71-3	4.0000e+01
2.900        8609.00	
CH3O+C4H8-1=CH3OH+C4H71-4	2.1700e+11
0.000        6458.00	
CH3O+C4H8-2=CH3OH+C4H71-3	1.8000e+01
2.950        11990.00	
C3H5-A+C4H8-1=C3H6+C4H71-3	7.9000e+10
0.000        12400.00	
C2H5O2+C4H8-1=C2H5O2H+C4H71-3	1.4000e+12
0.000        14900.00	
C2H5+C4H71-3=C2H4+C4H8-1	2.5900e+12
0.000        -131.00	
CH3O+C4H71-3=CH2O+C4H8-1	2.4100e+13
0.000        0.00	
C4H71-3=H+C4H6	8.5300e+07
1.950        47490.11	

C4H71-4=C2H4+C2H3					2.8400e+10
0.990	38998.80				
C4H71-4=H+C4H6					1.3200e+05
2.280	33245.86				
C4H71-3=C4H71-4					5.6200e-12
7.190	36200.82				
HO2+C4H71-3=OH+C4H71-O					1.0000e+00
1.000	1.00				
PLOG /	1.000000e-02	6.900000e+20	-2.680000e+00	2.290000e+02	
/					
PLOG /	1.000000e-01	4.500000e+22	-3.180000e+00	1.760000e+03	
/					
PLOG /	1.000000e+00	8.610000e+27	-4.630000e+00	6.415000e+03	
/					
PLOG /	2.000000e+00	1.920000e+30	-5.280000e+00	8.578000e+03	
/					
PLOG /	5.000000e+00	5.460000e+33	-6.220000e+00	1.187900e+04	
/					
PLOG /	1.000000e+01	2.980000e+36	-6.970000e+00	1.460000e+04	
/					
PLOG /	3.000000e+01	5.580000e+40	-8.140000e+00	1.904000e+04	
/					
PLOG /	5.000000e+01	4.440000e+42	-8.670000e+00	2.107100e+04	
/					
CH2O+C3H5-S=HCO+C3H6					1.6500e+01
3.170	9399.80				
CH3O2+C4H71-3=CH3O+C4H71-O					1.0000e+00
1.000	1.00				
PLOG /	1.000000e-02	3.450000e+20	-2.680000e+00	2.290000e+02	
/					
PLOG /	1.000000e-01	2.250000e+22	-3.180000e+00	1.760000e+03	
/					
PLOG /	1.000000e+00	4.310000e+27	-4.630000e+00	6.415000e+03	
/					
PLOG /	2.000000e+00	9.600000e+29	-5.280000e+00	8.578000e+03	
/					
PLOG /	5.000000e+00	2.730000e+33	-6.220000e+00	1.187900e+04	
/					
PLOG /	1.000000e+01	1.490000e+36	-6.970000e+00	1.460000e+04	
/					
PLOG /	3.000000e+01	2.790000e+40	-8.140000e+00	1.904000e+04	
/					
PLOG /	5.000000e+01	2.220000e+42	-8.670000e+00	2.107100e+04	
/					
C2H5O2+C4H71-3=C2H5O+C4H71-O					3.8000e+12
0.000	-1200.00				
C4H71-O=CH3+C2H3CHO					7.9400e+14
0.000	19000.00				
O+C4H71-3=CH3+C2H3CHO					6.0300e+13
0.000	0.00				

H+C4H8-1=C2H5+C2H4 1.0000e+00  
 1.000 1.00  
 DUPLICATE  
 PLOG / 1.000000e-03 2.550000e+06 1.930000e+00 5.564000e+03  
 /  
 PLOG / 1.000000e-02 5.560000e+06 1.830000e+00 5.802000e+03  
 /  
 PLOG / 1.000000e-01 1.210000e+09 1.180000e+00 7.472000e+03  
 /  
 PLOG / 1.000000e+00 9.470000e+16 -1.030000e+00 1.341300e+04  
 /  
 PLOG / 1.000000e+01 4.500000e+28 -4.240000e+00 2.361800e+04  
 /  
 PLOG / 1.000000e+02 7.020000e+32 -5.220000e+00 3.175400e+04  
 /

H+C4H8-1=C2H5+C2H4 1.0000e+00  
 1.000 1.00  
 DUPLICATE  
 PLOG / 1.000000e-03 3.450000e+07 1.810000e+00 2.263000e+03  
 /  
 PLOG / 1.000000e-02 8.060000e+07 1.710000e+00 2.522000e+03  
 /  
 PLOG / 1.000000e-01 1.180000e+10 1.100000e+00 4.077000e+03  
 /  
 PLOG / 1.000000e+00 6.020000e+15 -4.900000e-01 8.452000e+03  
 /  
 PLOG / 1.000000e+01 7.580000e+21 -2.140000e+00 1.424500e+04  
 /  
 PLOG / 1.000000e+02 2.290000e+21 -1.870000e+00 1.724300e+04  
 /

H+C4H8-1=CH3+C3H6 1.0000e+00  
 1.000 1.00  
 DUPLICATE  
 PLOG / 1.000000e-03 7.830000e+09 1.170000e+00 1.442000e+03  
 /  
 PLOG / 1.000000e-02 3.390000e+10 1.000000e+00 1.895000e+03  
 /  
 PLOG / 1.000000e-01 3.700000e+13 1.400000e-01 4.127000e+03  
 /  
 PLOG / 1.000000e+00 4.570000e+19 -1.540000e+00 9.061000e+03  
 /  
 PLOG / 1.000000e+01 8.570000e+23 -2.660000e+00 1.414000e+04  
 /  
 PLOG / 1.000000e+02 1.320000e+20 -1.460000e+00 1.538300e+04  
 /

H+C4H8-1=CH3+C3H6 1.0000e+00  
 1.000 1.00  
 DUPLICATE  
 PLOG / 1.000000e-03 1.800000e+06 1.760000e+00 5.900000e+03  
 /  
 PLOG / 1.000000e-02 3.460000e+06 1.680000e+00 6.100000e+03  
 /  
 PLOG / 1.000000e-01 4.020000e+08 1.100000e+00 7.574000e+03  
 /

PLOG / 1.000000e+00 1.210000e+16 -9.900000e-01 1.317500e+04  
/  
PLOG / 1.000000e+01 7.140000e+27 -4.230000e+00 2.331900e+04  
/  
PLOG / 1.000000e+02 1.000000e+33 -5.490000e+00 3.192200e+04  
/

H+C4H8-1=PC4H9 1.0000e+00  
1.000 1.00

DUPLICATE  
PLOG / 1.000000e-03 1.350000e+15 -2.810000e+00 1.570000e+03  
/  
PLOG / 1.000000e-02 5.200000e+16 -2.970000e+00 1.992000e+03  
/  
PLOG / 1.000000e-01 1.910000e+21 -3.970000e+00 4.636000e+03  
/  
PLOG / 1.000000e+00 1.900000e+31 -6.460000e+00 1.196800e+04  
/  
PLOG / 1.000000e+01 2.100000e+40 -8.600000e+00 2.105800e+04  
/  
PLOG / 1.000000e+02 1.440000e+37 -7.210000e+00 2.489600e+04  
/

H+C4H8-1=PC4H9 1.0000e+00  
1.000 1.00

DUPLICATE  
PLOG / 1.000000e-03 4.330000e+20 -4.160000e+00 -2.630000e+02  
/  
PLOG / 1.000000e-02 1.780000e+22 -4.330000e+00 1.860000e+02  
/  
PLOG / 1.000000e-01 1.980000e+26 -5.180000e+00 2.518000e+03  
/  
PLOG / 1.000000e+00 3.780000e+32 -6.630000e+00 7.265000e+03  
/  
PLOG / 1.000000e+01 8.790000e+34 -6.910000e+00 1.095200e+04  
/  
PLOG / 1.000000e+02 7.800000e+28 -4.790000e+00 1.035500e+04  
/

H+C4H8-1=SC4H9 1.0000e+00  
1.000 1.00

DUPLICATE  
PLOG / 1.000000e-03 4.070000e+22 -4.510000e+00 -7.710000e+02  
/  
PLOG / 1.000000e-02 3.900000e+24 -4.780000e+00 -3.400000e+01  
/  
PLOG / 1.000000e-01 2.030000e+29 -5.810000e+00 2.970000e+03  
/  
PLOG / 1.000000e+00 3.530000e+34 -6.950000e+00 7.525000e+03  
/  
PLOG / 1.000000e+01 1.190000e+34 -6.420000e+00 9.810000e+03  
/  
PLOG / 1.000000e+02 1.370000e+26 -3.790000e+00 8.012000e+03  
/

H+C4H8-1=SC4H9 1.0000e+00  
1.000 1.00

DUPLICATE

PLOG /	1.000000e-03	3.520000e+12	-2.150000e+00	1.466000e+03
/				
PLOG /	1.000000e-02	1.020000e+14	-2.280000e+00	1.799000e+03
/				
PLOG /	1.000000e-01	1.160000e+18	-3.130000e+00	4.049000e+03
/				
PLOG /	1.000000e+00	5.220000e+27	-5.530000e+00	1.096300e+04
/				
PLOG /	1.000000e+01	4.330000e+37	-7.920000e+00	2.035400e+04
/				
PLOG /	1.000000e+02	2.220000e+36	-7.060000e+00	2.520300e+04
/				

H+C4H8-2=C2H5+C2H4 1.0000e+00

1.000	1.00			
PLOG /	1.000000e-03	8.960000e+06	1.860000e+00	6.209000e+03
/				
PLOG /	1.000000e-02	1.920000e+07	1.770000e+00	6.443000e+03
/				
PLOG /	1.000000e-01	3.970000e+09	1.110000e+00	8.097000e+03
/				
PLOG /	1.000000e+00	3.010000e+17	-1.090000e+00	1.402300e+04
/				
PLOG /	1.000000e+01	1.880000e+29	-4.330000e+00	2.429700e+04
/				
PLOG /	1.000000e+02	5.150000e+33	-5.390000e+00	3.260100e+04
/				

H+C4H8-2=CH3+C3H6 1.0000e+00

1.000	1.00			
PLOG /	1.000000e-03	6.390000e+09	1.290000e+00	1.834000e+03
/				
PLOG /	1.000000e-02	2.600000e+10	1.120000e+00	2.267000e+03
/				
PLOG /	1.000000e-01	2.480000e+13	2.900000e-01	4.456000e+03
/				
PLOG /	1.000000e+00	2.910000e+19	-1.390000e+00	9.365000e+03
/				
PLOG /	1.000000e+01	6.130000e+23	-2.530000e+00	1.446300e+04
/				
PLOG /	1.000000e+02	1.230000e+20	-1.350000e+00	1.576200e+04
/				

H+C4H8-2=PC4H9 1.0000e+00

1.000	1.00			
PLOG /	1.000000e-03	3.900000e+14	-2.550000e+00	1.729000e+03
/				
PLOG /	1.000000e-02	1.410000e+16	-2.710000e+00	2.133000e+03
/				
PLOG /	1.000000e-01	4.310000e+20	-3.690000e+00	4.719000e+03
/				
PLOG /	1.000000e+00	4.030000e+30	-6.170000e+00	1.202000e+04
/				
PLOG /	1.000000e+01	5.190000e+39	-8.330000e+00	2.113700e+04
/				
PLOG /	1.000000e+02	5.170000e+36	-6.980000e+00	2.506300e+04
/				



H+C4H8-2=SC4H9 1.0000e+00  
 1.000 1.00  
 PLOG / 1.000000e-03 8.340000e+21 -4.210000e+00 -6.020000e+02  
 /  
 PLOG / 1.000000e-02 6.790000e+23 -4.460000e+00 8.200000e+01  
 /  
 PLOG / 1.000000e-01 2.850000e+28 -5.470000e+00 3.003000e+03  
 /  
 PLOG / 1.000000e+00 5.450000e+33 -6.610000e+00 7.559000e+03  
 /  
 PLOG / 1.000000e+01 2.330000e+33 -6.110000e+00 9.893000e+03  
 /  
 PLOG / 1.000000e+02 3.270000e+25 -3.510000e+00 8.145000e+03  
 /

H+C4H8-1=H+C4H8-2 1.0000e+00  
 1.000 1.00  
 DUPLICATE  
 PLOG / 1.000000e-03 2.980000e+07 1.860000e+00 3.575000e+03  
 /  
 PLOG / 1.000000e-02 6.110000e+07 1.770000e+00 3.794000e+03  
 /  
 PLOG / 1.000000e-01 4.780000e+09 1.240000e+00 5.152000e+03  
 /  
 PLOG / 1.000000e+00 1.020000e+15 -2.500000e-01 9.233000e+03  
 /  
 PLOG / 1.000000e+01 6.510000e+20 -1.820000e+00 1.480600e+04  
 /  
 PLOG / 1.000000e+02 4.440000e+19 -1.370000e+00 1.740900e+04  
 /

H+C4H8-1=H+C4H8-2 1.0000e+00  
 1.000 1.00  
 DUPLICATE  
 PLOG / 1.000000e-03 1.550000e+04 2.320000e+00 7.049000e+03  
 /  
 PLOG / 1.000000e-02 2.360000e+04 2.270000e+00 7.177000e+03  
 /  
 PLOG / 1.000000e-01 6.600000e+05 1.860000e+00 8.201000e+03  
 /  
 PLOG / 1.000000e+00 1.150000e+12 1.100000e-01 1.278900e+04  
 /  
 PLOG / 1.000000e+01 8.800000e+23 -3.170000e+00 2.254600e+04  
 /  
 PLOG / 1.000000e+02 3.720000e+31 -5.160000e+00 3.223400e+04  
 /

SC4H9=PC4H9 1.0000e+00  
 1.000 1.00  
 PLOG / 1.000000e-03 9.600000e+37 -1.104000e+01 3.884000e+04  
 /  
 PLOG / 1.000000e-02 6.050000e+40 -1.126000e+01 3.946100e+04  
 /  
 PLOG / 1.000000e-01 1.640000e+47 -1.249000e+01 4.311200e+04  
 /  
 PLOG / 1.000000e+00 6.530000e+55 -1.427000e+01 5.035100e+04  
 /

PLOG / 1.000000e+01 2.130000e+56 -1.371000e+01 5.486600e+04  
/  
PLOG / 1.000000e+02 6.020000e+45 -1.007000e+01 5.339900e+04  
/

PC4H9=C2H5+C2H4 1.0000e+00  
1.000 1.00  
PLOG / 1.000000e-03 3.440000e+34 -8.100000e+00 2.839700e+04  
/  
PLOG / 1.000000e-02 1.110000e+39 -9.050000e+00 3.189100e+04  
/  
PLOG / 1.000000e-01 7.740000e+42 -9.780000e+00 3.577100e+04  
/  
PLOG / 1.000000e+00 7.470000e+43 -9.670000e+00 3.872200e+04  
/  
PLOG / 1.000000e+01 2.060000e+39 -7.970000e+00 3.895500e+04  
/  
PLOG / 1.000000e+02 1.480000e+29 -4.710000e+00 3.595000e+04  
/

PC4H9=CH3+C3H6 1.0000e+00  
1.000 1.00  
PLOG / 1.000000e-03 3.710000e+25 -5.810000e+00 3.496500e+04  
/  
PLOG / 1.000000e-02 1.850000e+27 -6.010000e+00 3.548100e+04  
/  
PLOG / 1.000000e-01 2.460000e+32 -7.160000e+00 3.863700e+04  
/  
PLOG / 1.000000e+00 2.050000e+42 -9.610000e+00 4.641500e+04  
/  
PLOG / 1.000000e+01 4.980000e+48 -1.097000e+01 5.445600e+04  
/  
PLOG / 1.000000e+02 2.230000e+42 -8.680000e+00 5.660100e+04  
/

SC4H9=C2H5+C2H4 1.0000e+00  
1.000 1.00  
PLOG / 1.000000e-03 8.300000e+25 -5.750000e+00 3.934300e+04  
/  
PLOG / 1.000000e-02 4.120000e+27 -5.940000e+00 3.985900e+04  
/  
PLOG / 1.000000e-01 5.570000e+32 -7.100000e+00 4.302900e+04  
/  
PLOG / 1.000000e+00 4.540000e+42 -9.540000e+00 5.083900e+04  
/  
PLOG / 1.000000e+01 1.060000e+49 -1.090000e+01 5.889900e+04  
/  
PLOG / 1.000000e+02 9.940000e+42 -8.700000e+00 6.120300e+04  
/

SC4H9=CH3+C3H6 1.0000e+00  
1.000 1.00  
PLOG / 1.000000e-03 2.890000e+40 -9.760000e+00 3.360100e+04  
/  
PLOG / 1.000000e-02 1.800000e+44 -1.050000e+01 3.700700e+04  
/  
PLOG / 1.000000e-01 2.510000e+46 -1.073000e+01 4.023700e+04  
/

PLOG /	1.000000e+00	4.740000e+44	-9.850000e+00	4.184100e+04	
/					
PLOG /	1.000000e+01	3.790000e+37	-7.440000e+00	4.060400e+04	
/					
PLOG /	1.000000e+02	4.790000e+26	-4.010000e+00	3.689800e+04	
/					
O+C4H8-1=HCO+NC3H7				7.4500e+06	
1.880	183.00				
O+C4H8-1=>H+C2H5+CH2CO				3.0500e+06	
1.880	183.00				
O+C4H8-2=>CO+CH3+C2H5				7.4500e+06	
1.880	183.00				
O+C4H8-2=>H+C2H5+CH2CO				3.0500e+06	
1.880	183.00				
C4H6=H2+C4H4				2.5000e+15	
0.000	94700.00				
H+C4H6=C2H4+C2H3				6.4800e+32	-
4.910	26478.00				
PLOG /	1.000000e-01	8.640000e+33	-5.380000e+00	2.326400e+04	
/					
PLOG /	1.000000e+00	6.480000e+32	-4.910000e+00	2.647800e+04	
/					
PLOG /	1.000000e+01	1.170000e+20	-1.140000e+00	2.302700e+04	
/					
PLOG /	1.000000e+02	5.670000e+03	3.510000e+00	1.641500e+04	
/					
H+C4H6=CH3+C3H4-P				2.0000e+12	
0.000	7000.00				
H+C4H6=CH3+C3H4-A				2.0000e+12	
0.000	7000.00				
O+C4H6=C2H2+C2H4O1-2				1.0000e+08	
1.450	-860.00				
OH+C4H6=CH3+C2H3CHO				1.3700e+12	
0.000	-1040.00				
OH+C4H6=CH2O+C3H5-A				1.3700e+12	
0.000	-1040.00				
C2H3+C2H2=H+C4H4				7.2000e+13	-
0.480	6100.00				
PLOG /	1.320000e-02	7.200000e+13	-4.800000e-01	6.100000e+03	
/					
PLOG /	2.630000e-02	5.000000e+14	-7.100000e-01	6.700000e+03	
/					
PLOG /	1.200000e-01	4.600000e+16	-1.250000e+00	8.400000e+03	
/					
PLOG /	1.000000e+00	2.000000e+18	-1.680000e+00	1.060000e+04	
/					

PLOG /	1.000000e+01	4.900000e+16	-1.130000e+00	1.180000e+04	
/					
2C2H3=C4H6				7.0000e+57	-
13.820	17629.00				
PLOG /	2.630000e-02	7.000000e+57	-1.382000e+01	1.762900e+04	
/					
PLOG /	1.200000e-01	1.500000e+52	-1.197000e+01	1.605600e+04	
/					
PLOG /	1.000000e+00	1.500000e+42	-8.840000e+00	1.248300e+04	
/					
CH2+C3H3=H+C4H4				5.0000e+13	
0.000	0.00				
O+C4H4=HCO+C3H3				6.0000e+08	
1.450	-860.00				
OH+C4H4=CH2O+C3H3				5.0000e+12	
0.000	0.00				
HCCO+C3H3=CO+C4H4				2.5000e+13	
0.000	0.00				
C2H2+C2H=H+C4H2				9.6000e+13	
0.000	0.00				
OH+C4H2=CO+C3H3				2.5800e+19	-
2.440	3034.00				
H+C6H5 (+M)=C6H6 (+M)				9.7900e+13	
0.150	0.00				
LOW/	6.60e+75	-16.300	7000.0/		
TROE/	1.000	0.1000	584.9	6113./	
H2/ 2.00/	H2O/ 6.00/	CH4/ 2.00/	CO/ 1.50/	CO2/ 2.00/	
FULVENE=C6H6				2.9500e+31	-
4.970	88470.00				
FULVENE=H+C6H5				8.5110e+24	-
2.505	113330.00				
H+C6H6=H+FULVENE				8.4300e+32	-
4.950	51244.00				
H+C6H6=H2+C6H5				1.4200e+08	
1.770	6570.00				
OH+C6H6=H2O+C6H5				2.0200e+03	
2.858	1289.41				
O+C6H6=OH+C6H5				7.8000e+06	
2.153	9205.60				
O2+C6H6=HO2+C6H5				9.0000e+07	
1.989	53168.67				

HO2+C6H6=H2O2+C6H5 3.650        22217.30	4.2000e+01	
HCO+C6H6=CH2O+C6H5 0.000        25426.59	1.4930e+13	
CH3+C6H6=CH4+C6H5 0.000        14628.78	4.6140e+12	
H+FULVENE=>H2+C6H5 1.770        6570.00	1.4200e+08	
OH+FULVENE=>H2O+C6H5 2.858        1289.41	2.0200e+03	
O+FULVENE=>OH+C6H5 2.153        9205.60	7.8000e+06	
O2+FULVENE=>HO2+C6H5 1.989        53168.67	9.0000e+07	
HO2+FULVENE=>H2O2+C6H5 3.650        22217.30	4.2000e+01	
HCO+FULVENE=>CH2O+C6H5 0.000        25426.59	1.4930e+13	
CH3+FULVENE=>CH4+C6H5 0.000        14628.78	4.6140e+12	
HCO+C6H5=CO+C6H6 2.190        38.00	8.5500e+04	
C6H5=>H+C2H2+C4H2 0.620        77294.00	4.3000e+12	
C4H6=>H+C4H5 6.270        112353.00 DUPLICATE	5.7000e+36	-
C4H6=H+C4H5 8.620        123608.00 DUPLICATE	5.3000e+44	-
H+C4H6=H2+C4H5 1.910        12885.00	2.3200e+08	
HO2+C4H5=O2+C4H6 0.000        0.00	6.0000e+11	
O+C4H6=OH+C4H5 1.900        3740.00	7.5000e+06	
OH+C4H6=H2O+C4H5 2.000        3430.00	6.2000e+06	
H2O2+C4H5=HO2+C4H6 0.000        -596.00	1.2100e+10	

CH3+C4H6=CH4+C4H5				2.0000e+14
0.000	22800.00			
C2H3+C4H6=C2H4+C4H5				5.0000e+13
0.000	22800.00			
C3H3+C4H6=C3H4-A+C4H5				1.0000e+13
0.000	22500.00			
C3H5-A+C4H6=C3H6+C4H5				1.0000e+13
0.000	22500.00			
C2H3+C2H2=C4H5				1.1000e+31 -
7.140	5600.00			
PLOG /	1.320000e-02	1.100000e+31	-7.140000e+00	5.600000e+03
/				
PLOG /	2.630000e-02	1.100000e+32	-7.330000e+00	6.200000e+03
/				
PLOG /	1.200000e-01	2.400000e+31	-6.950000e+00	5.600000e+03
/				
PLOG /	1.000000e+00	9.300000e+38	-8.760000e+00	1.200000e+04
/				
PLOG /	1.000000e+01	8.100000e+37	-8.090000e+00	1.340000e+04
/				
2C2H3=H+C4H5				1.1000e+24 -
3.280	12395.00			
PLOG /	2.630000e-02	1.100000e+24	-3.280000e+00	1.239500e+04
/				
PLOG /	1.200000e-01	4.600000e+24	-3.380000e+00	1.465000e+04
/				
PLOG /	1.000000e+00	2.400000e+20	-2.040000e+00	1.536100e+04
/				
H+C4H4=C4H5				1.2000e+51 -
12.570	12300.00			
DUPLICATE				
PLOG /	1.320000e-02	1.200000e+51	-1.257000e+01	1.230000e+04
/				
PLOG /	2.630000e-02	4.200000e+50	-1.234000e+01	1.250000e+04
/				
PLOG /	1.200000e-01	1.100000e+50	-1.194000e+01	1.340000e+04
/				
PLOG /	1.000000e+00	1.300000e+51	-1.192000e+01	1.650000e+04
/				
PLOG /	1.000000e+01	6.200000e+45	-1.008000e+01	1.580000e+04
/				
H+C4H4=C4H5				6.1000e+53 -
13.190	14200.00			
DUPLICATE				
PLOG /	1.320000e-02	6.100000e+53	-1.319000e+01	1.420000e+04
/				
PLOG /	2.630000e-02	9.600000e+52	-1.285000e+01	1.430000e+04
/				
PLOG /	1.200000e-01	2.100000e+52	-1.244000e+01	1.550000e+04
/				

PLOG /	1.000000e+00	4.900000e+51	-1.192000e+01	1.770000e+04	
/					
PLOG /	1.000000e+01	1.500000e+48	-1.058000e+01	1.880000e+04	
/					
H+C4H5=H2+C4H4				1.5000e+13	
0.000	0.00				
OH+C4H5=H2O+C4H4				2.0000e+12	
0.000	0.00				
HCO+C4H5=CO+C4H6				5.0000e+12	
0.000	0.00				
HO2+C4H5=>OH+C2H3+CH2CO				6.6000e+12	
0.000	0.00				
O2+C4H5=HCO+C2H3CHO				9.2000e+16	-
1.390	1010.00				
O2+C4H5=>H+CO+C2H3CHO				5.1900e+15	-
1.260	3312.62				
C2H2+C4H5=H+FULVENE				1.7400e+19	-
1.860	12384.00				
C2H2+C4H5=H+C6H6				1.3700e+16	-
1.000	8896.00				
PLOG /	1.000000e-02	1.370000e+16	-1.000000e+00	8.896000e+03	
/					
PLOG /	2.500000e-02	2.940000e+16	-1.090000e+00	9.259000e+03	
/					
PLOG /	1.000000e-01	1.370000e+16	-1.000000e+00	8.898000e+03	
/					
PLOG /	1.000000e+00	1.385000e+16	-1.000000e+00	8.900000e+03	
/					
PLOG /	1.000000e+01	1.690000e+16	-1.030000e+00	8.967000e+03	
/					
PLOG /	1.000000e+02	1.650000e+16	-1.010000e+00	9.480000e+03	
/					
C2H2+C4H4=C6H6				4.4700e+11	
0.000	30010.00				
O+C4H6=CH2O+C3H4-A				2.2400e+11	
0.679	2150.00				
PLOG /	1.000000e-01	7.780000e+10	8.090000e-01	1.860000e+03	
/					
PLOG /	1.000000e+00	7.260000e+10	8.190000e-01	1.830000e+03	
/					
PLOG /	1.000000e+01	2.240000e+11	6.790000e-01	2.150000e+03	
/					
O+C4H6=C2H3+CH2CHO				2.4600e+11	
0.562	1220.00				
PLOG /	1.000000e-01	2.290000e+11	5.700000e-01	1.190000e+03	
/					

PLOG /	1.000000e+00	1.620000e+09	1.250000e+00	5.390000e+02	
/					
PLOG /	1.000000e+01	2.460000e+11	5.620000e-01	1.220000e+03	
/					
C2H3+C4H5=H2+C6H6				1.8400e-13	
7.070	-3611.00				
C2H+C4H5=2C3H3				4.0000e+12	
0.000	0.00				
H+C4H3=C4H4				3.4000e+43	-
9.010	12120.00				
H+C4H4=H2+C4H3				6.6500e+05	
2.530	12240.00				
OH+C4H4=H2O+C4H3				3.1000e+07	
2.000	3430.00				
CH3+C4H4=CH4+C4H3				5.0000e+13	
0.000	19800.00				
C2H2+C2H(+M)=C4H3(+M)				8.3000e+10	
0.899	-363.00				
LOW/	1.24e+31	-4.718	1871.0/		
TROE/	1.000	100.0	5613.	1.339e+04/	
H2/ 2.00/	H2O/ 6.00/	CH4/ 2.00/	CO/ 1.50/	CO2/ 2.00/	C2H6/ 3.00/
C2H2/ 2.50/	C2H4/ 2.50/				
H+C4H2=C4H3				1.1000e+42	-
8.720	15300.00				
H+C4H3=H2+C4H2				3.0000e+13	
0.000	0.00				
OH+C4H3=H2O+C4H2				2.0000e+12	
0.000	0.00				
C2H3+C4H3=2C3H3				4.0000e+12	
0.000	0.00				
CH+C3H3=H+C4H3				5.0000e+13	
0.000	0.00				
O2+C4H3=CH2CO+HCCO				7.8600e+16	-
1.800	0.00				
CH2+C4H3=C2H+C3H4-A				2.0000e+13	
0.000	0.00				
CH3CHO=H2+CH2CO				4.0000e+13	
0.000	80500.00				
O2+C3H4-A=>CH2O+CH2CO				1.0000e+15	
0.000	41000.00				



O+C2H2=>CH2CO 0.000 15000.00	1.0000e+13
O+CH2CO=>2HCO 0.000 2300.00	2.0000e+13
O+CH2CO=>CO+CH2O 0.000 5000.00	1.0000e+12
OH+CH2CO=>CO2+CH3 0.000 0.00	1.0000e+13
O2+CH2CO=>CO2+CH2O 0.000 37000.00	1.0000e+14
O2+CH2CO=>OH+CO+HCO 0.000 40000.00	3.0000e+14
O+C4H3=C2H+CH2CO 0.000 0.00	2.0000e+13
O2+C4H5=>OH+C2H2+CH2CO 0.000 15000.00	1.5000e+13
OH+C4H5=>C2H4+CH2CO 0.000 0.00	3.0000e+12
OH+CH3CO=>H2O+CH2CO 0.000 0.00	3.0000e+12
OH+CH2CHO=>H2O+CH2CO 0.000 0.00	5.0000e+12
HO2+CH2CO=>OH+CO+CH2O 0.000 5000.00	1.0000e+10
O2+CH2CHO=>HO2+CH2CO 0.000 3000.00	5.0000e+11
2CH2CO=CH3CO+HCCO 0.000 60500.00	1.5000e+13
2CH2CO=CO2+C3H4-A 0.000 27700.00	7.5000e+09
2CH2CO=>2CO+C2H4 0.000 40000.00	7.5000e+10
CH2CO=>H+HCCO 0.000 102400.00	1.5000e+14
CH2+CH2CO=CO+C2H4 2.800 6210.00	5.0000e+03
CH2+CH2CO=CH3+HCCO 0.000 11000.00	3.6000e+13

CH3+CH2CO=OH+C3H4-A 0.000 32300.00	1.5000e+11
CH3+CH2CO=OH+C3H4-P 0.000 39000.00	3.0000e+10
OH+HCCO=H+CO+HCO 0.000 0.00	1.0000e+13
O2+HCCO=CO2+HCO 0.000 -854.00	2.4000e+11
CH2+HCCO=CO+C2H3 0.000 0.00	3.0000e+13
2HCCO=>2CO+C2H2 0.000 0.00	1.0000e+13
C2H3+HCCO=CO+C3H4-P 0.000 0.00	4.0000e+13
HCCO+C3H5-A=CO+C4H6 0.000 0.00	1.0000e+12
O2+C2H2=OH+HCCO 1.500 30000.00	2.0000e+07
OH+C4H2=C2H2+HCCO 0.000 0.00	5.0000e+12
O2+C2H=O+HCCO 0.000 0.00	2.3000e+13
O2+C3H2=HCO+HCCO 0.000 0.00	4.0000e+13
OH+C3H3=C2H3CHO 0.000 0.00	3.0000e+13
OH+C3H4-P=>H+C2H3CHO 0.000 1000.00	6.0000e+11
OH+C2H3CHO=>HCO+CH3CHO 0.000 0.00	4.0000e+12
OH+C2H3CHO=>H+CO2+C2H4 0.000 0.00	5.0000e+12
HO2+C2H3CHO=>OH+CH2O+CH2CO 0.000 15000.00	5.0000e+12
HCO+C2H4=>0.2H+0.8CO+0.8C2H5+0.2C2H3CHO 0.000 6000.00	7.0000e+11
HCO+C3H6=>CH3+C2H3CHO 0.000 6000.00	5.0000e+11

O2+C4H6=>CH2O+C2H3CHO	1.0000e+14
0.000 39000.00	
O2+C5H6=>CH2CO+C2H3CHO	1.0000e+13
0.000 39000.00	
H+C2H3CHO=>HCO+C2H4	1.0000e+13
0.000 5000.00	
C3H6O=>CH3+CH2CHO	5.0000e+16
0.000 73000.00	
C3H6O=>CH2O+C2H4	1.0000e+16
0.000 64000.00	
O+C3H6=>C3H6O	7.0000e+12
0.000 5000.00	
OH+C3H5-A=>0.5CH2O+0.5C2H4+0.5C3H6O	3.0000e+12
0.000 0.00	
OH+C3H5-S=>0.5CH2O+0.5C2H4+0.5C3H6O	2.0000e+12
0.000 0.00	
HO2+IC4H7=>CH2O+0.2C3H6O+0.8CH3COCH3	8.0000e+11
0.000 0.00	
H+CH2CO=>H2+HCCO	1.5000e+14
0.000 14126.59	
CH3+CH2CO=>CH4+HCCO	2.5000e+12
0.000 15137.82	
O+OH+M=HO2+M	1.0000e+16
0.000 0.00	
O2+C2H=CO2+CH	4.5000e+15
0.000 25000.00	
OH+CH=H2O+C	4.0000e+07
2.000 3000.00	
O2+C2H5=>CH3O+CH2O	1.0000e+14
0.000 24000.00	
O2+C2H5=>O+CH3+CH2O	1.0000e+13
0.000 27000.00	
O+C2H5=>0.35H+0.30OH+0.35CH3+0.35CH2O+0.3C2H4+0.35CH3CHO	5.0000e+13
0.000 0.00	
HO2+C2H5=>OH+CH3+CH2O	5.0000e+12
0.000 0.00	
O+C2H4=>CH3CHO	1.0000e+09
0.000 5000.00	

C2H5OH=H+SC2H4OH	5.0000e+15
0.000 100000.00	
O2+PC2H4OH=>OH+2CH2O	1.0000e+12
0.000 2000.00	
H+CH3COCH3=CH3+CH3CHO	2.0000e+13
0.000 5000.00	
CH3COCH2=CH3+CH2CO	1.0000e+14
0.000 31000.00	
O2+CH3COCH2=>OH+CH2O+CH2CO	8.0000e+11
0.000 0.00	
HO2+CH3COCH2=>OH+CH2O+CH3CO	1.0000e+11
0.000 0.00	
CH2OHCHO=CH2OH+HCO	1.0000e+16
0.000 82000.00	
CH2OHCHO=2CH2O	5.0000e+12
0.000 60000.00	
CH2OHCHO=H2O+CH2CO	1.0000e+14
0.000 70000.00	
OH+C2H3CHO=>CH3+CHOCHO	1.0000e+12
0.000 0.00	
CHOCHO=2HCO	3.0000e+16
0.000 71000.00	
HCOOH=H2O+CO	9.0000e+13
0.000 65300.00	
HCOOH=H2+CO2	7.0000e+12
0.000 64700.00	
CH3OCHO=CO+CH3OH	2.0000e+13
0.000 60000.00	
CH3OCHO=CO2+CH4	1.5000e+12
0.000 59800.00	
CH3OCHO=2CH2O	1.0000e+12
0.000 61000.00	
CH3OCHO=>H+CO2+CH3	2.1700e+24
2.400 97600.00	-
H+CH3OCO=CH3OCHO	1.0000e+14
0.000 0.00	
CH3O+HCO=CH3OCHO	3.0000e+13
0.000 0.00	

H+CH3OCHO=>H2+CH2O+HCO 0.000 10500.00	1.6000e+14
H+CH3OCHO=>H2+CH3OCO 0.000 10500.00	5.3000e+13
CH3OCO=CO2+CH3 0.514 15200.00	1.5500e+12
CH3OCO=CO+CH3O 0.479 23800.00	7.3700e+12
H+CH3O2=CH3O2H 0.000 0.00	5.0000e+13
CH3O2=OH+CH2O 0.000 47000.00	1.5000e+13
OH+CH3O2=>HO2+CH3O 0.000 0.00	3.0000e+12
HO2+CH3O2=>O2+H2O+CH2O 0.000 0.00	5.0000e+10
CH3O2+CH3O=>CH3O2H+CH2O 0.000 0.00	6.0000e+11
CH3O2+C3H5-A=>O2+C4H8-1 0.000 0.00	1.5000e+11
CH3O2+C3H5-A=>CH3O+CH2O+C2H3 0.000 0.00	7.5000e+10
CH3O2H+CH3O=>OH+CH3OH+CH2O 0.000 6500.00	1.5000e+11
CH3O2+CH2O=>H2+OH+CO+CH2O 0.000 11000.00	2.0000e+11
CO+CH3O2=>CO2+CH3O 0.000 24000.00	1.0000e+14
HO2+C2H5=C2H5O2H 0.000 0.00	3.0000e+12
O2+C2H4O2H=O2C2H4O2H 0.000 0.00	1.0000e+12
O2C2H4O2H=>OH+HO2CH2CHO 0.000 28500.00	1.0000e+12
HO2CH2CHO=>OH+CH2O+HCO 0.000 42500.00	2.0000e+15
CH3+C2H5O2=>CH3+CH3O+CH2O 0.000 -1200.00	2.0000e+12

CH3O2+C2H5O2=>O2+CH3+CH3O+CH2O 0.000 0.00	2.0000e+11
2C2H5O2=>O2+2CH3+2CH2O 0.000 0.00	2.0000e+11
CO+C2H5O2=>CO2+CH3+CH2O 0.000 24000.00	1.0000e+14
CH2+HCO=CO+CH3 0.000 0.00	2.0000e+13
O+CH2=H2+CO 0.000 0.00	5.0000e+13
OH+CH2=H+CH2O 0.000 0.00	3.0000e+13
CO2+CH2=CO+CH2O 0.000 1000.00	1.1000e+11
O+CH2 (S)=2H+CO 0.000 0.00	3.0000e+13
OH+C3H2=HCO+C2H2 0.000 0.00	5.0000e+13
CH3+CH=H+C2H3 0.000 0.00	3.0000e+13
CH3+C=H+C2H2 0.000 0.00	5.0000e+13
CH4+CH2 (S)=2CH3 0.000 0.00	4.3000e+13
2C2H2=C2H3+C2H 0.000 92000.00	1.7000e+14
C2H6+C2H2=C2H5+C2H3 0.000 60000.00	2.0000e+14
2CH3=>H2+C2H4 0.000 32000.00	5.0000e+14
2CH2=>2H+C2H2 0.000 0.00	1.2000e+14
CH2+CH=H+C2H2 0.000 0.00	4.0000e+13
CH2+C=H+C2H 0.000 0.00	5.0000e+13
CH+C2H2=H+C3H2 0.000 0.00	8.4000e+13

C2H3+C3H6=>CH3+C4H6 0.000            6000.00	1.8000e+11
C2H5+IC3H7=>C2H4+C3H8 0.000            0.00	5.0000e+11
CH3+IC3H7=>CH4+C3H6 0.000            0.00	6.0000e+10
C2H5+C4H71-3=>C2H6+C4H6 0.000            0.00	1.0000e+12
C2H2+C3H4-A=C2H+C3H5-A 0.000            73000.00	5.0000e+14
C2H2+C3H6=C2H3+C3H5-A 0.000            46800.00	4.0000e+13
C2H3+IC4H7=>C2H2+IC4H8 0.000            0.00	2.0000e+12
2C3H3=>C2H2+C4H4 0.000            0.00	1.0000e+11
2C4H71-3=C4H8-2+C4H6 0.000            0.00	7.0000e+11
IC4H7+C4H71-3=IC4H8+C4H6 0.000            0.00	7.0000e+11
C2H3+C4H71-3=C2H4+C4H6 0.000            0.00	2.0000e+12
C4H5=C2H4+C2H 0.000            60000.00	2.0000e+12
CH3+C3H3=>C4H6 0.000            0.00	5.0000e+12
C4H6=>CH3+C3H3 0.000            92000.00	5.0000e+16
C3H3=H+C3H2 0.000            97000.00	1.0000e+13
IC3H7=NC3H7 0.000            42000.00	2.0000e+12
CH3+C4H6=>C2H4+C3H5-A 0.000            7600.00	1.0000e+11
C2H5+C2H2=>C4H71-4 0.000            7600.00	3.0000e+11
C2H5+C3H6=C2H4+NC3H7 0.000            7600.00	1.0000e+11

C2H5+C3H6=CH3+C4H8-1 0.000 7600.00	9.0000e+10
C2H5+C4H6=>C2H4+C4H71-3 0.000 5000.00	1.0000e+10
C2H4+IC3H7=C2H5+C3H6 0.000 7600.00	1.0000e+11
IC3H7+C3H6=NC3H7+C3H6 0.000 7600.00	5.0000e+10
C2H4+C3H5-S=>CH3+C4H6 0.000 6000.00	2.0000e+11
C2H4+C4H71-3=>0.15C2H5+0.85C3H6+0.85C3H5-A+0.15C4H6 0.000 13000.00	2.0000e+11
C2H4+C4H71-4=>0.8C2H5+0.2C3H6+0.1C3H5-A+0.1C3H5-S+0.8C4H6 0.000 7600.00	3.0000e+11
C3H6+C4H71-4=>NC3H7+C4H6 0.000 7600.00	3.0000e+11
2C4H6=C4H71-3+C4H5 0.000 64000.00	5.0000e+14
2C3H6=NC3H7+C3H5-A 0.000 68000.00	1.0000e+15
2C3H6=IC3H7+C3H5-A 0.000 68000.00	1.0000e+15
C2H6=H2+C2H4 0.000 78500.00	3.0000e+13
C3H6=H2+C3H4-A 0.000 78000.00	1.8000e+13
C3H6=H2+C3H4-P 0.000 78000.00	1.8000e+13
C3H8=H2+C3H6 0.000 70000.00	5.0000e+13
C4H4=H2+C4H2 0.000 66000.00	7.0000e+11
C2H4+C2H2=C4H6 0.000 28000.00	5.0000e+10
2C2H4=C4H8-1 0.000 40000.00	1.0000e+10
2C2H2=C4H4 0.000 37000.00	5.0000e+11



2C2H2=H2+C4H2				1.0000e+16
0.000	68200.00			
2C3H6=C2H4+C4H8-2				5.0000e+11
0.000	46000.00			
2C3H2=C2H2+C4H2				2.0000e+13
0.000	85000.00			
C2H4+C4H2=>C6H6				3.0000e+11
0.000	30000.00			
H+C3H3=C3H4-A				2.0500e+13
0.206	-173.00			
PLOG /	4.000000e-02	3.390000e+36	-7.410000e+00	6.337000e+03
/				
PLOG /	1.000000e+00	3.160000e+29	-5.000000e+00	4.711000e+03
/				
PLOG /	1.000000e+01	8.710000e+23	-3.200000e+00	3.255000e+03
/				
PLOG /	1.000000e+02	2.050000e+13	2.060000e-01	-1.730000e+02
/				
H+C3H3=C3H4-P				6.4000e+13
0.102	-31.20			
PLOG /	4.000000e-02	3.630000e+36	-7.360000e+00	6.039000e+03
/				
PLOG /	1.000000e+00	7.940000e+29	-5.060000e+00	4.861000e+03
/				
PLOG /	1.000000e+01	1.070000e+24	-3.150000e+00	3.261000e+03
/				
PLOG /	1.000000e+02	6.400000e+13	1.020000e-01	-3.120000e+01
/				
H+C4H5=C2H4+C2H2				1.0000e+13
0.000	0.00			
C4H4=C2H3+C2H				1.0000e+16
0.000	125000.00			
C2H2+C4H4=C2H+C4H5				1.0000e+14
0.000	95000.00			
C2H2+C4H4=C2H3+C4H3				3.0000e+14
0.000	73000.00			
2C4H4=C4H5+C4H3				5.0000e+16
0.000	81500.00			
CH2 (S) +C3H3=H+C4H4				5.0000e+13
0.000	0.00			
CH3+C3H2=H+C4H4				2.5000e+12
0.000	0.00			
C3H3+C4H71-3=>C3H6+C4H4				4.0000e+12
0.000	0.00			

C3H3+IC4H7=>C3H6+C4H4 0.000            0.00	4.0000e+12
2C2H2=H+C4H3 0.000            81500.00	2.0000e+16
CH+C3H2=H+C4H2 0.000            0.00	5.0000e+13
CH+C3H3=2H+C4H2 0.000            0.00	5.0000e+13
C2H2+C4H2=C2H+C4H3 0.000            97000.00	3.0000e+14
C2H+C3H4-P=>CH3+C4H2 0.000            8000.00	3.0000e+11
2C3H4-A=>C2H4+C4H4 0.000            29000.00	5.0000e+11
2C3H4-P=>C2H4+C4H4 0.000            29000.00	5.0000e+11
2C4H4=>C2H2+C6H6 0.000            44000.00	2.5000e+14
CH2+C4H3=C2H+C3H4-P 0.000            0.00	2.0000e+13
O+C4H2=CO+C3H2 0.000            1660.00	2.7000e+13
OH+C4H2=>HCO+C3H2 0.000            5000.00	3.0000e+12
O+C4H4=>CO+0.5C3H4-P+0.5C3H4-A 0.000            5000.00	2.0000e+12
OH+C4H4=>CO+C3H5-A 0.000            0.00	3.0000e+13
O2+C4H5=>0.6OH+CO+0.4CH2O+0.4C2H3+0.3C3H4-P+0.3C3H4-A 0.000            15000.00	7.0000e+13
OH+C4H3=>CO+0.5C3H4-P+0.5C3H4-A 0.000            0.00	3.0000e+12
H+CH3CO=CH3CHO 0.000            0.00	1.3000e+13
O2+C3H4-P=>HCO+CH3CO 0.000            41000.00	7.0000e+13
O2+CH3CHO=HO2+CH2CHO 0.000            49000.00	4.0000e+13

H+CH3CHO=H2+CH3CO	5.0000e+07	
2.000        3600.00		
C2H5CHO (+M) =HCO+C2H5 (+M)	1.3000e+26	-
3.000        86405.90		
LOW/    2.87e+84        -18.600        101060.0/		
TROE/            0.002491    376.8    6.089    4632./		
C2H5CHO (+M) =CH3+CH2CHO (+M)	1.1600e+25	-
2.800        85718.20		
LOW/    1.26e+87        -19.400        101280.0/		
TROE/            0.002491    372.5    6.089    5252./		
C2H5CHO=>H+CO+C2H5	9.4000e+16	-
0.430        89167.00		
C2H5CHO=CO+C2H6	1.0000e+14	
0.000        75000.00		
OH+C2H5CHO=>H2O+RALD3	1.3000e+13	
0.000        1700.00		
HO2+C2H5CHO=>H2O2+RALD3	6.0000e+12	
0.000        15860.00		
RALD3=>0.75H+0.25HCO+0.25C2H4+0.75C2H3CHO	1.3000e+14	
0.000        40000.00		
O2+RALD3=>HO2+C2H3CHO	3.0000e+11	
0.000        3000.00		
C2H5O+C2H5CHO=>CO+C2H5+C2H5OH	6.0260e+11	
0.000        3300.00		
H+C2H5CHO=>H2+CO+C2H5	1.6000e+14	
0.000        6360.00		
OH+C2H5CHO=>H2O+CO+C2H5	2.0000e+13	
0.000        630.00		
HO2+C2H5CHO=>H2O2+CO+C2H5	5.0000e+12	
0.000        12460.00		
CH3+C2H5CHO=>CO+CH4+C2H5	1.4000e+12	
0.000        7234.20		
H+CH3OH=>H2O+CH3	6.5000e+11	
0.000        5300.00		
O+C3H6=>2H+C2H3CHO	1.0000e+13	
0.000        3000.00		
O+C4H6=>CO+C3H6	1.5000e+12	
0.000        0.00		
O+CH2O=>2H+CO2	2.0000e+13	
0.000        5000.00		

O+CH3CHO=>H+CO2+CH3 0.000            3000.00	2.0000e+13	
OH+CH2O=>H2+H+CO2 0.000            0.00	1.0000e+11	
OH+CH3CHO=>H2+CO2+CH3 0.000            0.00	1.0000e+11	
OH+C4H8-1=>0.5CH2O+0.5C2H5+0.5CH3CHO+0.5NC3H7 0.000            0.00	1.5000e+12	
OH+C4H8-2=>0.5CH3+0.5C2H5+0.5CH3CHO+0.5C2H5CHO 0.000            0.00	1.5000e+12	
HO2+C2H2=>CH2O+HCO 0.000            15000.00	5.0000e+12	
HCO+C4H6=>CO+C4H71-3 0.000            6000.00	5.0000e+11	
CH2O+HCO=CO2+CH3 0.000            8000.00	5.0000e+11	
HCO+CH3CHO=>CO2+C2H5 0.000            8000.00	2.0000e+11	
CH2O+C2H3=>0.5CH3O+0.5CH2OH+C2H2 0.000            6000.00	5.0000e+11	
CO+CH3O=CO2+CH3 0.000            6500.00	5.0000e+11	
O2+C2H2=>CO+CH2O 0.000            26000.00	3.0000e+11	
O2+C2H4=>2CH2O 0.000            48000.00	1.0000e+14	
O2+C2H2=>2HCO 0.000            27000.00	3.0000e+11	
O2+C2H4=>CH3O+HCO 0.000            43000.00	1.0000e+14	
O2+C4H6=>O2+C2H4+C2H2 0.000            40000.00	4.0000e+14	
O2+C3H5-S=HO2+C3H4-P 0.000            2000.00	2.0000e+12	
O2+C3H5-S=O+RALD3 2.140            5142.00	5.3800e+18	-
O2+C4H71-3=>HO2+C4H6 0.000            8000.00	3.0000e+10	

O2+C4H71-4=>HO2+C4H6 0.000            3500.00	2.0000e+12
O2+CH2CHO=>OH+CO+CH2O 0.000            0.00	6.0000e+10
O2+IC4H7=>O2+CH3+C3H4-A 0.000            22000.00	8.0000e+12
O+CH3+M=>CH3O+M 0.000            0.00	5.0000e+16
O+C2H3=>CH2CHO 0.000            0.00	2.5000e+13
O+NC3H7=>CH2O+C2H5 0.000            0.00	2.0000e+13
O+C3H5-A=>CH2O+C2H3 0.000            0.00	3.2500e+13
O+C4H71-3=>0.5OH+0.5CH2O+0.5C3H5-S+0.5C4H6 0.000            0.00	5.0000e+13
O+IC4H7=>CH2O+C3H5-T 0.000            0.00	5.0000e+13
O+CH2CHO=>CH2O+HCO 0.000            0.00	5.0000e+13
OH+C2H=>0.7O+0.7C2H2+0.3CH2CO 0.000            13000.00	1.0000e+12
OH+C2H3=>CH3CHO 0.000            0.00	5.0000e+12
OH+IC4H7=>CH2O+C3H6 0.000            0.00	2.0000e+12
OH+C4H71-3=>C2H4+CH3CHO 0.000            0.00	2.0000e+12
OH+C4H71-3=>0.75H2+CO+0.25C2H6+0.5C2H4+0.5C3H6 0.000            0.00	5.0000e+12
HO2+C2H3=>OH+CH2CHO 0.000            0.00	3.0000e+12
HO2+IC4H7=>OH+CH2O+C3H5-T 0.000            0.00	3.0000e+11
HO2+HCO=H2O2+CO 0.000            0.00	4.0000e+11
OH+CH3O=>H2O+CH2O 0.000            0.00	1.5000e+13

CH3O+HCO=2CH2O 0.000            0.00	1.0000e+13
CH3O+HCO=>CO+CH3OH 0.000            0.00	1.0000e+13
CH3+CH2OH=>CH4+CH2O 0.000            0.00	1.5000e+13
H+CH2CHO=>CH3CHO 0.000            0.00	6.0000e+13
OH+CH2CHO=>CH2OH+HCO 0.000            0.00	1.0000e+13
CH2CHO=CH3CO 0.000            32000.00	2.0000e+11
OH+C2H2=>CH2CHO 0.000            0.00	5.0000e+11
O+C3H6=>C2H5CHO 0.000            5000.00	1.0000e+12
O2+C4H8-1=CH2O+C2H5CHO 0.000            39000.00	1.0000e+14
O2+C4H8-2=2CH3CHO 0.000            39000.00	1.0000e+14
O2+C4H6=>CO+HCO+C2H5 0.000            41000.00	5.0000e+13
H+C2H5CHO=>CH2O+C2H5 0.000            6400.00	8.0000e+12
OH+C4H6=>0.55CH2O+0.05C2H4+0.4C2H3+0.4CH3CHO+0.05CH2CHO+0.55C3H5-S 6.0000e+12    0.000            -1000.00	
OH+C2H3CHO=>H2O+CO+C2H3 2.000            -3343.83	9.9990e+06
O2+C4H4=HO2+C4H3 2.000            56172.82	2.3850e+07
C5H6=H+C5H5 0.000            81500.00	1.5000e+15
CH3+C4H3=>C5H6 0.000            0.00	1.0000e+13
C2H2+C3H4-A=C5H6 0.000            22000.00	2.0000e+11
C2H2+C3H4-P=C5H6 0.000            22000.00	2.5000e+10

C2H4+C3H3=H+C5H6 0.000        20400.00	5.0000e+10
H+C5H6=>C2H2+C3H5-A 0.000        8000.00	2.0000e+12
OH+C5H6=>HCO+C4H6 0.000        0.00	8.0000e+12
OH+C5H6=>HCO+C2H4+C2H2 0.000        0.00	2.0000e+12
OH+C5H6=>CH3+C2H2+CH2CO 0.000        0.00	2.0000e+13
O2+C5H6=>2CO+C3H6 0.000        39000.00	1.0000e+13
O2+C5H6=>CO+HCO+C3H5-A 0.000        39000.00	4.0000e+13
O+C5H6=>CO+C4H6 0.000        0.00	1.0000e+13
O+C5H6=>CH2CO+C3H4-A 0.000        0.00	3.0000e+12
O+C5H6=>CH2CO+C3H4-P 0.000        0.00	3.0000e+12
HO2+C5H5=>OH+CO+C4H5 0.000        0.00	3.3000e+13
HO2+C5H5=>OH+CO+C2H4+C2H 0.000        0.00	1.5000e+13
HO2+C5H5=>OH+HCO+C4H4 0.000        0.00	3.0000e+12
OH+C5H5=>CO+C2H4+C2H2 0.250        4350.00	2.0000e+14
OH+C5H5=>H+CH2CO+C3H3 0.250        4350.00	3.5000e+13
OH+C5H5=>CO+C4H6 0.250        4350.00	1.2500e+13
O+C5H5=>CO+C4H5 0.000        0.00	1.0000e+14
O+C5H5=>HCCO+C3H4-A 0.000        0.00	5.0000e+12
O+C5H5=>HCCO+C3H4-P 0.000        0.00	5.0000e+12

H+C5H6=>H2+C5H5 0.000        7925.00	1.2000e+15
H2+C5H5=>H+C5H6 0.000        30000.00	1.8000e+14
OH+C5H6=>H2O+C5H5 0.000        1714.00	1.0000e+14
C5H5=>C2H2+C3H3 0.000        68000.00	2.0000e+12
CH3+C4H2=>C5H5 0.000        7600.00	1.0000e+11
C5H6+C5H5=>C4H5+C6H6 0.000        25500.00	1.2000e+13
CH3+C5H5=>C2H3+C4H5 0.000        3000.00	1.0000e+12
C2H3+C3H4-A=>H+C5H6 0.000        3000.00	5.0000e+11
C2H3+C3H4-P=>H+C5H6 0.000        3000.00	5.0000e+11
C2H4+C4H71-3=>H2+CH3+C5H6 0.000        13000.00	1.5000e+11
C2H4+IC4H7=>H+CH4+C5H6 0.000        18000.00	1.0500e+11
C2H4+IC4H7=>0.33NC3H7+0.67C3H6+0.67C3H5-A+0.33C3H4-A 0.000        18000.00	4.5000e+10
C4H5+C5H5=>C3H4-A+C6H6 0.000        3000.00	2.0000e+12
C4H5+C5H6=>C3H5-A+C6H6 0.000        6000.00	1.0000e+12
C2H3+C5H6=C2H4+C5H5 2.000        4871.29	1.4000e+06
C2H+C4H5=>C6H6 0.000        0.00	1.0000e+13
C2H3+C4H3=>C6H6 0.000        0.00	1.0000e+13
C2H3+C4H3=H+C6H5 0.000        0.00	6.0000e+12
2C4H5=C2H4+C6H6 0.000        0.00	2.0000e+12



C2H4+C5H6=>H+CH3+C6H6 0.000 30000.00	7.5000e+10
C3H6+C5H6=>2CH3+C6H6 0.000 30000.00	7.5000e+10
C4H8-1+C5H6=>CH3+C2H5+C6H6 0.000 30000.00	7.5000e+10
C4H8-2+C5H6=>CH3+C2H5+C6H6 0.000 30000.00	7.5000e+10
C4H6+C5H6=>CH3+C2H3+C6H6 0.000 30000.00	1.5000e+11
C2H3+C4H4=>H+C6H6 0.000 6000.00	1.0000e+12
C2H3+C4H6=>H2+H+C6H6 0.000 3240.00	5.6200e+11
C2H3+C4H6=>CH3+C5H6 0.000 2000.00	1.0000e+12
C2H+C4H6=>H+C6H6 0.000 8000.00	3.0000e+11
C3H4-P+C3H3=H+C6H6 0.000 10000.00	1.4000e+12
C2H4+C4H3=>H+C6H6 0.000 5000.00	5.0000e+11
C3H4-A+C4H5=>CH3+C6H6 0.000 5000.00	2.5000e+11
C3H4-P+C4H5=>CH3+C6H6 0.000 5000.00	2.5000e+11
C4H5+C4H2=>C2H+C6H6 0.000 5000.00	5.0000e+11
C4H5+C4H4=>C2H3+C6H6 0.000 5000.00	5.0000e+11
O+C6H5=>CO+C5H5 0.000 0.00	1.0000e+14
CH3COCH2+C6H6=CH3COCH3+C6H5 2.000 14929.22	3.6770e+05
2C5H6=>2H2+C10H8 0.000 35000.00	2.0000e+11
C5H6+C5H5=>H2+H+C10H8 0.000 23000.00	3.0000e+12

C6H6+C5H5=>CH3+C10H8					3.0000e+12
0.000	23000.00				
2C5H5=>2H+C10H8					1.0000e+12
0.000	6000.00				
C4H3+C6H6=>H+C10H8					5.0000e+11
0.000	5000.00				
C4H71-4+C6H6=>2H2+H+C10H8					4.5000e+11
0.000	6000.00				
C4H6+C6H6=>H2+2H+C10H8					1.0000e+11
0.000	30000.00				
C6H6+C5H6=>H+CH3+C10H8					2.0000e+11
0.000	30000.00				
C4H4+C6H5=>H+C10H8					1.2600e+04
2.610	1430.00				
H+C10H8=>C4H4+C6H5					5.0000e+12
0.000	5000.00				
CH3+C5H5=MCPTD					9.1000e+109 -
29.190	41906.00				
PLOG /	1.000000e-02	9.100000e+109	-2.919000e+01	4.190600e+04	
/					
PLOG /	1.000000e+00	3.060000e+105	-2.705000e+01	4.795200e+04	
/					
PLOG /	1.000000e+01	2.380000e+94	-2.352000e+01	4.518400e+04	
/					
PLOG /	1.000000e+02	1.090000e+70	-1.633000e+01	3.229600e+04	
/					
CH3+C5H5=>H2+FULVENE					9.2500e+01
2.190	8815.00				
PLOG /	1.000000e-02	9.250000e+01	2.190000e+00	8.815000e+03	
/					
PLOG /	1.000000e+00	1.140000e+15	-1.400000e+00	2.026600e+04	
/					
PLOG /	1.000000e+01	3.620000e+31	-5.900000e+00	3.563100e+04	
/					
PLOG /	1.000000e+02	3.380000e+43	-9.050000e+00	4.974200e+04	
/					
MCPTD=>H2+FULVENE					3.3800e+77 -
21.530	96791.00				
PLOG /	1.000000e-02	3.380000e+77	-2.153000e+01	9.679100e+04	
/					
PLOG /	1.000000e+00	2.040000e+94	-2.505000e+01	1.186020e+05	
/					
PLOG /	1.000000e+01	1.050000e+97	-2.523000e+01	1.268380e+05	
/					
PLOG /	1.000000e+02	3.850000e+84	-2.121000e+01	1.243460e+05	
/					

H+MCPTD=>CH3+C5H6	1.5000e+13
0.000 2000.00	
C2H2+IC4H7=>H+MCPTD	2.0000e+12
0.000 18000.00	
H+C3H5-A (+M)=C3H6 (+M)	1.0000e+14
0.000 0.00	
LOW/ 1.33e+60 -12.000 5967.8/	
TROE/ 0.02000 1097. 1.097e+04 6860./	
H2/ 2.00/ H2O/ 6.00/ CH4/ 2.00/ CO/ 1.50/ CO2/ 2.00/ C2H6/ 3.00/	
AR/ 0.70/	
C3H6+C3H5-A=C2H4+C4H71-4	4.2000e+10
0.000 15000.00	
C3H6+C3H5-A=>H2+CH3+C5H6	1.0000e+11
0.000 15000.00	
C3H6+C3H5-A=>H2+H+MCPTD	4.0000e+10
0.000 15000.00	
C3H6+C3H5-A=C2H3+C4H8-1	2.4000e+10
0.000 15000.00	
C3H5-A+C4H8-1=>H2+CH3+MCPTD	7.2000e+10
0.000 15000.00	
C3H5-A+C4H8-2=>H2+CH3+MCPTD	9.5000e+10
0.000 15000.00	
C3H5-A+C4H6=C2H5+C5H6	8.0000e+11
0.000 15000.00	
C2H4+PC4H9=NC3H7+C3H6	1.5000e+11
0.000 7600.00	
C3H5-A+C3H3=C2H2+C4H6	2.5000e+11
0.000 0.00	
C3H5-A+C4H71-3=C3H6+C4H6	5.0000e+11
0.000 3000.00	
C3H5-A+IC4H7=C3H4-A+IC4H8	2.0000e+11
0.000 0.00	
C3H4-P=C3H4-A	1.4000e+52 -
10.860 95400.00	
PLOG / 1.000000e-01 6.400000e+61 -1.459000e+01 8.820000e+04	
/	
PLOG / 1.000000e+00 5.200000e+60 -1.393000e+01 9.110000e+04	
/	
PLOG / 1.000000e+01 1.900000e+57 -1.262000e+01 9.330000e+04	
/	
PLOG / 1.000000e+02 1.400000e+52 -1.086000e+01 9.540000e+04	
/	

C2H3+C4H2=>C6H5 0.000        6000.00	5.0000e+11
C4H8-1+C4H71-4=PC4H9+C4H6 0.000        7600.00	3.0000e+11
C4H8-2+C4H71-4=SC4H9+C4H6 0.000        7600.00	3.0000e+11
NC4H10=>H2+0.5C4H8-1+0.5C4H8-2 0.000        71000.00	5.0000e+13
IC4H10=H2+IC4H8 0.000        69000.00	5.0000e+13
HCO+C4H8-2=>CO+SC4H9 0.000        6000.00	3.0000e+11
HCO+C4H8-1=>CO+PC4H9 0.000        6000.00	3.0000e+11
HCO+IC4H8=>CO+0.7IC4H9+0.3TC4H9 0.000        6000.00	3.0000e+11
O2+IC4H8=>CH2O+CH3COCH3 0.000        44000.00	1.0000e+13
O2+IC4H9=HO2+IC4H8 0.000        3000.00	2.0000e+11
O2+TC4H9=HO2+IC4H8 0.000        3000.00	1.8000e+12
O+PC4H9=>CH2O+NC3H7 0.000        0.00	2.0000e+13
O+SC4H9=>CH3+C2H5CHO 0.000        0.00	2.0000e+13
O+IC4H9=>CH2O+IC3H7 0.000        0.00	2.0000e+13
O+TC4H9=>CH3+CH3COCH3 0.000        0.00	2.0000e+13
H2+HCCO=>H+CH2CO 2.000        7705.88	5.9920e+05
H2+NC3H7O2=>H+C3H7OOH 2.000        17269.01	1.0640e+06
H2+IC3H7O2=>H+C3H7OOH 2.000        17269.01	1.0640e+06
H2+HCO3=>H+HCO3H 2.000        10313.39	4.7600e+05

H2+CH3CO3=>H+CH3CO3H	4.7600e+05
2.000 10313.39	
H2+C6H5O=>H+C6H5OH	3.7800e+05
2.000 16484.07	
H2+C5H7=>H+LC5H8	3.7800e+05
2.000 19648.56	
H2+RCRESOLO=>H+CRESOL	3.7800e+05
2.000 17261.48	
H2+C10H7=>H+C10H8	5.1800e+08
1.000 3621.04	
H2+C10H6CH3=>H+C10H7CH3	5.1800e+08
1.000 4763.78	
CH4+CH3CO=>CH3+CH3CHO	9.4500e+05
2.000 21697.02	
CH4+CH2CHO=>CH3+CH3CHO	1.6100e+05
2.000 18832.77	
CH4+HCCO=>CH3+CH2CO	2.9960e+05
2.000 10274.99	
CH4+NC3H7O2=>CH3+C3H7OOH	5.3200e+05
2.000 20059.36	
CH4+IC3H7O2=>CH3+C3H7OOH	5.3200e+05
2.000 20059.36	
CH4+HCO3=>CH3+HCO3H	2.3800e+05
2.000 12748.45	
CH4+CH3CO3=>CH3+CH3CO3H	2.3800e+05
2.000 12748.45	
CH4+C6H5O=>CH3+C6H5OH	1.8900e+05
2.000 19410.24	
CH4+C5H7=>CH3+LC5H8	1.8900e+05
2.000 22616.91	
CH4+RCRESOLO=>CH3+CRESOL	1.8900e+05
2.000 20110.38	
CH4+C10H7=>CH3+C10H8	2.5900e+08
1.000 5625.13	
CH4+INDENYL=>CH3+INDENE	9.1000e+04
2.000 23748.43	
CH4+C10H6CH3=>CH3+C10H7CH3	2.5900e+08
1.000 6528.60	

CH3+C2H2=>CH4+C2H 2.000 11196.53	6.0000e+04
C2H3+C2H2=>C2H4+C2H 2.000 9832.26	1.3560e+05
C2H5+C2H2=>C2H6+C2H 2.000 13265.38	4.0000e+04
C2H2+NC3H7=>C2H+C3H8 2.000 13265.38	2.7000e+04
C2H2+IC3H7=>C2H+C3H8 2.000 17064.96	2.7000e+04
C2H2+C3H5-S=>C2H+C3H6 2.000 10579.25	5.4000e+04
C2H2+C3H5-T=>C2H+C3H6 2.000 10579.25	5.4000e+04
C2H2+C3H5-A=>C2H+C3H6 2.000 20432.90	1.0780e+05
C2H2+C4H5=>C2H+C4H6 2.000 10579.25	5.4000e+04
C2H2+C4H71-4=>C2H+C4H8-1 2.000 13144.81	2.7000e+04
C2H2+C4H71-3=>C2H+C4H8-2 2.000 21467.03	6.8000e+04
C2H2+IC4H7=>C2H+IC4H8 2.000 21467.03	5.4000e+04
C2H2+C4H3=>C2H+C4H4 2.000 11442.22	8.1800e+04
C2H2+C6H5=>C2H+C6H6 1.000 6728.39	7.4000e+07
O+C2H2=>OH+C2H 2.000 8057.53	4.7000e+06
O2+C2H2=>HO2+C2H 2.000 54834.21	3.4000e+06
HO2+C2H2=>H2O2+C2H 2.000 24090.27	1.6000e+06
CH3O+C2H2=>CH3OH+C2H 2.000 6755.27	8.5600e+04
CH2OH+C2H2=>CH3OH+C2H 2.000 17416.23	5.6600e+04

HCO+C2H2=>CH2O+C2H	2.5200e+05
2.000 19856.30	
C2H2+CH3CO=>C2H+CH3CHO	2.7000e+05
2.000 21810.72	
C2H2+CH2CHO=>C2H+CH3CHO	4.6000e+04
2.000 18930.41	
C2H2+HCCO=>C2H+CH2CO	8.5600e+04
2.000 11442.22	
CH3O2+C2H2=>CH3O2H+C2H	1.5200e+05
2.000 20202.44	
C2H5O2+C2H2=>C2H5O2H+C2H	1.5200e+05
2.000 20202.44	
C2H2+NC3H7O2=>C2H+C3H7OOH	1.5200e+05
2.000 20202.44	
C2H2+IC3H7O2=>C2H+C3H7OOH	1.5200e+05
2.000 20202.44	
C2H2+HCO3=>C2H+HCO3H	6.8000e+04
2.000 13024.11	
C2H2+CH3CO3=>C2H+CH3CO3H	6.8000e+04
2.000 13024.11	
C2H2+CH3COCH2=>C2H+CH3COCH3	4.6000e+04
2.000 14821.74	
C2H2+C6H5O=>C2H+C6H5OH	5.4000e+04
2.000 20087.13	
C2H2+C5H7=>C2H+LC5H8	5.4000e+04
2.000 22952.95	
C2H2+C7H7=>C2H+C7H8	2.7000e+04
2.000 24090.27	
C2H2+CH3C6H4=>C2H+C7H8	7.4000e+07
1.000 6728.39	
C2H2+RCRESOLO=>C2H+CRE SOL	5.4000e+04
2.000 20432.90	
C2H2+C10H7=>C2H+C10H8	7.4000e+07
1.000 6728.39	
C2H2+INDENYL=>C2H+INDENE	2.6000e+04
2.000 24090.27	
C2H2+C10H6CH3=>C2H+C10H7CH3	7.4000e+07
1.000 6728.39	

C2H6+C2H3=>C2H5+C2H4	6.1020e+05
2.000 5704.86	
C2H6+C3H5-S=>C2H5+C3H6	2.4300e+05
2.000 6897.45	
C2H6+C3H5-T=>C2H5+C3H6	2.4300e+05
2.000 6897.45	
C2H6+C4H5=>C2H5+C4H6	2.4300e+05
2.000 6362.83	
C2H6+C4H71-4=>C2H5+C4H8-1	1.2150e+05
2.000 9181.05	
C2H6+C4H71-3=>C2H5+C4H8-2	3.0600e+05
2.000 16763.05	
C2H6+IC4H7=>C2H5+IC4H8	2.4300e+05
2.000 16763.05	
C2H6+C4H3=>C2H5+C4H4	3.6810e+05
2.000 7149.69	
C2H6+C6H5=>C2H5+C6H6	3.3300e+08
1.000 3330.09	
CH2OH+C2H6=>CH3OH+C2H5	2.5470e+05
2.000 12835.00	
HCO+C2H6=>CH2O+C2H5	1.1340e+06
2.000 15407.96	
C2H6+CH3CO=>C2H5+CH3CHO	1.2150e+06
2.000 17208.29	
C2H6+CH2CHO=>C2H5+CH3CHO	2.0700e+05
2.000 14558.31	
C2H6+C3H3=>C2H5+C3H4-A	2.4300e+05
2.000 16545.66	
C2H6+HCCO=>C2H5+CH2CO	3.8520e+05
2.000 7127.10	
C2H6+NC3H7O2=>C2H5+C3H7OOH	6.8400e+05
2.000 15703.57	
C2H6+IC3H7O2=>C2H5+C3H7OOH	6.8400e+05
2.000 15703.57	
C2H6+HCO3=>C2H5+HCO3H	3.0600e+05
2.000 9072.89	
C2H6+CH3CO3=>C2H5+CH3CO3H	3.0600e+05
2.000 9072.89	



C2H6+CH3COCH2=>C2H5+CH3COCH3	2.0700e+05
2.000 10690.26	
C2H6+C6H5O=>C2H5+C6H5OH	2.4300e+05
2.000 15281.27	
C2H6+C5H7=>C2H5+LC5H8	2.4300e+05
2.000 18136.38	
C2H6+C7H7=>C2H5+C7H8	1.2150e+05
2.000 18655.90	
C2H6+CH3C6H4=>C2H5+C7H8	3.3300e+08
1.000 3330.09	
C2H6+RCRESOLO=>C2H5+CRESOL	2.4300e+05
2.000 15810.16	
C2H6+C10H7=>C2H5+C10H8	3.3300e+08
1.000 3330.09	
C2H6+INDENYL=>C2H5+INDENE	1.1700e+05
2.000 19190.53	
C2H6+C10H6CH3=>C2H5+C10H7CH3	3.3300e+08
1.000 3864.72	
C2H5+C2H4=>C2H6+C2H3	1.6000e+05
2.000 12804.86	
C2H4+C3H5-S=>C2H3+C3H6	2.1600e+05
2.000 10579.25	
C2H4+C3H5-T=>C2H3+C3H6	2.1600e+05
2.000 10579.25	
C2H4+C3H5-A=>C2H3+C3H6	4.3120e+05
2.000 20432.90	
C2H4+C4H71-4=>C2H3+C4H8-1	1.0800e+05
2.000 13144.81	
C2H4+C4H71-3=>C2H3+C4H8-2	2.7200e+05
2.000 21467.03	
C2H4+IC4H7=>C2H3+IC4H8	2.1600e+05
2.000 21467.03	
C2H4+C4H3=>C2H3+C4H4	3.2720e+05
2.000 10323.82	
C2H4+C6H5=>C2H3+C6H6	2.9600e+08
1.000 5560.65	
O+C2H4=>OH+C2H3	1.8800e+07
2.000 8057.53	

HO2+C2H4=>H2O2+C2H3	6.4000e+06
2.000 24887.96	
CH2OH+C2H4=>CH3OH+C2H3	2.2640e+05
2.000 16955.72	
C2H4+CH3CO=>C2H3+CH3CHO	1.0800e+06
2.000 22090.32	
C2H4+CH2CHO=>C2H3+CH3CHO	1.8400e+05
2.000 19210.01	
C2H4+C3H3=>C2H3+C3H4-A	2.1600e+05
2.000 20642.98	
C2H4+HCCO=>C2H3+CH2CO	3.4240e+05
2.000 10274.48	
C2H4+NC3H7O2=>C2H3+C3H7OOH	6.0800e+05
2.000 20432.70	
C2H4+IC3H7O2=>C2H3+C3H7OOH	6.0800e+05
2.000 20432.70	
C2H4+HCO3=>C2H3+HCO3H	2.7200e+05
2.000 13024.11	
C2H4+CH3CO3=>C2H3+CH3CO3H	2.7200e+05
2.000 13024.11	
C2H4+CH3COCH2=>C2H3+CH3COCH3	1.8400e+05
2.000 14821.74	
C2H4+C6H5O=>C2H3+C6H5OH	2.1600e+05
2.000 19626.61	
C2H4+C5H7=>C2H3+LC5H8	2.1600e+05
2.000 22952.95	
C2H4+C7H7=>C2H3+C7H8	1.0800e+05
2.000 22922.53	
C2H4+CH3C6H4=>C2H3+C7H8	2.9600e+08
1.000 5560.65	
C2H4+RCRESOLO=>C2H3+CRESOL	2.1600e+05
2.000 20432.90	
C2H4+C10H7=>C2H3+C10H8	2.9600e+08
1.000 5560.65	
C2H4+INDENYL=>C2H3+INDENE	1.0400e+05
2.000 24090.27	
C2H4+C10H6CH3=>C2H3+C10H7CH3	2.9600e+08
1.000 6728.39	

C3H8+C3H5-S=>NC3H7+C3H6	2.1600e+05
2.000 6897.45	
C3H8+C3H5-T=>NC3H7+C3H6	2.1600e+05
2.000 6897.45	
C3H8+C4H5=>NC3H7+C4H6	2.1600e+05
2.000 6362.83	
C3H8+C4H71-4=>NC3H7+C4H8-1	1.0800e+05
2.000 9181.05	
C3H8+C4H71-3=>NC3H7+C4H8-2	2.7200e+05
2.000 16763.05	
C3H8+IC4H7=>NC3H7+IC4H8	2.1600e+05
2.000 16763.05	
C3H8+C4H3=>NC3H7+C4H4	3.2720e+05
2.000 7149.69	
C3H8+C6H5=>NC3H7+C6H6	2.9600e+08
1.000 3330.09	
CH2OH+C3H8=>CH3OH+NC3H7	2.2640e+05
2.000 12835.00	
HCO+C3H8=>CH2O+NC3H7	1.0080e+06
2.000 15407.96	
CH3CO+C3H8=>CH3CHO+NC3H7	1.0800e+06
2.000 17208.29	
CH2CHO+C3H8=>CH3CHO+NC3H7	1.8400e+05
2.000 14558.31	
C3H8+C3H3=>NC3H7+C3H4-A	2.1600e+05
2.000 16545.66	
HCCO+C3H8=>CH2CO+NC3H7	3.4240e+05
2.000 7127.10	
C3H8+NC3H7O2=>NC3H7+C3H7OOH	6.0800e+05
2.000 15703.57	
C3H8+IC3H7O2=>NC3H7+C3H7OOH	6.0800e+05
2.000 15703.57	
C3H8+HCO3=>NC3H7+HCO3H	2.7200e+05
2.000 9072.89	
CH3CO3+C3H8=>CH3CO3H+NC3H7	2.7200e+05
2.000 9072.89	
C3H8+CH3COCH2=>NC3H7+CH3COCH3	1.8400e+05
2.000 10690.26	

C3H8+C6H5O=>NC3H7+C6H5OH	2.1600e+05
2.000 15281.27	
C3H8+C5H7=>NC3H7+LC5H8	2.1600e+05
2.000 18136.38	
C3H8+C7H7=>NC3H7+C7H8	1.0800e+05
2.000 18655.90	
C3H8+CH3C6H4=>NC3H7+C7H8	2.9600e+08
1.000 3330.09	
C3H8+RCRESOLO=>NC3H7+CRESOL	2.1600e+05
2.000 15810.16	
C3H8+C10H7=>NC3H7+C10H8	2.9600e+08
1.000 3330.09	
C3H8+INDENYL=>NC3H7+INDENE	1.0400e+05
2.000 19190.53	
C3H8+C10H6CH3=>NC3H7+C10H7CH3	2.9600e+08
1.000 3864.72	
C3H8+C3H5-S=>IC3H7+C3H6	5.4000e+04
2.000 4500.00	
C3H8+C3H5-T=>IC3H7+C3H6	5.4000e+04
2.000 4500.00	
C3H8+C4H5=>IC3H7+C4H6	5.4000e+04
2.000 4564.96	
C3H8+C4H71-4=>IC3H7+C4H8-1	2.7000e+04
2.000 6600.00	
C3H8+C4H71-3=>IC3H7+C4H8-2	6.8000e+04
2.000 13700.00	
C3H8+IC4H7=>IC3H7+IC4H8	5.4000e+04
2.000 13700.00	
C3H8+C4H3=>IC3H7+C4H4	8.1800e+04
2.000 5262.22	
C3H8+C6H5=>IC3H7+C6H6	7.4000e+07
1.000 2064.96	
CH2OH+C3H8=>CH3OH+IC3H7	5.6600e+04
2.000 10225.62	
HCO+C3H8=>CH2O+IC3H7	2.5200e+05
2.000 12284.45	
CH3CO+C3H8=>CH3CHO+IC3H7	2.7000e+05
2.000 13984.45	

CH2CHO+C3H8=>CH3CHO+IC3H7	4.6000e+04
2.000 11484.45	
C3H8+C3H3=>IC3H7+C3H4-A	5.4000e+04
2.000 14064.96	
HCCO+C3H8=>CH2CO+IC3H7	8.5600e+04
2.000 5264.96	
C3H8+NC3H7O2=>IC3H7+C3H7OOH	1.5200e+05
2.000 12587.19	
C3H8+IC3H7O2=>IC3H7+C3H7OOH	1.5200e+05
2.000 12587.19	
C3H8+HCO3=>IC3H7+HCO3H	6.8000e+04
2.000 6500.00	
CH3CO3+C3H8=>CH3CO3H+IC3H7	6.8000e+04
2.000 6500.00	
C3H8+CH3COCH2=>IC3H7+CH3COCH3	4.6000e+04
2.000 8000.00	
C3H8+C6H5O=>IC3H7+C6H5OH	5.4000e+04
2.000 12525.62	
C3H8+C5H7=>IC3H7+LC5H8	5.4000e+04
2.000 15000.00	
C3H8+C7H7=>IC3H7+C7H8	2.7000e+04
2.000 16064.96	
C3H8+CH3C6H4=>IC3H7+C7H8	7.4000e+07
1.000 2064.96	
C3H8+RCRESOLO=>IC3H7+CRESOL	5.4000e+04
2.000 12800.00	
C3H8+C10H7=>IC3H7+C10H8	7.4000e+07
1.000 2064.96	
C3H8+INDENYL=>IC3H7+INDENE	2.6000e+04
2.000 16000.00	
C3H8+C10H6CH3=>IC3H7+C10H7CH3	7.4000e+07
1.000 2000.00	
C2H3+C3H6=>C2H4+C3H5-A	2.0340e+05
2.000 4432.90	
C3H6+C3H5-S=>C3H6+C3H5-A	8.1000e+04
2.000 4500.00	
C3H6+C3H5-T=>C3H6+C3H5-A	8.1000e+04
2.000 4500.00	

C3H6+C4H71-4=>C3H5-A+C4H8-1	4.0500e+04
2.000 6600.00	
C3H6+C4H71-3=>C3H5-A+C4H8-2	1.0200e+05
2.000 13700.00	
C3H6+C4H3=>C3H5-A+C4H4	1.2270e+05
2.000 5710.38	
C3H6+C6H5=>C3H5-A+C6H6	1.1100e+08
1.000 2532.90	
CH2OH+C3H6=>CH3OH+C3H5-A	8.4900e+04
2.000 10410.16	
HCO+C3H6=>CH2O+C3H5-A	3.7800e+05
2.000 12172.41	
CH3CO+C3H6=>CH3CHO+C3H5-A	4.0500e+05
2.000 13872.41	
CH2CHO+C3H6=>CH3CHO+C3H5-A	6.9000e+04
2.000 11372.41	
HCCO+C3H6=>CH2CO+C3H5-A	1.2840e+05
2.000 5732.90	
C3H6+NC3H7O2=>C3H5-A+C3H7OOH	2.2800e+05
2.000 12494.92	
C3H6+IC3H7O2=>C3H5-A+C3H7OOH	2.2800e+05
2.000 12494.92	
C3H6+HCO3=>C3H5-A+HCO3H	1.0200e+05
2.000 6500.00	
CH3CO3+C3H6=>CH3CO3H+C3H5-A	1.0200e+05
2.000 6500.00	
C3H6+CH3COCH2=>C3H5-A+CH3COCH3	6.9000e+04
2.000 8000.00	
C3H6+C6H5O=>C3H5-A+C6H5OH	8.1000e+04
2.000 12710.16	
C3H6+C5H7=>C3H5-A+LC5H8	8.1000e+04
2.000 15000.00	
C3H6+C7H7=>C3H5-A+C7H8	4.0500e+04
2.000 16532.90	
C3H6+CH3C6H4=>C3H5-A+C7H8	1.1100e+08
1.000 2532.90	
C3H6+RCRESOLO=>C3H5-A+CRESOL	8.1000e+04
2.000 12800.00	

C3H6+C10H7=>C3H5-A+C10H8	1.1100e+08
1.000 2532.90	
C3H6+INDENYL=>C3H5-A+INDENE	3.9000e+04
2.000 16000.00	
C3H6+C10H6CH3=>C3H5-A+C10H7CH3	1.1100e+08
1.000 2000.00	
C2H3+C3H6=>C2H4+C3H5-S	2.7120e+05
2.000 8811.51	
C2H5+C3H6=>C2H6+C3H5-S	8.0000e+04
2.000 12862.83	
NC3H7+C3H6=>C3H8+C3H5-S	5.4000e+04
2.000 12862.83	
IC3H7+C3H6=>C3H8+C3H5-S	5.4000e+04
2.000 16662.41	
C3H6+C3H5-T=>C3H6+C3H5-S	1.0800e+05
2.000 10579.25	
C3H6+C3H5-A=>C3H6+C3H5-S	2.1560e+05
2.000 20432.90	
C3H6+C4H5=>C3H5-S+C4H6	1.0800e+05
2.000 9558.50	
C3H6+C4H71-4=>C3H5-S+C4H8-1	5.4000e+04
2.000 13144.81	
C3H6+C4H71-3=>C3H5-S+C4H8-2	1.3600e+05
2.000 21467.03	
C3H6+C4H3=>C3H5-S+C4H4	1.6360e+05
2.000 10464.60	
C3H6+C6H5=>C3H5-S+C6H6	1.4800e+08
1.000 5707.64	
CH3O+C3H6=>CH3OH+C3H5-S	1.7120e+05
2.000 6352.72	
CH2OH+C3H6=>CH3OH+C3H5-S	1.1320e+05
2.000 17013.68	
CH3CO+C3H6=>CH3CHO+C3H5-S	5.4000e+05
2.000 22055.13	
CH2CHO+C3H6=>CH3CHO+C3H5-S	9.2000e+04
2.000 19174.81	
C3H6+C3H3=>C3H5-S+C3H4-A	1.0800e+05
2.000 20789.97	

HCCO+C3H6=>CH2CO+C3H5-S	1.7120e+05
2.000 10421.47	
CH3O2+C3H6=>CH3O2H+C3H5-S	3.0400e+05
2.000 20202.44	
C2H5O2+C3H6=>C2H5O2H+C3H5-S	3.0400e+05
2.000 20202.44	
C3H6+NC3H7O2=>C3H5-S+C3H7OOH	3.0400e+05
2.000 20403.72	
C3H6+IC3H7O2=>C3H5-S+C3H7OOH	3.0400e+05
2.000 20403.72	
C3H6+HCO3=>C3H5-S+HCO3H	1.3600e+05
2.000 13024.11	
CH3CO3+C3H6=>CH3CO3H+C3H5-S	1.3600e+05
2.000 13024.11	
C3H6+CH3COCH2=>C3H5-S+CH3COCH3	9.2000e+04
2.000 14821.74	
C3H6+C6H5O=>C3H5-S+C6H5OH	1.0800e+05
2.000 19684.58	
C3H6+C5H7=>C3H5-S+LC5H8	1.0800e+05
2.000 22952.95	
C3H6+C7H7=>C3H5-S+C7H8	5.4000e+04
2.000 23069.52	
C3H6+CH3C6H4=>C3H5-S+C7H8	1.4800e+08
1.000 5707.64	
C3H6+RCRESOLO=>C3H5-S+CRESOL	1.0800e+05
2.000 20432.90	
C3H6+C10H7=>C3H5-S+C10H8	1.4800e+08
1.000 5707.64	
C3H6+INDENYL=>C3H5-S+INDENE	5.2000e+04
2.000 24090.27	
C3H6+C10H6CH3=>C3H5-S+C10H7CH3	1.4800e+08
1.000 6728.39	
C2H3+C3H6=>C2H4+C3H5-T	9.4920e+04
2.000 8811.51	
C2H5+C3H6=>C2H6+C3H5-T	2.8000e+04
2.000 12862.83	
NC3H7+C3H6=>C3H8+C3H5-T	1.8900e+04
2.000 12862.83	



IC3H7+C3H6=>C3H8+C3H5-T	1.8900e+04
2.000 16662.41	
C3H6+C3H5-S=>C3H6+C3H5-T	3.7800e+04
2.000 10579.25	
C3H6+C3H5-A=>C3H6+C3H5-T	7.5460e+04
2.000 20432.90	
C3H6+C4H5=>C3H5-T+C4H6	3.7800e+04
2.000 9558.50	
C3H6+C4H71-4=>C3H5-T+C4H8-1	1.8900e+04
2.000 13144.81	
C3H6+C4H71-3=>C3H5-T+C4H8-2	4.7600e+04
2.000 21467.03	
C3H6+C4H3=>C3H5-T+C4H4	5.7260e+04
2.000 10464.60	
C3H6+C6H5=>C3H5-T+C6H6	5.1800e+07
1.000 5707.64	
CH3O+C3H6=>CH3OH+C3H5-T	5.9920e+04
2.000 6352.72	
CH2OH+C3H6=>CH3OH+C3H5-T	3.9620e+04
2.000 17013.68	
CH3CO+C3H6=>CH3CHO+C3H5-T	1.8900e+05
2.000 22055.13	
CH2CHO+C3H6=>CH3CHO+C3H5-T	3.2200e+04
2.000 19174.81	
C3H6+C3H3=>C3H5-T+C3H4-A	3.7800e+04
2.000 20789.97	
HCCO+C3H6=>CH2CO+C3H5-T	5.9920e+04
2.000 10421.47	
CH3O2+C3H6=>CH3O2H+C3H5-T	1.0640e+05
2.000 20202.44	
C2H5O2+C3H6=>C2H5O2H+C3H5-T	1.0640e+05
2.000 20202.44	
C3H6+NC3H7O2=>C3H5-T+C3H7OOH	1.0640e+05
2.000 20403.72	
C3H6+IC3H7O2=>C3H5-T+C3H7OOH	1.0640e+05
2.000 20403.72	
C3H6+HCO3=>C3H5-T+HCO3H	4.7600e+04
2.000 13024.11	

CH3CO3+C3H6=>CH3CO3H+C3H5-T	4.7600e+04
2.000 13024.11	
C3H6+CH3COCH2=>C3H5-T+CH3COCH3	3.2200e+04
2.000 14821.74	
C3H6+C6H5O=>C3H5-T+C6H5OH	3.7800e+04
2.000 19684.58	
C3H6+C5H7=>C3H5-T+LC5H8	3.7800e+04
2.000 22952.95	
C3H6+C7H7=>C3H5-T+C7H8	1.8900e+04
2.000 23069.52	
C3H6+CH3C6H4=>C3H5-T+C7H8	5.1800e+07
1.000 5707.64	
C3H6+RCRESOLO=>C3H5-T+CRESOL	3.7800e+04
2.000 20432.90	
C3H6+C10H7=>C3H5-T+C10H8	5.1800e+07
1.000 5707.64	
C3H6+INDENYL=>C3H5-T+INDENE	1.8200e+04
2.000 24090.27	
C3H6+C10H6CH3=>C3H5-T+C10H7CH3	5.1800e+07
1.000 6728.39	
C2H3+C3H4-A=>C2H4+C3H3	4.0680e+06
2.000 10542.98	
C2H5+C3H4-A=>C2H6+C3H3	1.2000e+06
2.000 13545.66	
NC3H7+C3H4-A=>C3H8+C3H3	8.1000e+05
2.000 13545.66	
IC3H7+C3H4-A=>C3H8+C3H3	8.1000e+05
2.000 17345.25	
C3H5-S+C3H4-A=>C3H6+C3H3	1.6200e+06
2.000 10579.25	
C3H5-T+C3H4-A=>C3H6+C3H3	1.6200e+06
2.000 10579.25	
C3H4-A+C4H71-4=>C3H3+C4H8-1	8.1000e+05
2.000 13144.81	
C3H4-A+C4H71-3=>C3H3+C4H8-2	2.0400e+06
2.000 21467.03	
C3H4-A+IC4H7=>C3H3+IC4H8	1.6200e+06
2.000 21467.03	

C3H4-A+C4H3=>C3H3+C4H4	2.4540e+06
2.000 12122.91	
C3H4-A+C6H5=>C3H3+C6H6	2.2200e+09
1.000 7439.11	
O+C3H4-A=>OH+C3H3	1.4100e+08
2.000 8057.53	
CH3O+C3H4-A=>CH3OH+C3H3	2.5680e+06
2.000 7035.56	
CH2OH+C3H4-A=>CH3OH+C3H3	1.6980e+06
2.000 17696.52	
HCO+C3H4-A=>CH2O+C3H3	7.5600e+06
2.000 19686.13	
CH3CO+C3H4-A=>CH3CHO+C3H3	8.1000e+06
2.000 21640.55	
CH2CHO+C3H4-A=>CH3CHO+C3H3	1.3800e+06
2.000 18760.24	
HCCO+C3H4-A=>CH2CO+C3H3	2.5680e+06
2.000 12152.94	
C2H5O2+C3H4-A=>C2H5O2H+C3H3	4.5600e+06
2.000 20202.44	
C3H4-A+NC3H7O2=>C3H3+C3H7OOH	4.5600e+06
2.000 20062.30	
C3H4-A+IC3H7O2=>C3H3+C3H7OOH	4.5600e+06
2.000 20062.30	
C3H4-A+HCO3=>C3H3+HCO3H	2.0400e+06
2.000 13024.11	
CH3CO3+C3H4-A=>CH3CO3H+C3H3	2.0400e+06
2.000 13024.11	
C3H4-A+CH3COCH2=>C3H3+CH3COCH3	1.3800e+06
2.000 14821.74	
C3H4-A+C6H5O=>C3H3+C6H5OH	1.6200e+06
2.000 20367.41	
C3H4-A+C5H7=>C3H3+LC5H8	1.6200e+06
2.000 22952.95	
C3H4-A+C7H7=>C3H3+C7H8	8.1000e+05
2.000 24800.99	
C3H4-A+CH3C6H4=>C3H3+C7H8	2.2200e+09
1.000 7439.11	

C3H4-A+RCRESOLO=>C3H3+CRESOL	1.6200e+06
2.000 20432.90	
C3H4-A+C10H7=>C3H3+C10H8	2.2200e+09
1.000 7439.11	
C3H4-A+INDENYL=>C3H3+INDENE	7.8000e+05
2.000 24090.27	
C3H4-A+C10H6CH3=>C3H3+C10H7CH3	2.2200e+09
1.000 6728.39	
C2H5+C3H4-P=>C2H6+C3H3	1.2000e+06
2.000 13545.66	
NC3H7+C3H4-P=>C3H8+C3H3	8.1000e+05
2.000 13545.66	
IC3H7+C3H4-P=>C3H8+C3H3	8.1000e+05
2.000 17345.25	
C3H5-S+C3H4-P=>C3H6+C3H3	1.6200e+06
2.000 10579.25	
C3H5-T+C3H4-P=>C3H6+C3H3	1.6200e+06
2.000 10579.25	
C3H4-P+C4H5=>C3H3+C4H6	1.6200e+06
2.000 11289.97	
C3H4-P+C4H71-4=>C3H3+C4H8-1	8.1000e+05
2.000 13144.81	
C3H4-P+C4H71-3=>C3H3+C4H8-2	2.0400e+06
2.000 21467.03	
C3H4-P+IC4H7=>C3H3+IC4H8	1.6200e+06
2.000 21467.03	
C3H4-P+C4H3=>C3H3+C4H4	2.4540e+06
2.000 12122.91	
C3H4-P+C6H5=>C3H3+C6H6	2.2200e+09
1.000 7439.11	
CH3O+C3H4-P=>CH3OH+C3H3	2.5680e+06
2.000 7035.56	
CH2OH+C3H4-P=>CH3OH+C3H3	1.6980e+06
2.000 17696.52	
HCO+C3H4-P=>CH2O+C3H3	7.5600e+06
2.000 19686.13	
CH3CO+C3H4-P=>CH3CHO+C3H3	8.1000e+06
2.000 21640.55	

CH2CHO+C3H4-P=>CH3CHO+C3H3	1.3800e+06
2.000 18760.24	
HCCO+C3H4-P=>CH2CO+C3H3	2.5680e+06
2.000 12152.94	
C2H5O2+C3H4-P=>C2H5O2H+C3H3	4.5600e+06
2.000 20202.44	
C3H4-P+NC3H7O2=>C3H3+C3H7OOH	4.5600e+06
2.000 20062.30	
C3H4-P+IC3H7O2=>C3H3+C3H7OOH	4.5600e+06
2.000 20062.30	
C3H4-P+HCO3=>C3H3+HCO3H	2.0400e+06
2.000 13024.11	
CH3CO3+C3H4-P=>CH3CO3H+C3H3	2.0400e+06
2.000 13024.11	
C3H4-P+CH3COCH2=>C3H3+CH3COCH3	1.3800e+06
2.000 14821.74	
C3H4-P+C6H5O=>C3H3+C6H5OH	1.6200e+06
2.000 20367.41	
C3H4-P+C5H7=>C3H3+LC5H8	1.6200e+06
2.000 22952.95	
C3H4-P+C7H7=>C3H3+C7H8	8.1000e+05
2.000 24800.99	
C3H4-P+CH3C6H4=>C3H3+C7H8	2.2200e+09
1.000 7439.11	
C3H4-P+RCRESOLO=>C3H3+CRESOL	1.6200e+06
2.000 20432.90	
C3H4-P+C10H7=>C3H3+C10H8	2.2200e+09
1.000 7439.11	
C3H4-P+INDENYL=>C3H3+INDENE	7.8000e+05
2.000 24090.27	
C3H4-P+C10H6CH3=>C3H3+C10H7CH3	2.2200e+09
1.000 6728.39	
H2O+HCCO=>OH+CH2CO	4.2800e+05
2.000 12957.85	
H2O+CH3O2=>OH+CH3O2H	7.6000e+05
2.000 26091.66	
H2O+C2H5O2=>OH+C2H5O2H	7.6000e+05
2.000 26091.66	

H2O+NC3H7O2=>OH+C3H7OOH	7.6000e+05
2.000 26746.29	
H2O+IC3H7O2=>OH+C3H7OOH	7.6000e+05
2.000 26746.29	
H2O+HCO3=>OH+HCO3H	3.4000e+05
2.000 18078.01	
H2O+CH3CO3=>OH+CH3CO3H	3.4000e+05
2.000 18078.01	
H2O+C6H5O=>OH+C6H5OH	2.7000e+05
2.000 24655.22	
H2O+C5H7=>OH+LC5H8	2.7000e+05
2.000 29113.69	
H2O+RCRESOLO=>OH+CRESOL	2.7000e+05
2.000 26345.71	
H2O+C10H7=>OH+C10H8	3.7000e+08
1.000 7071.34	
H2O+INDENYL=>OH+INDENE	1.3000e+05
2.000 30357.38	
H2O+C10H6CH3=>OH+C10H7CH3	3.7000e+08
1.000 10391.23	
H2O2+C2H3=>HO2+C2H4	5.4240e+04
2.000 837.96	
H2O2+C4H3=>HO2+C4H4	3.2720e+04
2.000 1884.38	
H2O2+CH2CHO=>HO2+CH3CHO	1.8400e+04
2.000 6187.19	
H2O2+HCCO=>HO2+CH2CO	3.4240e+04
2.000 1926.22	
H2O2+C2H5O2=>HO2+C2H5O2H	6.0800e+04
2.000 7406.78	
H2O2+NC3H7O2=>HO2+C3H7OOH	6.0800e+04
2.000 7211.52	
H2O2+IC3H7O2=>HO2+C3H7OOH	6.0800e+04
2.000 7211.52	
H2O2+HCO3=>HO2+HCO3H	2.7200e+04
2.000 2043.39	
H2O2+CH3CO3=>HO2+CH3CO3H	2.7200e+04
2.000 2043.39	

H2O2+C6H5O=>HO2+C6H5OH	2.1600e+04
2.000 7707.77	
H2O2+C5H7=>HO2+LC5H8	2.1600e+04
2.000 9567.35	
H2O2+RCRESOLO=>HO2+CRESOL	2.1600e+04
2.000 7585.98	
H2O2+C10H7=>HO2+C10H8	2.9600e+07
1.000 -239.69	
H2O2+INDENYL=>HO2+INDENE	1.0400e+04
2.000 10473.55	
H2O2+C10H6CH3=>HO2+C10H7CH3	2.9600e+07
1.000 -1229.96	
CH2O+C2H5=>HCO+C2H6	1.6000e+05
2.000 5307.96	
CH2O+NC3H7=>HCO+C3H8	1.0800e+05
2.000 5307.96	
CH2O+IC3H7=>HCO+C3H8	1.0800e+05
2.000 8364.40	
CH2O+C3H5-A=>HCO+C3H6	4.3120e+05
2.000 10972.41	
CH2O+C4H5=>HCO+C4H6	2.1600e+05
2.000 3500.70	
CH2O+C4H71-4=>HCO+C4H8-1	1.0800e+05
2.000 5032.93	
CH2O+C4H71-3=>HCO+C4H8-2	2.7200e+05
2.000 11840.29	
CH2O+IC4H7=>HCO+IC4H8	2.1600e+05
2.000 11840.29	
CH2O+C4H3=>HCO+C4H4	3.2720e+05
2.000 4142.40	
CH2O+CH3CO=>HCO+CH3CHO	1.0800e+06
2.000 12020.57	
CH2O+CH2CHO=>HCO+CH3CHO	1.8400e+05
2.000 9611.63	
CH2O+C3H3=>HCO+C3H4-A	2.1600e+05
2.000 12586.13	
CH2O+HCCO=>HCO+CH2CO	3.4240e+05
2.000 4161.68	

CH2O+NC3H7O2=>HCO+C3H7OOH 2.000 10689.72	6.0800e+05
CH2O+IC3H7O2=>HCO+C3H7OOH 2.000 10689.72	6.0800e+05
CH2O+HCO3=>HCO+HCO3H 2.000 4937.89	2.7200e+05
CH2O+CH3CO3=>HCO+CH3CO3H 2.000 4937.89	2.7200e+05
CH2O+CH3COCH2=>HCO+CH3COCH3 2.000 6366.63	1.8400e+05
CH2O+C6H5O=>HCO+C6H5OH 2.000 10863.31	2.1600e+05
CH2O+C5H7=>HCO+LC5H8 2.000 13095.77	2.1600e+05
CH2O+C7H7=>HCO+C7H8 2.000 14519.19	1.0800e+05
CH2O+CH3C6H4=>HCO+C7H8 1.000 1324.15	2.9600e+08
CH2O+RCRESOLO=>HCO+CRESOL 2.000 10972.41	2.1600e+05
CH2O+C10H7=>HCO+C10H8 1.000 1324.15	2.9600e+08
CH2O+INDENYL=>HCO+INDENE 2.000 14062.89	1.0400e+05
CH2O+C10H6CH3=>HCO+C10H7CH3 1.000 867.85	2.9600e+08
CH3OH+C3H5-S=>CH3O+C3H6 2.000 6897.45	2.7000e+04
CH3OH+C3H5-T=>CH3O+C3H6 2.000 6897.45	2.7000e+04
CH3OH+C4H5=>CH3O+C4H6 2.000 5052.72	2.7000e+04
CH3OH+C4H3=>CH3O+C4H4 2.000 5894.94	4.0900e+04
CH3OH+C6H5=>CH3O+C6H6 1.000 2019.99	3.7000e+07
CH3OH+CH3CO=>CH3O+CH3CHO 2.000 17521.98	1.3500e+05



CH3OH+CH2CHO=>CH3O+CH3CHO	2.3000e+04
2.000 14872.00	
CH3OH+C3H3=>CH3O+C3H4-A	2.7000e+04
2.000 15235.56	
CH3OH+HCCO=>CH3O+CH2CO	4.2800e+04
2.000 5816.99	
CH3O2+CH3OH=>CH3O2H+CH3O	7.6000e+04
2.000 15598.15	
CH3OH+C2H5O2=>CH3O+C2H5O2H	7.6000e+04
2.000 15598.15	
CH3OH+NC3H7O2=>CH3O+C3H7OOH	7.6000e+04
2.000 15961.90	
CH3OH+IC3H7O2=>CH3O+C3H7OOH	7.6000e+04
2.000 15961.90	
CH3OH+HCO3=>CH3O+HCO3H	3.4000e+04
2.000 9072.89	
CH3OH+CH3CO3=>CH3O+CH3CO3H	3.4000e+04
2.000 9072.89	
CH3OH+C6H5O=>CH3O+C6H5OH	2.7000e+04
2.000 14764.61	
CH3OH+C5H7=>CH3O+LC5H8	2.7000e+04
2.000 18136.38	
CH3OH+C7H7=>CH3O+C7H8	1.3500e+04
2.000 17345.80	
CH3OH+CH3C6H4=>CH3O+C7H8	3.7000e+07
1.000 2019.99	
CH3OH+RCRESOLO=>CH3O+CRESOL	2.7000e+04
2.000 15810.16	
CH3OH+C10H7=>CH3O+C10H8	3.7000e+07
1.000 2019.99	
CH3OH+INDENYL=>CH3O+INDENE	1.3000e+04
2.000 19190.53	
CH3OH+C10H6CH3=>CH3O+C10H7CH3	3.7000e+07
1.000 3864.72	
CH3OH+C2H3=>CH2OH+C2H4	2.0340e+05
2.000 6355.72	
CH3OH+C2H5=>CH2OH+C2H6	6.0000e+04
2.000 9335.00	

CH3OH+NC3H7=>CH2OH+C3H8 2.000 9335.00	4.0500e+04
CH3OH+IC3H7=>CH2OH+C3H8 2.000 12771.46	4.0500e+04
CH3OH+C3H5-S=>CH2OH+C3H6 2.000 6897.45	8.1000e+04
CH3OH+C3H5-T=>CH2OH+C3H6 2.000 6897.45	8.1000e+04
CH3OH+C3H5-A=>CH2OH+C3H6 2.000 15810.16	1.6170e+05
CH3OH+C4H5=>CH2OH+C4H6 2.000 7013.68	8.1000e+04
CH3OH+C4H71-4=>CH2OH+C4H8-1 2.000 9181.05	4.0500e+04
CH3OH+C4H71-3=>CH2OH+C4H8-2 2.000 16763.05	1.0200e+05
CH3OH+IC4H7=>CH2OH+IC4H8 2.000 16763.05	8.1000e+04
CH3OH+C4H3=>CH2OH+C4H4 2.000 7773.04	1.2270e+05
CH3OH+C6H5=>CH2OH+C6H6 1.000 3980.95	1.1100e+08
CH3OH+CH3CO=>CH2OH+CH3CHO 2.000 17052.45	4.0500e+05
CH3OH+CH2CHO=>CH2OH+CH3CHO 2.000 14402.47	6.9000e+04
CH3OH+C3H3=>CH2OH+C3H4-A 2.000 17196.52	8.1000e+04
CH3OH+HCCO=>CH2OH+CH2CO 2.000 7777.95	1.2840e+05
CH3OH+NC3H7O2=>CH2OH+C3H7OOH 2.000 15575.23	2.2800e+05
CH3OH+IC3H7O2=>CH2OH+C3H7OOH 2.000 15575.23	2.2800e+05
CH3OH+HCO3=>CH2OH+HCO3H 2.000 9072.89	1.0200e+05
CH3OH+CH3CO3=>CH2OH+CH3CO3H 2.000 9072.89	1.0200e+05

CH3OH+CH3COCH2=>CH2OH+CH3COCH3	6.9000e+04
2.000 10690.26	
CH3OH+C6H5O=>CH2OH+C6H5OH	8.1000e+04
2.000 15537.94	
CH3OH+C5H7=>CH2OH+LC5H8	8.1000e+04
2.000 18136.38	
CH3OH+C7H7=>CH2OH+C7H8	4.0500e+04
2.000 19306.76	
CH3OH+CH3C6H4=>CH2OH+C7H8	1.1100e+08
1.000 3980.95	
CH3OH+RCRESOLO=>CH2OH+CRESOL	8.1000e+04
2.000 15810.16	
CH3OH+C10H7=>CH2OH+C10H8	1.1100e+08
1.000 3980.95	
CH3OH+INDENYL=>CH2OH+INDENE	3.9000e+04
2.000 19190.53	
CH3OH+C10H6CH3=>CH2OH+C10H7CH3	1.1100e+08
1.000 3864.72	
CH3+CH3CHO=>CH4+CH3CO	1.8000e+05
2.000 4197.02	
C2H3+CH3CHO=>C2H4+CH3CO	4.0680e+05
2.000 3190.32	
C2H5+CH3CHO=>C2H6+CH3CO	1.2000e+05
2.000 5408.29	
CH3CHO+NC3H7=>CH3CO+C3H8	8.1000e+04
2.000 5408.29	
CH3CHO+IC3H7=>CH3CO+C3H8	8.1000e+04
2.000 8464.73	
CH3CHO+C3H5-S=>CH3CO+C3H6	1.6200e+05
2.000 3044.41	
CH3CHO+C3H5-T=>CH3CO+C3H6	1.6200e+05
2.000 3044.41	
CH3CHO+C3H5-A=>CH3CO+C3H6	3.2340e+05
2.000 10972.41	
CH3CHO+C4H5=>CH3CO+C4H6	1.6200e+05
2.000 3755.13	
CH3CHO+C4H71-4=>CH3CO+C4H8-1	8.1000e+04
2.000 5032.93	

CH3CHO+C4H71-3=>CH3CO+C4H8-2	2.0400e+05
2.000 11840.29	
CH3CHO+IC4H7=>CH3CO+IC4H8	1.6200e+05
2.000 11840.29	
CH3CHO+C4H3=>CH3CO+C4H4	2.4540e+05
2.000 4386.08	
CH3CHO+C6H5=>CH3CO+C6H6	2.2200e+08
1.000 1578.57	
CH3O+CH3CHO=>CH3OH+CH3CO	2.5680e+05
2.000 521.98	
CH2OH+CH3CHO=>CH3OH+CH3CO	1.6980e+05
2.000 8752.45	
HCO+CH3CHO=>CH2O+CH3CO	7.5600e+05
2.000 10320.57	
CH3CHO+CH2CHO=>CH3CHO+CH3CO	1.3800e+05
2.000 9550.72	
CH3CHO+C3H3=>CH3CO+C3H4-A	1.6200e+05
2.000 12840.55	
CH3CHO+HCCO=>CH3CO+CH2CO	2.5680e+05
2.000 4416.11	
C2H5O2+CH3CHO=>C2H5O2H+CH3CO	4.5600e+05
2.000 10779.70	
CH3CHO+NC3H7O2=>CH3CO+C3H7OOH	4.5600e+05
2.000 10639.55	
CH3CHO+IC3H7O2=>CH3CO+C3H7OOH	4.5600e+05
2.000 10639.55	
CH3CHO+HCO3=>CH3CO+HCO3H	2.0400e+05
2.000 4937.89	
CH3CHO+CH3CO3=>CH3CO+CH3CO3H	2.0400e+05
2.000 4937.89	
CH3CHO+CH3COCH2=>CH3CO+CH3COCH3	1.3800e+05
2.000 6366.63	
CH3CHO+C6H5O=>CH3CO+C6H5OH	1.6200e+05
2.000 10963.65	
CH3CHO+C5H7=>CH3CO+LC5H8	1.6200e+05
2.000 13095.77	
CH3CHO+C7H7=>CH3CO+C7H8	8.1000e+04
2.000 14773.61	

CH3CHO+CH3C6H4=>CH3CO+C7H8	2.2200e+08
1.000 1578.57	
CH3CHO+RCRESOLO=>CH3CO+CRESOL	1.6200e+05
2.000 10972.41	
CH3CHO+C10H7=>CH3CO+C10H8	2.2200e+08
1.000 1578.57	
CH3CHO+INDENYL=>CH3CO+INDENE	7.8000e+04
2.000 14062.89	
CH3CHO+C10H6CH3=>CH3CO+C10H7CH3	2.2200e+08
1.000 867.85	
CH3+CH3CHO=>CH4+CH2CHO	9.0000e+04
2.000 7760.15	
C2H3+CH3CHO=>C2H4+CH2CHO	2.0340e+05
2.000 6569.89	
C2H5+CH3CHO=>C2H6+CH2CHO	6.0000e+04
2.000 9419.46	
CH3CHO+NC3H7=>CH2CHO+C3H8	4.0500e+04
2.000 9419.46	
CH3CHO+IC3H7=>CH2CHO+C3H8	4.0500e+04
2.000 12855.92	
CH3CHO+C3H5-S=>CH2CHO+C3H6	8.1000e+04
2.000 6897.45	
CH3CHO+C3H5-T=>CH2CHO+C3H6	8.1000e+04
2.000 6897.45	
CH3CHO+C3H5-A=>CH2CHO+C3H6	1.6170e+05
2.000 15810.16	
CH3CHO+C4H5=>CH2CHO+C4H6	8.1000e+04
2.000 7227.86	
CH3CHO+C4H71-4=>CH2CHO+C4H8-1	4.0500e+04
2.000 9181.05	
CH3CHO+C4H71-3=>CH2CHO+C4H8-2	1.0200e+05
2.000 16763.05	
CH3CHO+IC4H7=>CH2CHO+IC4H8	8.1000e+04
2.000 16763.05	
CH3CHO+C4H3=>CH2CHO+C4H4	1.2270e+05
2.000 7978.17	
CH3CHO+C6H5=>CH2CHO+C6H6	1.1100e+08
1.000 4195.13	

O+CH3CHO=>OH+CH2CHO	7.0500e+06
2.000 4691.70	
HO2+CH3CHO=>H2O2+CH2CHO	2.4000e+06
2.000 18964.83	
CH3O+CH3CHO=>CH3OH+CH2CHO	1.2840e+05
2.000 3702.80	
CH2OH+CH3CHO=>CH3OH+CH2CHO	8.4900e+04
2.000 13176.14	
HCO+CH3CHO=>CH2O+CH2CHO	3.7800e+05
2.000 15200.84	
CH3CHO+CH3CO=>CH3CHO+CH2CHO	4.0500e+05
2.000 17001.17	
CH3CHO+C3H3=>CH2CHO+C3H4-A	8.1000e+04
2.000 17410.69	
CH3CHO+HCCO=>CH2CHO+CH2CO	1.2840e+05
2.000 7992.13	
CH3O2+CH3CHO=>CH3O2H+CH2CHO	2.2800e+05
2.000 15598.15	
C2H5O2+CH3CHO=>C2H5O2H+CH2CHO	2.2800e+05
2.000 15598.15	
CH3CHO+NC3H7O2=>CH2CHO+C3H7OOH	2.2800e+05
2.000 15533.00	
CH3CHO+IC3H7O2=>CH2CHO+C3H7OOH	2.2800e+05
2.000 15533.00	
CH3CHO+HCO3=>CH2CHO+HCO3H	1.0200e+05
2.000 9072.89	
CH3CHO+CH3CO3=>CH2CHO+CH3CO3H	1.0200e+05
2.000 9072.89	
CH3CHO+CH3COCH2=>CH2CHO+CH3COCH3	6.9000e+04
2.000 10690.26	
CH3CHO+C6H5O=>CH2CHO+C6H5OH	8.1000e+04
2.000 15622.41	
CH3CHO+C5H7=>CH2CHO+LC5H8	8.1000e+04
2.000 18136.38	
CH3CHO+C7H7=>CH2CHO+C7H8	4.0500e+04
2.000 19520.94	
CH3CHO+CH3C6H4=>CH2CHO+C7H8	1.1100e+08
1.000 4195.13	

CH3CHO+RCRESOLO=>CH2CHO+CRESOL	8.1000e+04
2.000 15810.16	
CH3CHO+C10H7=>CH2CHO+C10H8	1.1100e+08
1.000 4195.13	
CH3CHO+INDENYL=>CH2CHO+INDENE	3.9000e+04
2.000 19190.53	
CH3CHO+C10H6CH3=>CH2CHO+C10H7CH3	1.1100e+08
1.000 3864.72	
H+C2H5CHO=>H2+RALD3	1.0500e+07
2.000 4000.00	
CH3+C2H5CHO=>CH4+RALD3	1.0500e+05
2.000 5000.00	
C2H3+C2H5CHO=>C2H4+RALD3	2.3730e+05
2.000 3900.00	
C2H5+C2H5CHO=>C2H6+RALD3	7.0000e+04
2.000 6700.00	
NC3H7+C2H5CHO=>C3H8+RALD3	4.7250e+04
2.000 6700.00	
IC3H7+C2H5CHO=>C3H8+RALD3	4.7250e+04
2.000 9900.00	
C3H5-S+C2H5CHO=>C3H6+RALD3	9.4500e+04
2.000 4500.00	
C3H5-T+C2H5CHO=>C3H6+RALD3	9.4500e+04
2.000 4500.00	
C3H5-A+C2H5CHO=>C3H6+RALD3	1.8865e+05
2.000 12800.00	
C2H5CHO+C4H5=>RALD3+C4H6	9.4500e+04
2.000 4500.00	
C2H5CHO+C4H71-4=>RALD3+C4H8-1	4.7250e+04
2.000 6600.00	
C2H5CHO+C4H71-3=>RALD3+C4H8-2	1.1900e+05
2.000 13700.00	
C2H5CHO+IC4H7=>RALD3+IC4H8	9.4500e+04
2.000 13700.00	
C2H5CHO+C4H3=>RALD3+C4H4	1.4315e+05
2.000 5200.00	
C2H5CHO+C6H5=>RALD3+C6H6	1.2950e+08
1.000 2000.00	

O+C2H5CHO=>OH+RALD3 2.000 2500.00	8.2250e+06
O2+C2H5CHO=>HO2+RALD3 2.000 44000.00	5.9500e+06
CH3O+C2H5CHO=>CH3OH+RALD3 2.000 1500.00	1.4980e+05
CH2OH+C2H5CHO=>CH3OH+RALD3 2.000 10200.00	9.9050e+04
HCO+C2H5CHO=>CH2O+RALD3 2.000 12300.00	4.4100e+05
CH3CO+C2H5CHO=>CH3CHO+RALD3 2.000 14000.00	4.7250e+05
CH2CHO+C2H5CHO=>CH3CHO+RALD3 2.000 11500.00	8.0500e+04
C3H3+C2H5CHO=>C3H4-A+RALD3 2.000 14000.00	9.4500e+04
HCCO+C2H5CHO=>CH2CO+RALD3 2.000 5200.00	1.4980e+05
CH3O2+C2H5CHO=>CH3O2H+RALD3 2.000 12600.00	2.6600e+05
C2H5O2+C2H5CHO=>C2H5O2H+RALD3 2.000 12600.00	2.6600e+05
C2H5CHO+NC3H7O2=>RALD3+C3H7OOH 2.000 12600.00	2.6600e+05
C2H5CHO+IC3H7O2=>RALD3+C3H7OOH 2.000 12600.00	2.6600e+05
C2H5CHO+HCO3=>RALD3+HCO3H 2.000 6500.00	1.1900e+05
CH3CO3+C2H5CHO=>CH3CO3H+RALD3 2.000 6500.00	1.1900e+05
C2H5CHO+CH3COCH2=>RALD3+CH3COCH3 2.000 8000.00	8.0500e+04
C2H5CHO+C6H5O=>RALD3+C6H5OH 2.000 12500.00	9.4500e+04
C2H5CHO+C5H7=>RALD3+LC5H8 2.000 15000.00	9.4500e+04
C2H5CHO+C7H7=>RALD3+C7H8 2.000 16000.00	4.7250e+04



C2H5CHO+CH3C6H4=>RALD3+C7H8	1.2950e+08
1.000 2000.00	
C2H5CHO+RCRESOLO=>RALD3+CRESOL	9.4500e+04
2.000 12800.00	
C2H5CHO+C10H7=>RALD3+C10H8	1.2950e+08
1.000 2000.00	
C2H5CHO+INDENYL=>RALD3+INDENE	4.5500e+04
2.000 16000.00	
C2H5CHO+C10H6CH3=>RALD3+C10H7CH3	1.2950e+08
1.000 2000.00	
C2H3+C2H5CHO=>CO+C2H5+C2H4	4.8816e+05
2.000 2479.60	
C2H5+C2H5CHO=>CO+C2H6+C2H5	1.4400e+05
2.000 5128.01	
NC3H7+C2H5CHO=>CO+C2H5+C3H8	9.7200e+04
2.000 5128.01	
IC3H7+C2H5CHO=>CO+C2H5+C3H8	9.7200e+04
2.000 8184.45	
C3H5-S+C2H5CHO=>CO+C2H5+C3H6	1.9440e+05
2.000 3044.41	
C3H5-T+C2H5CHO=>CO+C2H5+C3H6	1.9440e+05
2.000 3044.41	
C3H5-A+C2H5CHO=>CO+C2H5+C3H6	3.8808e+05
2.000 10972.41	
C2H5CHO+C4H5=>CO+C2H5+C4H6	1.9440e+05
2.000 3044.41	
C2H5CHO+C4H71-4=>CO+C2H5+C4H8-1	9.7200e+04
2.000 5032.93	
C2H5CHO+C4H71-3=>CO+C2H5+C4H8-2	2.4480e+05
2.000 11840.29	
C2H5CHO+IC4H7=>CO+C2H5+IC4H8	1.9440e+05
2.000 11840.29	
C2H5CHO+C4H3=>CO+C2H5+C4H4	2.9448e+05
2.000 3705.38	
C2H5CHO+C6H5=>CO+C2H5+C6H6	2.6640e+08
1.000 867.85	
O+C2H5CHO=>OH+CO+C2H5	1.6920e+07
2.000 1169.32	

O2+C2H5CHO=>HO2+CO+C2H5	1.2240e+07
2.000 41405.89	
CH3O+C2H5CHO=>CO+CH3OH+C2H5	3.0816e+05
2.000 241.70	
CH2OH+C2H5CHO=>CO+CH3OH+C2H5	2.0376e+05
2.000 8472.17	
HCO+C2H5CHO=>CO+CH2O+C2H5	9.0720e+05
2.000 10490.75	
CH3CO+C2H5CHO=>CO+C2H5+CH3CHO	9.7200e+05
2.000 12129.83	
CH2CHO+C2H5CHO=>CO+C2H5+CH3CHO	1.6560e+05
2.000 9720.89	
C3H3+C2H5CHO=>CO+C2H5+C3H4-A	1.9440e+05
2.000 12129.83	
HCCO+C2H5CHO=>CO+C2H5+CH2CO	3.0816e+05
2.000 3705.38	
CH3O2+C2H5CHO=>CO+CH3O2H+C2H5	5.4720e+05
2.000 10779.70	
C2H5O2+C2H5CHO=>CO+C2H5+C2H5O2H	5.4720e+05
2.000 10779.70	
C2H5CHO+NC3H7O2=>CO+C2H5+C3H7OOH	5.4720e+05
2.000 10779.70	
C2H5CHO+IC3H7O2=>CO+C2H5+C3H7OOH	5.4720e+05
2.000 10779.70	
C2H5CHO+HCO3=>CO+C2H5+HCO3H	2.4480e+05
2.000 4937.89	
CH3CO3+C2H5CHO=>CO+C2H5+CH3CO3H	2.4480e+05
2.000 4937.89	
C2H5CHO+CH3COCH2=>CO+C2H5+CH3COCH3	1.6560e+05
2.000 6366.63	
C2H5CHO+C6H5O=>CO+C2H5+C6H5OH	1.9440e+05
2.000 10683.36	
C2H5CHO+C5H7=>CO+C2H5+LC5H8	1.9440e+05
2.000 13095.77	
C2H5CHO+C7H7=>CO+C2H5+C7H8	9.7200e+04
2.000 14062.89	
C2H5CHO+CH3C6H4=>CO+C2H5+C7H8	2.6640e+08
1.000 867.85	

C2H5CHO+RCRESOLO=>CO+C2H5+CRESOL	1.9440e+05
2.000 10972.41	
C2H5CHO+C10H7=>CO+C2H5+C10H8	2.6640e+08
1.000 867.85	
C2H5CHO+INDENYL=>CO+C2H5+INDENE	9.3600e+04
2.000 14062.89	
C2H5CHO+C10H6CH3=>CO+C2H5+C10H7CH3	2.6640e+08
1.000 867.85	
C2H3+CH2CO=>C2H4+HCCO	5.4240e+05
2.000 8974.48	
C2H5+CH2CO=>C2H6+HCCO	1.6000e+05
2.000 12927.09	
CH2CO+NC3H7=>HCCO+C3H8	1.0800e+05
2.000 12927.09	
CH2CO+IC3H7=>HCCO+C3H8	1.0800e+05
2.000 16726.68	
CH2CO+C3H5-S=>HCCO+C3H6	2.1600e+05
2.000 10579.25	
CH2CO+C3H5-T=>HCCO+C3H6	2.1600e+05
2.000 10579.25	
CH2CO+C3H5-A=>HCCO+C3H6	4.3120e+05
2.000 20432.90	
CH2CO+C4H5=>HCCO+C4H6	2.1600e+05
2.000 9721.47	
CH2CO+C4H71-4=>HCCO+C4H8-1	1.0800e+05
2.000 13144.81	
CH2CO+C4H71-3=>HCCO+C4H8-2	2.7200e+05
2.000 21467.03	
CH2CO+IC4H7=>HCCO+IC4H8	2.1600e+05
2.000 21467.03	
CH2CO+C4H3=>HCCO+C4H4	3.2720e+05
2.000 10620.68	
CH2CO+C6H5=>HCCO+C6H6	2.9600e+08
1.000 5870.61	
O+CH2CO=>OH+HCCO	1.8800e+07
2.000 8057.53	
O2+CH2CO=>HO2+HCCO	1.3600e+07
2.000 54834.21	

OH+CH2CO=>H2O+HCCO	1.2000e+10
1.000 2307.85	
H02+CH2CO=>H2O2+HCCO	6.4000e+06
2.000 24676.22	
CH3O+CH2CO=>CH3OH+HCCO	3.4240e+05
2.000 6416.99	
CH2OH+CH2CO=>CH3OH+HCCO	2.2640e+05
2.000 17077.95	
HCO+CH2CO=>CH2O+HCCO	1.0080e+06
2.000 20061.68	
CH3CO+CH2CO=>CH3CHO+HCCO	1.0800e+06
2.000 22016.11	
CH2CHO+CH2CO=>CH3CHO+HCCO	1.8400e+05
2.000 19135.79	
CH2CO+C3H3=>HCCO+C3H4-A	2.1600e+05
2.000 20952.94	
CH3O2+CH2CO=>CH3O2H+HCCO	6.0800e+05
2.000 20202.44	
C2H5O2+CH2CO=>C2H5O2H+HCCO	6.0800e+05
2.000 20202.44	
CH2CO+NC3H7O2=>HCCO+C3H7OOH	6.0800e+05
2.000 20371.58	
CH2CO+IC3H7O2=>HCCO+C3H7OOH	6.0800e+05
2.000 20371.58	
CH2CO+HCO3=>HCCO+HCO3H	2.7200e+05
2.000 13024.11	
CH2CO+CH3CO3=>HCCO+CH3CO3H	2.7200e+05
2.000 13024.11	
CH2CO+CH3COCH2=>HCCO+CH3COCH3	1.8400e+05
2.000 14821.74	
CH2CO+C6H5O=>HCCO+C6H5OH	2.1600e+05
2.000 19748.85	
CH2CO+C5H7=>HCCO+LC5H8	2.1600e+05
2.000 22952.95	
CH2CO+C7H7=>HCCO+C7H8	1.0800e+05
2.000 23232.49	
CH2CO+CH3C6H4=>HCCO+C7H8	2.9600e+08
1.000 5870.61	

CH2CO+RCRESOLO=>HCCO+CRESOL	2.1600e+05
2.000 20432.90	
CH2CO+C10H7=>HCCO+C10H8	2.9600e+08
1.000 5870.61	
CH2CO+INDENYL=>HCCO+INDENE	1.0400e+05
2.000 24090.27	
CH2CO+C10H6CH3=>HCCO+C10H7CH3	2.9600e+08
1.000 6728.39	
H+CH2OHCHO=>H2+CO+CH2OH	1.2000e+07
2.000 2573.61	
CH3+CH2OHCHO=>CO+CH4+CH2OH	1.2000e+05
2.000 3516.32	
C2H3+CH2OHCHO=>CO+CH2OH+C2H4	2.7120e+05
2.000 2479.60	
C2H5+CH2OHCHO=>CO+CH2OH+C2H6	8.0000e+04
2.000 5128.01	
CH2OHCHO+NC3H7=>CO+CH2OH+C3H8	5.4000e+04
2.000 5128.01	
CH2OHCHO+IC3H7=>CO+CH2OH+C3H8	5.4000e+04
2.000 8184.45	
CH2OHCHO+C3H5-S=>CO+CH2OH+C3H6	1.0800e+05
2.000 3044.41	
CH2OHCHO+C3H5-T=>CO+CH2OH+C3H6	1.0800e+05
2.000 3044.41	
CH2OHCHO+C3H5-A=>CO+CH2OH+C3H6	2.1560e+05
2.000 10972.41	
CH2OHCHO+C4H5=>CO+CH2OH+C4H6	1.0800e+05
2.000 3044.41	
CH2OHCHO+C4H71-4=>CO+CH2OH+C4H8-1	5.4000e+04
2.000 5032.93	
CH2OHCHO+C4H71-3=>CO+CH2OH+C4H8-2	1.3600e+05
2.000 11840.29	
CH2OHCHO+IC4H7=>CO+CH2OH+IC4H8	1.0800e+05
2.000 11840.29	
CH2OHCHO+C4H3=>CO+CH2OH+C4H4	1.6360e+05
2.000 3705.38	
CH2OHCHO+C6H5=>CO+CH2OH+C6H6	1.4800e+08
1.000 867.85	

O+CH2OHCHO=>OH+CO+CH2OH	9.4000e+06
2.000 1169.32	
O2+CH2OHCHO=>HO2+CO+CH2OH	6.8000e+06
2.000 41405.89	
OH+CH2OHCHO=>H2O+CO+CH2OH	6.0000e+09
1.000 -855.10	
HO2+CH2OHCHO=>H2O2+CO+CH2OH	3.2000e+06
2.000 14062.89	
CH3O+CH2OHCHO=>CO+CH3OH+CH2OH	1.7120e+05
2.000 241.70	
CH2OH+CH2OHCHO=>CO+CH3OH+CH2OH	1.1320e+05
2.000 8472.17	
HCO+CH2OHCHO=>CO+CH2OH+CH2O	5.0400e+05
2.000 10490.75	
CH3CO+CH2OHCHO=>CO+CH2OH+CH3CHO	5.4000e+05
2.000 12129.83	
CH2CHO+CH2OHCHO=>CO+CH2OH+CH3CHO	9.2000e+04
2.000 9720.89	
CH2OHCHO+C3H3=>CO+CH2OH+C3H4-A	1.0800e+05
2.000 12129.83	
HCCO+CH2OHCHO=>CO+CH2OH+CH2CO	1.7120e+05
2.000 3705.38	
CH3O2+CH2OHCHO=>CO+CH3O2H+CH2OH	3.0400e+05
2.000 10779.70	
C2H5O2+CH2OHCHO=>CO+CH2OH+C2H5O2H	3.0400e+05
2.000 10779.70	
CH2OHCHO+NC3H7O2=>CO+CH2OH+C3H7OOH	3.0400e+05
2.000 10779.70	
CH2OHCHO+IC3H7O2=>CO+CH2OH+C3H7OOH	3.0400e+05
2.000 10779.70	
CH2OHCHO+HCO3=>CO+CH2OH+HCO3H	1.3600e+05
2.000 4937.89	
CH3CO3+CH2OHCHO=>CO+CH2OH+CH3CO3H	1.3600e+05
2.000 4937.89	
CH2OHCHO+CH3COCH2=>CO+CH2OH+CH3COCH3	9.2000e+04
2.000 6366.63	
CH2OHCHO+C6H5O=>CO+CH2OH+C6H5OH	1.0800e+05
2.000 10683.36	

CH2OHCHO+C5H7=>CO+CH2OH+LC5H8	1.0800e+05
2.000 13095.77	
CH2OHCHO+C7H7=>CO+CH2OH+C7H8	5.4000e+04
2.000 14062.89	
CH2OHCHO+CH3C6H4=>CO+CH2OH+C7H8	1.4800e+08
1.000 867.85	
CH2OHCHO+RCRESOLO=>CO+CH2OH+CRESOL	1.0800e+05
2.000 10972.41	
CH2OHCHO+C10H7=>CO+CH2OH+C10H8	1.4800e+08
1.000 867.85	
CH2OHCHO+INDENYL=>CO+CH2OH+INDENE	5.2000e+04
2.000 14062.89	
CH2OHCHO+C10H6CH3=>CO+CH2OH+C10H7CH3	1.4800e+08
1.000 867.85	
H+CH2OHCHO=>H2+H+CHOCHO	3.0000e+06
2.000 4000.00	
CH3+CH2OHCHO=>H+CH4+CHOCHO	3.0000e+04
2.000 5000.00	
C2H3+CH2OHCHO=>H+C2H4+CHOCHO	6.7800e+04
2.000 3900.00	
C2H5+CH2OHCHO=>H+C2H6+CHOCHO	2.0000e+04
2.000 6700.00	
CH2OHCHO+NC3H7=>H+CHOCHO+C3H8	1.3500e+04
2.000 6700.00	
CH2OHCHO+IC3H7=>H+CHOCHO+C3H8	1.3500e+04
2.000 9900.00	
CH2OHCHO+C3H5-S=>H+CHOCHO+C3H6	2.7000e+04
2.000 4500.00	
CH2OHCHO+C3H5-T=>H+CHOCHO+C3H6	2.7000e+04
2.000 4500.00	
CH2OHCHO+C3H5-A=>H+CHOCHO+C3H6	5.3900e+04
2.000 12800.00	
CH2OHCHO+C4H5=>H+CHOCHO+C4H6	2.7000e+04
2.000 4500.00	
CH2OHCHO+C4H71-4=>H+CHOCHO+C4H8-1	1.3500e+04
2.000 6600.00	
CH2OHCHO+C4H71-3=>H+CHOCHO+C4H8-2	3.4000e+04
2.000 13700.00	

CH2OHCHO+IC4H7=>H+CHOCHO+IC4H8 2.000 13700.00	2.7000e+04
CH2OHCHO+C4H3=>H+CHOCHO+C4H4 2.000 5200.00	4.0900e+04
CH2OHCHO+C6H5=>H+CHOCHO+C6H6 1.000 2000.00	3.7000e+07
O+CH2OHCHO=>H+OH+CHOCHO 2.000 2500.00	2.3500e+06
O2+CH2OHCHO=>H+HO2+CHOCHO 2.000 44000.00	1.7000e+06
OH+CH2OHCHO=>H+H2O+CHOCHO 1.000 50.00	1.5000e+09
HO2+CH2OHCHO=>H+H2O2+CHOCHO 2.000 16000.00	8.0000e+05
CH3O+CH2OHCHO=>H+CH3OH+CHOCHO 2.000 1500.00	4.2800e+04
CH2OH+CH2OHCHO=>H+CH3OH+CHOCHO 2.000 10200.00	2.8300e+04
HCO+CH2OHCHO=>H+CH2O+CHOCHO 2.000 12300.00	1.2600e+05
CH3CO+CH2OHCHO=>H+CH3CHO+CHOCHO 2.000 14000.00	1.3500e+05
CH2CHO+CH2OHCHO=>H+CH3CHO+CHOCHO 2.000 11500.00	2.3000e+04
CH2OHCHO+C3H3=>H+CHOCHO+C3H4-A 2.000 14000.00	2.7000e+04
HCCO+CH2OHCHO=>H+CH2CO+CHOCHO 2.000 5200.00	4.2800e+04
CH3O2+CH2OHCHO=>H+CH3O2H+CHOCHO 2.000 12600.00	7.6000e+04
C2H5O2+CH2OHCHO=>H+C2H5O2H+CHOCHO 2.000 12600.00	7.6000e+04
CH2OHCHO+NC3H7O2=>H+CHOCHO+C3H7OOH 2.000 12600.00	7.6000e+04
CH2OHCHO+IC3H7O2=>H+CHOCHO+C3H7OOH 2.000 12600.00	7.6000e+04
CH2OHCHO+HCO3=>H+CHOCHO+HCO3H 2.000 6500.00	3.4000e+04



CH3CO3+CH2OHCHO=>H+CH3CO3H+CHOCHO	3.4000e+04
2.000        6500.00	
CH2OHCHO+CH3COCH2=>H+CHOCHO+CH3COCH3	2.3000e+04
2.000        8000.00	
CH2OHCHO+C6H5O=>H+CHOCHO+C6H5OH	2.7000e+04
2.000        12500.00	
CH2OHCHO+C5H7=>H+CHOCHO+LC5H8	2.7000e+04
2.000        15000.00	
CH2OHCHO+C7H7=>H+CHOCHO+C7H8	1.3500e+04
2.000        16000.00	
CH2OHCHO+CH3C6H4=>H+CHOCHO+C7H8	3.7000e+07
1.000        2000.00	
CH2OHCHO+RCRESOLO=>H+CHOCHO+CRESOL	2.7000e+04
2.000        12800.00	
CH2OHCHO+C10H7=>H+CHOCHO+C10H8	3.7000e+07
1.000        2000.00	
CH2OHCHO+INDENYL=>H+CHOCHO+INDENE	1.3000e+04
2.000        16000.00	
CH2OHCHO+C10H6CH3=>H+CHOCHO+C10H7CH3	3.7000e+07
1.000        2000.00	
H+CHOCHO=>H2+CO+HCO	2.4000e+07
2.000        2573.61	
CH3+CHOCHO=>CO+CH4+HCO	2.4000e+05
2.000        3516.32	
C2H3+CHOCHO=>CO+HCO+C2H4	5.4240e+05
2.000        2479.60	
C2H5+CHOCHO=>CO+HCO+C2H6	1.6000e+05
2.000        5128.01	
CHOCHO+NC3H7=>CO+HCO+C3H8	1.0800e+05
2.000        5128.01	
CHOCHO+IC3H7=>CO+HCO+C3H8	1.0800e+05
2.000        8184.45	
CHOCHO+C3H5-S=>CO+HCO+C3H6	2.1600e+05
2.000        3044.41	
CHOCHO+C3H5-T=>CO+HCO+C3H6	2.1600e+05
2.000        3044.41	
CHOCHO+C3H5-A=>CO+HCO+C3H6	4.3120e+05
2.000        10972.41	

CHOCHO+C4H5=>CO+HCO+C4H6	2.1600e+05
2.000 3044.41	
CHOCHO+C4H71-4=>CO+HCO+C4H8-1	1.0800e+05
2.000 5032.93	
CHOCHO+C4H71-3=>CO+HCO+C4H8-2	2.7200e+05
2.000 11840.29	
CHOCHO+IC4H7=>CO+HCO+IC4H8	2.1600e+05
2.000 11840.29	
CHOCHO+C4H3=>CO+HCO+C4H4	3.2720e+05
2.000 3705.38	
CHOCHO+C6H5=>CO+HCO+C6H6	2.9600e+08
1.000 867.85	
O+CHOCHO=>OH+CO+HCO	1.8800e+07
2.000 1169.32	
O2+CHOCHO=>HO2+CO+HCO	1.3600e+07
2.000 41405.89	
OH+CHOCHO=>H2O+CO+HCO	1.2000e+10
1.000 -855.10	
HO2+CHOCHO=>H2O2+CO+HCO	6.4000e+06
2.000 14062.89	
CH3O+CHOCHO=>CO+CH3OH+HCO	3.4240e+05
2.000 241.70	
CH2OH+CHOCHO=>CO+CH3OH+HCO	2.2640e+05
2.000 8472.17	
HCO+CHOCHO=>CO+CH2O+HCO	1.0080e+06
2.000 10490.75	
CH3CO+CHOCHO=>CO+HCO+CH3CHO	1.0800e+06
2.000 12129.83	
CH2CHO+CHOCHO=>CO+HCO+CH3CHO	1.8400e+05
2.000 9720.89	
CHOCHO+C3H3=>CO+HCO+C3H4-A	2.1600e+05
2.000 12129.83	
HCCO+CHOCHO=>CO+HCO+CH2CO	3.4240e+05
2.000 3705.38	
CH3O2+CHOCHO=>CO+CH3O2H+HCO	6.0800e+05
2.000 10779.70	
C2H5O2+CHOCHO=>CO+HCO+C2H5O2H	6.0800e+05
2.000 10779.70	

CHOCHO+NC3H7O2=>CO+HCO+C3H7OOH 2.000 10779.70	6.0800e+05
CHOCHO+IC3H7O2=>CO+HCO+C3H7OOH 2.000 10779.70	6.0800e+05
CHOCHO+HCO3=>CO+HCO+HCO3H 2.000 4937.89	2.7200e+05
CH3CO3+CHOCHO=>CO+HCO+CH3CO3H 2.000 4937.89	2.7200e+05
CHOCHO+CH3COCH2=>CO+HCO+CH3COCH3 2.000 6366.63	1.8400e+05
CHOCHO+C6H5O=>CO+HCO+C6H5OH 2.000 10683.36	2.1600e+05
CHOCHO+C5H7=>CO+HCO+LC5H8 2.000 13095.77	2.1600e+05
CHOCHO+C7H7=>CO+HCO+C7H8 2.000 14062.89	1.0800e+05
CHOCHO+CH3C6H4=>CO+HCO+C7H8 1.000 867.85	2.9600e+08
CHOCHO+RCRESOLO=>CO+HCO+CRESOL 2.000 10972.41	2.1600e+05
CHOCHO+C10H7=>CO+HCO+C10H8 1.000 867.85	2.9600e+08
CHOCHO+INDENYL=>CO+HCO+INDENE 2.000 14062.89	1.0400e+05
CHOCHO+C10H6CH3=>CO+HCO+C10H7CH3 1.000 867.85	2.9600e+08
H+HCOOH=>H2+OH+CO 2.000 6349.34	1.5000e+06
CH3+HCOOH=>OH+CO+CH4 2.000 7443.70	1.5000e+04
C2H3+HCOOH=>OH+CO+C2H4 2.000 6239.48	3.3900e+04
C2H5+HCOOH=>OH+CO+C2H6 2.000 9289.16	1.0000e+04
HCOOH+NC3H7=>OH+CO+C3H8 2.000 9289.16	6.7500e+03
HCOOH+IC3H7=>OH+CO+C3H8 2.000 12725.62	6.7500e+03

HCOOH+C3H5-S=>OH+CO+C3H6 2.000 6897.45	1.3500e+04
HCOOH+C3H5-T=>OH+CO+C3H6 2.000 6897.45	1.3500e+04
HCOOH+C3H5-A=>OH+CO+C3H6 2.000 15810.16	2.6950e+04
HCOOH+C4H5=>OH+CO+C4H6 2.000 6897.45	1.3500e+04
HCOOH+C4H71-4=>OH+CO+C4H8-1 2.000 9181.05	6.7500e+03
HCOOH+C4H71-3=>OH+CO+C4H8-2 2.000 16763.05	1.7000e+04
HCOOH+IC4H7=>OH+CO+IC4H8 2.000 16763.05	1.3500e+04
HCOOH+C4H3=>OH+CO+C4H4 2.000 7661.72	2.0450e+04
HCOOH+C6H5=>OH+CO+C6H6 1.000 3864.72	1.8500e+07
O+HCOOH=>2OH+CO 2.000 4691.70	1.1750e+06
O2+HCOOH=>OH+HO2+CO 2.000 48272.65	8.5000e+05
OH+HCOOH=>H2O+OH+CO 1.000 1540.75	7.5000e+08
HO2+HCOOH=>OH+H2O2+CO 2.000 19190.53	4.0000e+05
CH3O+HCOOH=>OH+CO+CH3OH 2.000 3572.50	2.1400e+04
CH2OH+HCOOH=>OH+CO+CH3OH 2.000 13045.84	1.4150e+04
HCO+HCOOH=>OH+CO+CH2O 2.000 15279.95	6.3000e+04
CH3CO+HCOOH=>OH+CO+CH3CHO 2.000 17080.28	6.7500e+04
CH2CHO+HCOOH=>OH+CO+CH3CHO 2.000 14430.30	1.1500e+04
HCOOH+C3H3=>OH+CO+C3H4-A 2.000 17080.28	1.3500e+04

HCCO+HCOOH=>OH+CO+CH2CO	2.1400e+04
2.000 7661.72	
CH3O2+HCOOH=>OH+CO+CH3O2H	3.8000e+04
2.000 15598.15	
C2H5O2+HCOOH=>OH+CO+C2H5O2H	3.8000e+04
2.000 15598.15	
HCOOH+NC3H7O2=>OH+CO+C3H7OOH	3.8000e+04
2.000 15598.15	
HCOOH+IC3H7O2=>OH+CO+C3H7OOH	3.8000e+04
2.000 15598.15	
HCOOH+HCO3=>OH+CO+HCO3H	1.7000e+04
2.000 9072.89	
HCOOH+CH3CO3=>OH+CO+CH3CO3H	1.7000e+04
2.000 9072.89	
HCOOH+CH3COCH2=>OH+CO+CH3COCH3	1.1500e+04
2.000 10690.26	
HCOOH+C6H5O=>OH+CO+C6H5OH	1.3500e+04
2.000 15492.11	
HCOOH+C5H7=>OH+CO+LC5H8	1.3500e+04
2.000 18136.38	
HCOOH+C7H7=>OH+CO+C7H8	6.7500e+03
2.000 19190.53	
HCOOH+CH3C6H4=>OH+CO+C7H8	1.8500e+07
1.000 3864.72	
HCOOH+RCRESOLO=>OH+CO+CRESOL	1.3500e+04
2.000 15810.16	
HCOOH+C10H7=>OH+CO+C10H8	1.8500e+07
1.000 3864.72	
HCOOH+INDENYL=>OH+CO+INDENE	6.5000e+03
2.000 19190.53	
HCOOH+C10H6CH3=>OH+CO+C10H7CH3	1.8500e+07
1.000 3864.72	
H+HCOOH=>H2+H+CO2	1.5000e+06
2.000 6349.34	
CH3+HCOOH=>H+CO2+CH4	1.5000e+04
2.000 7443.70	
C2H3+HCOOH=>H+CO2+C2H4	3.3900e+04
2.000 6239.48	

C2H5+HCOOH=>H+CO2+C2H6	1.0000e+04
2.000 9289.16	
HCOOH+NC3H7=>H+CO2+C3H8	6.7500e+03
2.000 9289.16	
HCOOH+IC3H7=>H+CO2+C3H8	6.7500e+03
2.000 12725.62	
HCOOH+C3H5-S=>H+CO2+C3H6	1.3500e+04
2.000 6897.45	
HCOOH+C3H5-T=>H+CO2+C3H6	1.3500e+04
2.000 6897.45	
HCOOH+C3H5-A=>H+CO2+C3H6	2.6950e+04
2.000 15810.16	
HCOOH+C4H5=>H+CO2+C4H6	1.3500e+04
2.000 6897.45	
HCOOH+C4H71-4=>H+CO2+C4H8-1	6.7500e+03
2.000 9181.05	
HCOOH+C4H71-3=>H+CO2+C4H8-2	1.7000e+04
2.000 16763.05	
HCOOH+IC4H7=>H+CO2+IC4H8	1.3500e+04
2.000 16763.05	
HCOOH+C4H3=>H+CO2+C4H4	2.0450e+04
2.000 7661.72	
HCOOH+C6H5=>H+CO2+C6H6	1.8500e+07
1.000 3864.72	
O+HCOOH=>H+OH+CO2	1.1750e+06
2.000 4691.70	
O2+HCOOH=>H+HO2+CO2	8.5000e+05
2.000 48272.65	
OH+HCOOH=>H+H2O+CO2	7.5000e+08
1.000 1540.75	
HO2+HCOOH=>H+H2O2+CO2	4.0000e+05
2.000 19190.53	
CH3O+HCOOH=>H+CO2+CH3OH	2.1400e+04
2.000 3572.50	
CH2OH+HCOOH=>H+CO2+CH3OH	1.4150e+04
2.000 13045.84	
HCO+HCOOH=>H+CO2+CH2O	6.3000e+04
2.000 15279.95	

CH3CO+HCOOH=>H+CO2+CH3CHO	6.7500e+04
2.000 17080.28	
CH2CHO+HCOOH=>H+CO2+CH3CHO	1.1500e+04
2.000 14430.30	
HCOOH+C3H3=>H+CO2+C3H4-A	1.3500e+04
2.000 17080.28	
HCCO+HCOOH=>H+CO2+CH2CO	2.1400e+04
2.000 7661.72	
CH3O2+HCOOH=>H+CO2+CH3O2H	3.8000e+04
2.000 15598.15	
C2H5O2+HCOOH=>H+CO2+C2H5O2H	3.8000e+04
2.000 15598.15	
HCOOH+NC3H7O2=>H+CO2+C3H7OOH	3.8000e+04
2.000 15598.15	
HCOOH+IC3H7O2=>H+CO2+C3H7OOH	3.8000e+04
2.000 15598.15	
HCOOH+HCO3=>H+CO2+HCO3H	1.7000e+04
2.000 9072.89	
HCOOH+CH3CO3=>H+CO2+CH3CO3H	1.7000e+04
2.000 9072.89	
HCOOH+CH3COCH2=>H+CO2+CH3COCH3	1.1500e+04
2.000 10690.26	
HCOOH+C6H5O=>H+CO2+C6H5OH	1.3500e+04
2.000 15492.11	
HCOOH+C5H7=>H+CO2+LC5H8	1.3500e+04
2.000 18136.38	
HCOOH+C7H7=>H+CO2+C7H8	6.7500e+03
2.000 19190.53	
HCOOH+CH3C6H4=>H+CO2+C7H8	1.8500e+07
1.000 3864.72	
HCOOH+RCRESOLO=>H+CO2+CRESOL	1.3500e+04
2.000 15810.16	
HCOOH+C10H7=>H+CO2+C10H8	1.8500e+07
1.000 3864.72	
HCOOH+INDENYL=>H+CO2+INDENE	6.5000e+03
2.000 19190.53	
HCOOH+C10H6CH3=>H+CO2+C10H7CH3	1.8500e+07
1.000 3864.72	

CH3+CH3OCHO=>CH4+CH2O+HCO 2.000        7443.70	1.3500e+05
C2H3+CH3OCHO=>CH2O+HCO+C2H4 2.000        6239.48	3.0510e+05
C2H5+CH3OCHO=>CH2O+HCO+C2H6 2.000        9289.16	9.0000e+04
CH3OCHO+NC3H7=>CH2O+HCO+C3H8 2.000        9289.16	6.0750e+04
CH3OCHO+IC3H7=>CH2O+HCO+C3H8 2.000        12725.62	6.0750e+04
CH3OCHO+C3H5-S=>CH2O+HCO+C3H6 2.000        6897.45	1.2150e+05
CH3OCHO+C3H5-T=>CH2O+HCO+C3H6 2.000        6897.45	1.2150e+05
CH3OCHO+C3H5-A=>CH2O+HCO+C3H6 2.000        15810.16	2.4255e+05
CH3OCHO+C4H5=>CH2O+HCO+C4H6 2.000        6897.45	1.2150e+05
CH3OCHO+C4H71-4=>CH2O+HCO+C4H8-1 2.000        9181.05	6.0750e+04
CH3OCHO+C4H71-3=>CH2O+HCO+C4H8-2 2.000        16763.05	1.5300e+05
CH3OCHO+IC4H7=>CH2O+HCO+IC4H8 2.000        16763.05	1.2150e+05
CH3OCHO+C4H3=>CH2O+HCO+C4H4 2.000        7661.72	1.8405e+05
CH3OCHO+C6H5=>CH2O+HCO+C6H6 1.000        3864.72	1.6650e+08
O+CH3OCHO=>OH+CH2O+HCO 2.000        4691.70	1.0575e+07
O2+CH3OCHO=>HO2+CH2O+HCO 2.000        48272.65	7.6500e+06
OH+CH3OCHO=>H2O+CH2O+HCO 1.000        1540.75	6.7500e+09
HO2+CH3OCHO=>H2O2+CH2O+HCO 2.000        19190.53	3.6000e+06
CH3O+CH3OCHO=>CH3OH+CH2O+HCO 2.000        3572.50	1.9260e+05



CH2OH+CH3OCHO=>CH3OH+CH2O+HCO 2.000 13045.84	1.2735e+05
HCO+CH3OCHO=>2CH2O+HCO 2.000 15279.95	5.6700e+05
CH3CO+CH3OCHO=>CH2O+HCO+CH3CHO 2.000 17080.28	6.0750e+05
CH2CHO+CH3OCHO=>CH2O+HCO+CH3CHO 2.000 14430.30	1.0350e+05
CH3OCHO+C3H3=>CH2O+HCO+C3H4-A 2.000 17080.28	1.2150e+05
HCCO+CH3OCHO=>CH2O+HCO+CH2CO 2.000 7661.72	1.9260e+05
CH3O2+CH3OCHO=>CH3O2H+CH2O+HCO 2.000 15598.15	3.4200e+05
C2H5O2+CH3OCHO=>CH2O+HCO+C2H5O2H 2.000 15598.15	3.4200e+05
CH3OCHO+NC3H7O2=>CH2O+HCO+C3H7OOH 2.000 15598.15	3.4200e+05
CH3OCHO+IC3H7O2=>CH2O+HCO+C3H7OOH 2.000 15598.15	3.4200e+05
CH3OCHO+HCO3=>CH2O+HCO+HCO3H 2.000 9072.89	1.5300e+05
CH3CO3+CH3OCHO=>CH2O+HCO+CH3CO3H 2.000 9072.89	1.5300e+05
CH3OCHO+CH3COCH2=>CH2O+HCO+CH3COCH3 2.000 10690.26	1.0350e+05
CH3OCHO+C6H5O=>CH2O+HCO+C6H5OH 2.000 15492.11	1.2150e+05
CH3OCHO+C5H7=>CH2O+HCO+LC5H8 2.000 18136.38	1.2150e+05
CH3OCHO+C7H7=>CH2O+HCO+C7H8 2.000 19190.53	6.0750e+04
CH3OCHO+CH3C6H4=>CH2O+HCO+C7H8 1.000 3864.72	1.6650e+08
CH3OCHO+RCRESOLO=>CH2O+HCO+CRESOL 2.000 15810.16	1.2150e+05
CH3OCHO+C10H7=>CH2O+HCO+C10H8 1.000 3864.72	1.6650e+08

CH3OCHO+INDENYL=>CH2O+HCO+INDENE	5.8500e+04
2.000 19190.53	
CH3OCHO+C10H6CH3=>CH2O+HCO+C10H7CH3	1.6650e+08
1.000 3864.72	
CH3+CH3OCHO=>CH4+CH3OCO	4.5000e+04
2.000 7443.70	
C2H3+CH3OCHO=>C2H4+CH3OCO	1.0170e+05
2.000 6239.48	
C2H5+CH3OCHO=>C2H6+CH3OCO	3.0000e+04
2.000 9289.16	
CH3OCHO+NC3H7=>CH3OCO+C3H8	2.0250e+04
2.000 9289.16	
CH3OCHO+IC3H7=>CH3OCO+C3H8	2.0250e+04
2.000 12725.62	
CH3OCHO+C3H5-S=>CH3OCO+C3H6	4.0500e+04
2.000 6897.45	
CH3OCHO+C3H5-T=>CH3OCO+C3H6	4.0500e+04
2.000 6897.45	
CH3OCHO+C3H5-A=>CH3OCO+C3H6	8.0850e+04
2.000 15810.16	
CH3OCHO+C4H5=>CH3OCO+C4H6	4.0500e+04
2.000 6897.45	
CH3OCHO+C4H71-4=>CH3OCO+C4H8-1	2.0250e+04
2.000 9181.05	
CH3OCHO+C4H71-3=>CH3OCO+C4H8-2	5.1000e+04
2.000 16763.05	
CH3OCHO+IC4H7=>CH3OCO+IC4H8	4.0500e+04
2.000 16763.05	
CH3OCHO+C4H3=>CH3OCO+C4H4	6.1350e+04
2.000 7661.72	
CH3OCHO+C6H5=>CH3OCO+C6H6	5.5500e+07
1.000 3864.72	
O+CH3OCHO=>OH+CH3OCO	3.5250e+06
2.000 4691.70	
O2+CH3OCHO=>HO2+CH3OCO	2.5500e+06
2.000 48272.65	
OH+CH3OCHO=>H2O+CH3OCO	2.2500e+09
1.000 1540.75	

HO2+CH3OCHO=>H2O2+CH3OCO	1.2000e+06
2.000 19190.53	
CH3O+CH3OCHO=>CH3OH+CH3OCO	6.4200e+04
2.000 3572.50	
CH2OH+CH3OCHO=>CH3OH+CH3OCO	4.2450e+04
2.000 13045.84	
HCO+CH3OCHO=>CH2O+CH3OCO	1.8900e+05
2.000 15279.95	
CH3CO+CH3OCHO=>CH3CHO+CH3OCO	2.0250e+05
2.000 17080.28	
CH2CHO+CH3OCHO=>CH3CHO+CH3OCO	3.4500e+04
2.000 14430.30	
CH3OCHO+C3H3=>CH3OCO+C3H4-A	4.0500e+04
2.000 17080.28	
HCCO+CH3OCHO=>CH2CO+CH3OCO	6.4200e+04
2.000 7661.72	
CH3O2+CH3OCHO=>CH3O2H+CH3OCO	1.1400e+05
2.000 15598.15	
C2H5O2+CH3OCHO=>C2H5O2H+CH3OCO	1.1400e+05
2.000 15598.15	
CH3OCHO+NC3H7O2=>CH3OCO+C3H7OOH	1.1400e+05
2.000 15598.15	
CH3OCHO+IC3H7O2=>CH3OCO+C3H7OOH	1.1400e+05
2.000 15598.15	
CH3OCHO+HCO3=>CH3OCO+HCO3H	5.1000e+04
2.000 9072.89	
CH3CO3+CH3OCHO=>CH3CO3H+CH3OCO	5.1000e+04
2.000 9072.89	
CH3OCHO+CH3COCH2=>CH3OCO+CH3COCH3	3.4500e+04
2.000 10690.26	
CH3OCHO+C6H5O=>CH3OCO+C6H5OH	4.0500e+04
2.000 15492.11	
CH3OCHO+C5H7=>CH3OCO+LC5H8	4.0500e+04
2.000 18136.38	
CH3OCHO+C7H7=>CH3OCO+C7H8	2.0250e+04
2.000 19190.53	
CH3OCHO+CH3C6H4=>CH3OCO+C7H8	5.5500e+07
1.000 3864.72	

CH3OCHO+RCRESOLO=>CH3OCO+CRESOL	4.0500e+04
2.000 15810.16	
CH3OCHO+C10H7=>CH3OCO+C10H8	5.5500e+07
1.000 3864.72	
CH3OCHO+INDENYL=>CH3OCO+INDENE	1.9500e+04
2.000 19190.53	
CH3OCHO+C10H6CH3=>CH3OCO+C10H7CH3	5.5500e+07
1.000 3864.72	
CH3O2H+C3H5-S=>CH3O2+C3H6	5.4000e+04
2.000 4500.00	
CH3O2H+C3H5-T=>CH3O2+C3H6	5.4000e+04
2.000 4500.00	
CH3O2H+C4H5=>CH3O2+C4H6	5.4000e+04
2.000 5002.44	
CH3O2H+C4H71-3=>CH3O2+C4H8-2	6.8000e+04
2.000 13700.00	
CH3O2H+C4H3=>CH3O2+C4H4	8.1800e+04
2.000 5681.21	
CH3O2H+C6H5=>CH3O2+C6H6	7.4000e+07
1.000 2502.44	
O+CH3O2H=>OH+CH3O2	4.7000e+06
2.000 2500.00	
OH+CH3O2H=>H2O+CH3O2	3.0000e+09
1.000 941.66	
CH3O2H+CH3O=>CH3O2+CH3OH	8.5600e+04
2.000 1698.15	
CH3O2H+CH2CHO=>CH3O2+CH3CHO	4.6000e+04
2.000 11379.70	
CH3O2H+HCCO=>CH3O2+CH2CO	8.5600e+04
2.000 5702.44	
CH3O2H+C2H5O2=>CH3O2+C2H5O2H	1.5200e+05
2.000 12600.00	
CH3O2H+NC3H7O2=>CH3O2+C3H7OOH	1.5200e+05
2.000 12500.93	
CH3O2H+IC3H7O2=>CH3O2+C3H7OOH	1.5200e+05
2.000 12500.93	
CH3O2H+HCO3=>CH3O2+HCO3H	6.8000e+04
2.000 6500.00	

CH3O2H+CH3CO3=>CH3O2+CH3CO3H 2.000        6500.00	6.8000e+04
CH3O2H+C6H5O=>CH3O2+C6H5OH 2.000        12698.15	5.4000e+04
CH3O2H+C5H7=>CH3O2+LC5H8 2.000        15000.00	5.4000e+04
CH3O2H+C7H7=>CH3O2+C7H8 2.000        16502.44	2.7000e+04
CH3O2H+CH3C6H4=>CH3O2+C7H8 1.000        2502.44	7.4000e+07
CH3O2H+RCRESOLO=>CH3O2+CRESOL 2.000        12800.00	5.4000e+04
CH3O2H+C10H7=>CH3O2+C10H8 1.000        2502.44	7.4000e+07
CH3O2H+INDENYL=>CH3O2+INDENE 2.000        16000.00	2.6000e+04
CH3O2H+C10H6CH3=>CH3O2+C10H7CH3 1.000        2000.00	7.4000e+07
H+C2H5O2H=>H2+0.5OH+0.5C2H5O2+0.5CH3CHO 2.000        4000.00	1.2000e+07
CH3+C2H5O2H=>0.5OH+CH4+0.5C2H5O2+0.5CH3CHO 2.000        5000.00	1.2000e+05
C2H5O2H+C2H3=>0.5OH+0.5C2H5O2+C2H4+0.5CH3CHO 2.000        3900.00	2.7120e+05
C2H5+C2H5O2H=>0.5OH+C2H6+0.5C2H5O2+0.5CH3CHO 2.000        6700.00	8.0000e+04
C2H5O2H+NC3H7=>0.5OH+0.5C2H5O2+0.5CH3CHO+C3H8 2.000        6700.00	5.4000e+04
C2H5O2H+IC3H7=>0.5OH+0.5C2H5O2+0.5CH3CHO+C3H8 2.000        9900.00	5.4000e+04
C2H5O2H+C3H5-S=>0.5OH+0.5C2H5O2+0.5CH3CHO+C3H6 2.000        4500.00	1.0800e+05
C2H5O2H+C3H5-T=>0.5OH+0.5C2H5O2+0.5CH3CHO+C3H6 2.000        4500.00	1.0800e+05
C2H5O2H+C3H5-A=>0.5OH+0.5C2H5O2+0.5CH3CHO+C3H6 2.000        12800.00	2.1560e+05
C2H5O2H+C4H5=>0.5OH+0.5C2H5O2+0.5CH3CHO+C4H6 2.000        4500.00	1.0800e+05

C2H5O2H+C4H71-4=>0.5OH+0.5C2H5O2+0.5CH3CHO+C4H8-1 2.000            6600.00	5.4000e+04
C2H5O2H+C4H71-3=>0.5OH+0.5C2H5O2+0.5CH3CHO+C4H8-2 2.000            13700.00	1.3600e+05
C2H5O2H+IC4H7=>0.5OH+0.5C2H5O2+0.5CH3CHO+IC4H8 2.000            13700.00	1.0800e+05
C2H5O2H+C4H3=>0.5OH+0.5C2H5O2+0.5CH3CHO+C4H4 2.000            5200.00	1.6360e+05
C2H5O2H+C6H5=>0.5OH+0.5C2H5O2+0.5CH3CHO+C6H6 1.000            2000.00	1.4800e+08
O+C2H5O2H=>1.5OH+0.5C2H5O2+0.5CH3CHO 2.000            2500.00	9.4000e+06
O2+C2H5O2H=>0.5OH+HO2+0.5C2H5O2+0.5CH3CHO 2.000            44000.00	6.8000e+06
OH+C2H5O2H=>H2O+0.5OH+0.5C2H5O2+0.5CH3CHO 1.000            50.00	6.0000e+09
HO2+C2H5O2H=>0.5OH+H2O2+0.5C2H5O2+0.5CH3CHO 2.000            16000.00	3.2000e+06
CH3O+C2H5O2H=>0.5OH+CH3OH+0.5C2H5O2+0.5CH3CHO 2.000            1500.00	1.7120e+05
CH2OH+C2H5O2H=>0.5OH+CH3OH+0.5C2H5O2+0.5CH3CHO 2.000            10200.00	1.1320e+05
HCO+C2H5O2H=>0.5OH+CH2O+0.5C2H5O2+0.5CH3CHO 2.000            12300.00	5.0400e+05
C2H5O2H+CH3CO=>0.5OH+0.5C2H5O2+1.5CH3CHO 2.000            14000.00	5.4000e+05
C2H5O2H+CH2CHO=>0.5OH+0.5C2H5O2+1.5CH3CHO 2.000            11500.00	9.2000e+04
C2H5O2H+C3H3=>0.5OH+0.5C2H5O2+0.5CH3CHO+C3H4-A 2.000            14000.00	1.0800e+05
C2H5O2H+HCCO=>0.5OH+0.5C2H5O2+0.5CH3CHO+CH2CO 2.000            5200.00	1.7120e+05
CH3O2+C2H5O2H=>0.5OH+CH3O2H+0.5C2H5O2+0.5CH3CHO 2.000            12600.00	3.0400e+05
C2H5O2H+C2H5O2=>0.5OH+C2H5O2H+0.5C2H5O2+0.5CH3CHO 2.000            12600.00	3.0400e+05
C2H5O2H+NC3H7O2=>0.5OH+0.5C2H5O2+0.5CH3CHO+C3H7OOH 2.000            12600.00	3.0400e+05

C2H5O2H+IC3H7O2=>0.5OH+0.5C2H5O2+0.5CH3CHO+C3H7OOH 2.000 12600.00	3.0400e+05
C2H5O2H+HCO3=>0.5OH+0.5C2H5O2+0.5CH3CHO+HCO3H 2.000 6500.00	1.3600e+05
C2H5O2H+CH3CO3=>0.5OH+0.5C2H5O2+0.5CH3CHO+CH3CO3H 2.000 6500.00	1.3600e+05
C2H5O2H+CH3COCH2=>0.5OH+0.5C2H5O2+0.5CH3CHO+CH3COCH3 2.000 8000.00	9.2000e+04
C2H5O2H+C6H5O=>0.5OH+0.5C2H5O2+0.5CH3CHO+C6H5OH 2.000 12500.00	1.0800e+05
C2H5O2H+C5H7=>0.5OH+0.5C2H5O2+0.5CH3CHO+LC5H8 2.000 15000.00	1.0800e+05
C2H5O2H+C7H7=>0.5OH+0.5C2H5O2+0.5CH3CHO+C7H8 2.000 16000.00	5.4000e+04
C2H5O2H+CH3C6H4=>0.5OH+0.5C2H5O2+0.5CH3CHO+C7H8 1.000 2000.00	1.4800e+08
C2H5O2H+RCRESOLO=>0.5OH+0.5C2H5O2+0.5CH3CHO+CRESOL 2.000 12800.00	1.0800e+05
C2H5O2H+C10H7=>0.5OH+0.5C2H5O2+0.5CH3CHO+C10H8 1.000 2000.00	1.4800e+08
C2H5O2H+INDENYL=>0.5OH+0.5C2H5O2+0.5CH3CHO+INDENE 2.000 16000.00	5.2000e+04
C2H5O2H+C10H6CH3=>0.5OH+0.5C2H5O2+0.5CH3CHO+C10H7CH3 1.000 2000.00	1.4800e+08
H+C2H3CHO=>H2+CO+C2H3 2.000 2573.61	2.1600e+07
CH3+C2H3CHO=>CO+CH4+C2H3 2.000 3516.32	2.1600e+05
C2H3+C2H3CHO=>CO+C2H4+C2H3 2.000 2479.60	4.8816e+05
C2H5+C2H3CHO=>CO+C2H6+C2H3 2.000 5128.01	1.4400e+05
NC3H7+C2H3CHO=>CO+C2H3+C3H8 2.000 5128.01	9.7200e+04
IC3H7+C2H3CHO=>CO+C2H3+C3H8 2.000 8184.45	9.7200e+04
C3H5-S+C2H3CHO=>CO+C2H3+C3H6 2.000 3044.41	1.9440e+05

C3H5-T+C2H3CHO=>CO+C2H3+C3H6	1.9440e+05
2.000 3044.41	
C3H5-A+C2H3CHO=>CO+C2H3+C3H6	3.8808e+05
2.000 10972.41	
C2H3CHO+C4H5=>CO+C2H3+C4H6	1.9440e+05
2.000 3044.41	
C2H3CHO+C4H71-4=>CO+C2H3+C4H8-1	9.7200e+04
2.000 5032.93	
C2H3CHO+C4H71-3=>CO+C2H3+C4H8-2	2.4480e+05
2.000 11840.29	
C2H3CHO+IC4H7=>CO+C2H3+IC4H8	1.9440e+05
2.000 11840.29	
C2H3CHO+C4H3=>CO+C2H3+C4H4	2.9448e+05
2.000 3705.38	
C2H3CHO+C6H5=>CO+C2H3+C6H6	2.6640e+08
1.000 867.85	
O+C2H3CHO=>OH+CO+C2H3	1.6920e+07
2.000 1169.32	
O2+C2H3CHO=>HO2+CO+C2H3	1.2240e+07
2.000 41405.89	
HO2+C2H3CHO=>H2O2+CO+C2H3	5.7600e+06
2.000 14062.89	
CH3O+C2H3CHO=>CO+CH3OH+C2H3	3.0816e+05
2.000 241.70	
CH2OH+C2H3CHO=>CO+CH3OH+C2H3	2.0376e+05
2.000 8472.17	
HCO+C2H3CHO=>CO+CH2O+C2H3	9.0720e+05
2.000 10490.75	
CH3CO+C2H3CHO=>CO+C2H3+CH3CHO	9.7200e+05
2.000 12129.83	
CH2CHO+C2H3CHO=>CO+C2H3+CH3CHO	1.6560e+05
2.000 9720.89	
C3H3+C2H3CHO=>CO+C2H3+C3H4-A	1.9440e+05
2.000 12129.83	
HCCO+C2H3CHO=>CO+C2H3+CH2CO	3.0816e+05
2.000 3705.38	
CH3O2+C2H3CHO=>CO+CH3O2H+C2H3	5.4720e+05
2.000 10779.70	



C2H5O2+C2H3CHO=>CO+C2H5O2H+C2H3	5.4720e+05
2.000 10779.70	
C2H3CHO+NC3H7O2=>CO+C2H3+C3H7OOH	5.4720e+05
2.000 10779.70	
C2H3CHO+IC3H7O2=>CO+C2H3+C3H7OOH	5.4720e+05
2.000 10779.70	
C2H3CHO+HCO3=>CO+C2H3+HCO3H	2.4480e+05
2.000 4937.89	
CH3CO3+C2H3CHO=>CO+C2H3+CH3CO3H	2.4480e+05
2.000 4937.89	
C2H3CHO+CH3COCH2=>CO+C2H3+CH3COCH3	1.6560e+05
2.000 6366.63	
C2H3CHO+C6H5O=>CO+C2H3+C6H5OH	1.9440e+05
2.000 10683.36	
C2H3CHO+C5H7=>CO+C2H3+LC5H8	1.9440e+05
2.000 13095.77	
C2H3CHO+C7H7=>CO+C2H3+C7H8	9.7200e+04
2.000 14062.89	
C2H3CHO+CH3C6H4=>CO+C2H3+C7H8	2.6640e+08
1.000 867.85	
C2H3CHO+RCRESOLO=>CO+C2H3+CRESOL	1.9440e+05
2.000 10972.41	
C2H3CHO+C10H7=>CO+C2H3+C10H8	2.6640e+08
1.000 867.85	
C2H3CHO+INDENYL=>CO+C2H3+INDENE	9.3600e+04
2.000 14062.89	
C2H3CHO+C10H6CH3=>CO+C2H3+C10H7CH3	2.6640e+08
1.000 867.85	
H+C3H6O=>H2+0.3HCO+0.3C2H4+0.7CH3COCH2	4.5000e+06
2.000 4000.00	
CH3+C3H6O=>CH4+0.3HCO+0.3C2H4+0.7CH3COCH2	4.5000e+04
2.000 5000.00	
C2H3+C3H6O=>0.3HCO+1.3C2H4+0.7CH3COCH2	1.0170e+05
2.000 3900.00	
C2H5+C3H6O=>0.3HCO+C2H6+0.3C2H4+0.7CH3COCH2	3.0000e+04
2.000 6700.00	
NC3H7+C3H6O=>0.3HCO+0.3C2H4+C3H8+0.7CH3COCH2	2.0250e+04
2.000 6700.00	

IC3H7+C3H6O=>0.3HCO+0.3C2H4+C3H8+0.7CH3COCH2 2.000            9900.00	2.0250e+04
C3H5-S+C3H6O=>0.3HCO+0.3C2H4+C3H6+0.7CH3COCH2 2.000            4500.00	4.0500e+04
C3H5-T+C3H6O=>0.3HCO+0.3C2H4+C3H6+0.7CH3COCH2 2.000            4500.00	4.0500e+04
C3H5-A+C3H6O=>0.3HCO+0.3C2H4+C3H6+0.7CH3COCH2 2.000            12800.00	8.0850e+04
C3H6O+C4H5=>0.3HCO+0.3C2H4+0.7CH3COCH2+C4H6 2.000            4500.00	4.0500e+04
C3H6O+C4H71-4=>0.3HCO+0.3C2H4+0.7CH3COCH2+C4H8-1 2.000            6600.00	2.0250e+04
C3H6O+C4H71-3=>0.3HCO+0.3C2H4+0.7CH3COCH2+C4H8-2 2.000            13700.00	5.1000e+04
C3H6O+IC4H7=>0.3HCO+0.3C2H4+0.7CH3COCH2+IC4H8 2.000            13700.00	4.0500e+04
C3H6O+C4H3=>0.3HCO+0.3C2H4+0.7CH3COCH2+C4H4 2.000            5200.00	6.1350e+04
C3H6O+C6H5=>0.3HCO+0.3C2H4+0.7CH3COCH2+C6H6 1.000            2000.00	5.5500e+07
O+C3H6O=>OH+0.3HCO+0.3C2H4+0.7CH3COCH2 2.000            2500.00	3.5250e+06
O2+C3H6O=>HO2+0.3HCO+0.3C2H4+0.7CH3COCH2 2.000            44000.00	2.5500e+06
OH+C3H6O=>H2O+0.3HCO+0.3C2H4+0.7CH3COCH2 1.000            50.00	2.2500e+09
HO2+C3H6O=>H2O2+0.3HCO+0.3C2H4+0.7CH3COCH2 2.000            16000.00	1.2000e+06
CH3O+C3H6O=>CH3OH+0.3HCO+0.3C2H4+0.7CH3COCH2 2.000            1500.00	6.4200e+04
CH2OH+C3H6O=>CH3OH+0.3HCO+0.3C2H4+0.7CH3COCH2 2.000            10200.00	4.2450e+04
HCO+C3H6O=>CH2O+0.3HCO+0.3C2H4+0.7CH3COCH2 2.000            12300.00	1.8900e+05
CH3CO+C3H6O=>0.3HCO+0.3C2H4+CH3CHO+0.7CH3COCH2 2.000            14000.00	2.0250e+05
CH2CHO+C3H6O=>0.3HCO+0.3C2H4+CH3CHO+0.7CH3COCH2 2.000            11500.00	3.4500e+04

C3H6O+C3H3=>0.3HCO+0.3C2H4+C3H4-A+0.7CH3COCH2 2.000 14000.00	4.0500e+04
HCCO+C3H6O=>0.3HCO+0.3C2H4+CH2CO+0.7CH3COCH2 2.000 5200.00	6.4200e+04
CH3O2+C3H6O=>CH3O2H+0.3HCO+0.3C2H4+0.7CH3COCH2 2.000 12600.00	1.1400e+05
C2H5O2+C3H6O=>0.3HCO+C2H5O2H+0.3C2H4+0.7CH3COCH2 2.000 12600.00	1.1400e+05
C3H6O+NC3H7O2=>0.3HCO+0.3C2H4+0.7CH3COCH2+C3H7OOH 2.000 12600.00	1.1400e+05
C3H6O+IC3H7O2=>0.3HCO+0.3C2H4+0.7CH3COCH2+C3H7OOH 2.000 12600.00	1.1400e+05
C3H6O+HCO3=>0.3HCO+0.3C2H4+0.7CH3COCH2+HCO3H 2.000 6500.00	5.1000e+04
CH3CO3+C3H6O=>0.3HCO+0.3C2H4+CH3CO3H+0.7CH3COCH2 2.000 6500.00	5.1000e+04
C3H6O+CH3COCH2=>0.3HCO+0.3C2H4+CH3COCH3+0.7CH3COCH2 2.000 8000.00	3.4500e+04
C3H6O+C6H5O=>0.3HCO+0.3C2H4+0.7CH3COCH2+C6H5OH 2.000 12500.00	4.0500e+04
C3H6O+C5H7=>0.3HCO+0.3C2H4+0.7CH3COCH2+LC5H8 2.000 15000.00	4.0500e+04
C3H6O+C7H7=>0.3HCO+0.3C2H4+0.7CH3COCH2+C7H8 2.000 16000.00	2.0250e+04
C3H6O+CH3C6H4=>0.3HCO+0.3C2H4+0.7CH3COCH2+C7H8 1.000 2000.00	5.5500e+07
C3H6O+RCRESOLO=>0.3HCO+0.3C2H4+0.7CH3COCH2+CRESOL 2.000 12800.00	4.0500e+04
C3H6O+C10H7=>0.3HCO+0.3C2H4+0.7CH3COCH2+C10H8 1.000 2000.00	5.5500e+07
C3H6O+INDENYL=>0.3HCO+0.3C2H4+0.7CH3COCH2+INDENE 2.000 16000.00	1.9500e+04
C3H6O+C10H6CH3=>0.3HCO+0.3C2H4+0.7CH3COCH2+C10H7CH3 1.000 2000.00	5.5500e+07
H+C3H6O=>H2+H+C2H3CHO 2.000 4000.00	4.5000e+06
CH3+C3H6O=>H+CH4+C2H3CHO 2.000 5000.00	4.5000e+04

C2H3+C3H6O=>H+C2H4+C2H3CHO	1.0170e+05
2.000 3900.00	
C2H5+C3H6O=>H+C2H6+C2H3CHO	3.0000e+04
2.000 6700.00	
NC3H7+C3H6O=>H+C3H8+C2H3CHO	2.0250e+04
2.000 6700.00	
IC3H7+C3H6O=>H+C3H8+C2H3CHO	2.0250e+04
2.000 9900.00	
C3H5-S+C3H6O=>H+C3H6+C2H3CHO	4.0500e+04
2.000 4500.00	
C3H5-T+C3H6O=>H+C3H6+C2H3CHO	4.0500e+04
2.000 4500.00	
C3H5-A+C3H6O=>H+C3H6+C2H3CHO	8.0850e+04
2.000 12800.00	
C3H6O+C4H5=>H+C2H3CHO+C4H6	4.0500e+04
2.000 4500.00	
C3H6O+C4H71-4=>H+C2H3CHO+C4H8-1	2.0250e+04
2.000 6600.00	
C3H6O+C4H71-3=>H+C2H3CHO+C4H8-2	5.1000e+04
2.000 13700.00	
C3H6O+IC4H7=>H+C2H3CHO+IC4H8	4.0500e+04
2.000 13700.00	
C3H6O+C4H3=>H+C2H3CHO+C4H4	6.1350e+04
2.000 5200.00	
C3H6O+C6H5=>H+C2H3CHO+C6H6	5.5500e+07
1.000 2000.00	
O+C3H6O=>H+OH+C2H3CHO	3.5250e+06
2.000 2500.00	
O2+C3H6O=>H+HO2+C2H3CHO	2.5500e+06
2.000 44000.00	
OH+C3H6O=>H+H2O+C2H3CHO	2.2500e+09
1.000 50.00	
HO2+C3H6O=>H+H2O2+C2H3CHO	1.2000e+06
2.000 16000.00	
CH3O+C3H6O=>H+CH3OH+C2H3CHO	6.4200e+04
2.000 1500.00	
CH2OH+C3H6O=>H+CH3OH+C2H3CHO	4.2450e+04
2.000 10200.00	

HCO+C3H6O=>H+CH2O+C2H3CHO	1.8900e+05
2.000 12300.00	
CH3CO+C3H6O=>H+CH3CHO+C2H3CHO	2.0250e+05
2.000 14000.00	
CH2CHO+C3H6O=>H+CH3CHO+C2H3CHO	3.4500e+04
2.000 11500.00	
C3H6O+C3H3=>H+C3H4-A+C2H3CHO	4.0500e+04
2.000 14000.00	
HCCO+C3H6O=>H+CH2CO+C2H3CHO	6.4200e+04
2.000 5200.00	
CH3O2+C3H6O=>H+CH3O2H+C2H3CHO	1.1400e+05
2.000 12600.00	
C2H5O2+C3H6O=>H+C2H5O2H+C2H3CHO	1.1400e+05
2.000 12600.00	
C3H6O+NC3H7O2=>H+C2H3CHO+C3H7OOH	1.1400e+05
2.000 12600.00	
C3H6O+IC3H7O2=>H+C2H3CHO+C3H7OOH	1.1400e+05
2.000 12600.00	
C3H6O+HCO3=>H+C2H3CHO+HCO3H	5.1000e+04
2.000 6500.00	
CH3CO3+C3H6O=>H+CH3CO3H+C2H3CHO	5.1000e+04
2.000 6500.00	
C3H6O+CH3COCH2=>H+C2H3CHO+CH3COCH3	3.4500e+04
2.000 8000.00	
C3H6O+C6H5O=>H+C2H3CHO+C6H5OH	4.0500e+04
2.000 12500.00	
C3H6O+C5H7=>H+C2H3CHO+LC5H8	4.0500e+04
2.000 15000.00	
C3H6O+C7H7=>H+C2H3CHO+C7H8	2.0250e+04
2.000 16000.00	
C3H6O+CH3C6H4=>H+C2H3CHO+C7H8	5.5500e+07
1.000 2000.00	
C3H6O+RCRESOLO=>H+C2H3CHO+CRESOL	4.0500e+04
2.000 12800.00	
C3H6O+C10H7=>H+C2H3CHO+C10H8	5.5500e+07
1.000 2000.00	
C3H6O+INDENYL=>H+C2H3CHO+INDENE	1.9500e+04
2.000 16000.00	

C3H6O+C10H6CH3=>H+C2H3CHO+C10H7CH3 1.000        2000.00	5.5500e+07
C2H3+C4H4=>C2H4+C4H3 2.000        8723.82	9.4920e+05
C2H5+C4H4=>C2H6+C4H3 2.000        12649.68	2.8000e+05
NC3H7+C4H4=>C3H8+C4H3 2.000        12649.68	1.8900e+05
IC3H7+C4H4=>C3H8+C4H3 2.000        16423.94	1.8900e+05
C3H5-S+C4H4=>C3H6+C4H3 2.000        10322.38	3.7800e+05
C3H5-T+C4H4=>C3H6+C4H3 2.000        10322.38	3.7800e+05
C3H5-A+C4H4=>C3H6+C4H3 2.000        20110.38	7.5460e+05
C4H5+C4H4=>C4H6+C4H3 2.000        9464.60	3.7800e+05
C4H71-4+C4H4=>C4H8-1+C4H3 2.000        12868.27	1.8900e+05
C4H71-3+C4H4=>C4H8-2+C4H3 2.000        21138.84	4.7600e+05
IC4H7+C4H4=>IC4H8+C4H3 2.000        21138.84	3.7800e+05
C4H4+C6H5=>C4H3+C6H6 1.000        5670.82	5.1800e+08
O+C4H4=>OH+C4H3 2.000        7822.71	3.2900e+07
HO2+C4H4=>H2O2+C4H3 2.000        24334.38	1.1200e+07
CH3O+C4H4=>CH3OH+C4H3 2.000        6194.94	5.9920e+05
CH2OH+C4H4=>CH3OH+C4H3 2.000        16773.04	3.9620e+05
HCO+C4H4=>CH2O+C4H3 2.000        19742.40	1.7640e+06
CH3CO+C4H4=>CH3CHO+C4H3 2.000        21686.08	1.8900e+06

CH2CHO+C4H4=>CH3CHO+C4H3	3.2200e+05
2.000 18821.83	
C3H3+C4H4=>C3H4-A+C4H3	3.7800e+05
2.000 20622.91	
HCCO+C4H4=>CH2CO+C4H3	5.9920e+05
2.000 10320.68	
CH3O2+C4H4=>CH3O2H+C4H3	1.0640e+06
2.000 19881.21	
C2H5O2+C4H4=>C2H5O2H+C4H3	1.0640e+06
2.000 19881.21	
C4H4+NC3H7O2=>C4H3+C3H7OOH	1.0640e+06
2.000 20050.35	
C4H4+IC3H7O2=>C4H3+C3H7OOH	1.0640e+06
2.000 20050.35	
C4H4+HCO3=>C4H3+HCO3H	4.7600e+05
2.000 12748.45	
CH3CO3+C4H4=>CH3CO3H+C4H3	4.7600e+05
2.000 12748.45	
CH3COCH2+C4H4=>CH3COCH3+C4H3	3.2200e+05
2.000 14533.50	
C4H4+C6H5O=>C4H3+C6H5OH	3.7800e+05
2.000 19428.26	
C4H4+C5H7=>C4H3+LC5H8	3.7800e+05
2.000 22616.91	
C4H4+C7H7=>C4H3+C7H8	1.8900e+05
2.000 22890.65	
C4H4+CH3C6H4=>C4H3+C7H8	5.1800e+08
1.000 5670.82	
C4H4+RCRESOLO=>C4H3+CRESOL	3.7800e+05
2.000 20110.38	
C4H4+C10H7=>C4H3+C10H8	5.1800e+08
1.000 5670.82	
C4H4+INDENYL=>C4H3+INDENE	1.8200e+05
2.000 23748.43	
C4H4+C10H6CH3=>C4H3+C10H7CH3	5.1800e+08
1.000 6528.60	
C2H5+C4H6=>C2H6+C4H5	4.8000e+05
2.000 12862.83	

NC3H7+C4H6=>C3H8+C4H5	3.2400e+05
2.000 12862.83	
IC3H7+C4H6=>C3H8+C4H5	3.2400e+05
2.000 16662.41	
C3H5-S+C4H6=>C3H6+C4H5	6.4800e+05
2.000 10579.25	
C3H5-T+C4H6=>C3H6+C4H5	6.4800e+05
2.000 10579.25	
C4H71-4+C4H6=>C4H8-1+C4H5	3.2400e+05
2.000 13144.81	
C4H71-3+C4H6=>C4H8-2+C4H5	8.1600e+05
2.000 21467.03	
IC4H7+C4H6=>IC4H8+C4H5	6.4800e+05
2.000 21467.03	
C4H6+C4H3=>C4H5+C4H4	9.8160e+05
2.000 10464.60	
C4H6+C6H5=>C4H5+C6H6	8.8800e+08
1.000 5707.64	
CH3O+C4H6=>CH3OH+C4H5	1.0272e+06
2.000 6352.72	
CH2OH+C4H6=>CH3OH+C4H5	6.7920e+05
2.000 17013.68	
HCO+C4H6=>CH2O+C4H5	3.0240e+06
2.000 20100.70	
CH3CO+C4H6=>CH3CHO+C4H5	3.2400e+06
2.000 22055.13	
CH2CHO+C4H6=>CH3CHO+C4H5	5.5200e+05
2.000 19174.81	
HCCO+C4H6=>CH2CO+C4H5	1.0272e+06
2.000 10421.47	
CH3O2+C4H6=>CH3O2H+C4H5	1.8240e+06
2.000 20202.44	
C2H5O2+C4H6=>C2H5O2H+C4H5	1.8240e+06
2.000 20202.44	
C4H6+NC3H7O2=>C4H5+C3H7OOH	1.8240e+06
2.000 20403.72	
C4H6+IC3H7O2=>C4H5+C3H7OOH	1.8240e+06
2.000 20403.72	



C4H6+HCO3=>C4H5+HCO3H	8.1600e+05
2.000 13024.11	
CH3CO3+C4H6=>CH3CO3H+C4H5	8.1600e+05
2.000 13024.11	
CH3COCH2+C4H6=>CH3COCH3+C4H5	5.5200e+05
2.000 14821.74	
C4H6+C6H5O=>C4H5+C6H5OH	6.4800e+05
2.000 19684.58	
C4H6+C5H7=>C4H5+LC5H8	6.4800e+05
2.000 22952.95	
C4H6+C7H7=>C4H5+C7H8	3.2400e+05
2.000 23069.52	
C4H6+CH3C6H4=>C4H5+C7H8	8.8800e+08
1.000 5707.64	
C4H6+RCRESOLO=>C4H5+CRESOL	6.4800e+05
2.000 20432.90	
C4H6+C10H7=>C4H5+C10H8	8.8800e+08
1.000 5707.64	
C4H6+INDENYL=>C4H5+INDENE	3.1200e+05
2.000 24090.27	
C4H6+C10H6CH3=>C4H5+C10H7CH3	8.8800e+08
1.000 6728.39	
C2H3+C4H8-1=>C2H4+C4H71-3	4.0680e+05
2.000 4567.03	
C2H5+C4H8-1=>C2H6+C4H71-3	1.2000e+05
2.000 6963.05	
NC3H7+C4H8-1=>C3H8+C4H71-3	8.1000e+04
2.000 6963.05	
IC3H7+C4H8-1=>C3H8+C4H71-3	8.1000e+04
2.000 10163.05	
C3H5-S+C4H8-1=>C3H6+C4H71-3	1.6200e+05
2.000 4500.00	
C3H5-T+C4H8-1=>C3H6+C4H71-3	1.6200e+05
2.000 4500.00	
C4H8-1+C4H5=>C4H71-3+C4H6	1.6200e+05
2.000 5167.03	
C4H8-1+C4H71-4=>C4H8-1+C4H71-3	8.1000e+04
2.000 6600.00	

C4H8-1+C4H71-3=>C4H8-2+C4H71-3 2.000 13700.00	2.0400e+05
IC4H7+C4H8-1=>IC4H8+C4H71-3 2.000 13700.00	1.6200e+05
C4H8-1+C4H3=>C4H71-3+C4H4 2.000 5838.84	2.4540e+05
C4H8-1+C6H5=>C4H71-3+C6H6 1.000 2667.03	2.2200e+08
CH2OH+C4H8-1=>CH3OH+C4H71-3 2.000 10463.05	1.6980e+05
HCO+C4H8-1=>CH2O+C4H71-3 2.000 12140.29	7.5600e+05
CH3CO+C4H8-1=>CH3CHO+C4H71-3 2.000 13840.29	8.1000e+05
CH2CHO+C4H8-1=>CH3CHO+C4H71-3 2.000 11340.29	1.3800e+05
C3H3+C4H8-1=>C3H4-A+C4H71-3 2.000 14667.03	1.6200e+05
HCCO+C4H8-1=>CH2CO+C4H71-3 2.000 5867.03	2.5680e+05
C4H8-1+NC3H7O2=>C4H71-3+C3H7OOH 2.000 12468.47	4.5600e+05
C4H8-1+IC3H7O2=>C4H71-3+C3H7OOH 2.000 12468.47	4.5600e+05
C4H8-1+HCO3=>C4H71-3+HCO3H 2.000 6500.00	2.0400e+05
CH3CO3+C4H8-1=>CH3CO3H+C4H71-3 2.000 6500.00	2.0400e+05
CH3COCH2+C4H8-1=>CH3COCH3+C4H71-3 2.000 8000.00	1.3800e+05
C4H8-1+C6H5O=>C4H71-3+C6H5OH 2.000 12763.05	1.6200e+05
C4H8-1+C5H7=>C4H71-3+LC5H8 2.000 15000.00	1.6200e+05
C4H8-1+C7H7=>C4H71-3+C7H8 2.000 16667.03	8.1000e+04
C4H8-1+CH3C6H4=>C4H71-3+C7H8 1.000 2667.03	2.2200e+08

C4H8-1+RCRESOLO=>C4H71-3+CRESOL 2.000 12800.00	1.6200e+05
C4H8-1+C10H7=>C4H71-3+C10H8 1.000 2667.03	2.2200e+08
C4H8-1+INDENYL=>C4H71-3+INDENE 2.000 16000.00	7.8000e+04
C4H8-1+C10H6CH3=>C4H71-3+C10H7CH3 1.000 2000.00	2.2200e+08
C2H3+C4H8-1=>C2H4+C4H71-4 2.000 5684.29	2.0340e+05
C2H5+C4H8-1=>C2H6+C4H71-4 2.000 9070.21	6.0000e+04
NC3H7+C4H8-1=>C3H8+C4H71-4 2.000 9070.21	4.0500e+04
IC3H7+C4H8-1=>C3H8+C4H71-4 2.000 12506.67	4.0500e+04
C3H5-S+C4H8-1=>C3H6+C4H71-4 2.000 6897.45	8.1000e+04
C3H5-T+C4H8-1=>C3H6+C4H71-4 2.000 6897.45	8.1000e+04
C3H5-A+C4H8-1=>C3H6+C4H71-4 2.000 15810.16	1.6170e+05
C4H8-1+C4H5=>C4H71-4+C4H6 2.000 6342.26	8.1000e+04
C4H8-1+C4H71-3=>C4H8-2+C4H71-4 2.000 16763.05	1.0200e+05
IC4H7+C4H8-1=>IC4H8+C4H71-4 2.000 16763.05	8.1000e+04
C4H8-1+C4H3=>C4H71-4+C4H4 2.000 7129.99	1.2270e+05
C4H8-1+C6H5=>C4H71-4+C6H6 1.000 3309.53	1.1100e+08
CH2OH+C4H8-1=>CH3OH+C4H71-4 2.000 12826.89	8.4900e+04
HCO+C4H8-1=>CH2O+C4H71-4 2.000 15412.88	3.7800e+05
CH3CO+C4H8-1=>CH3CHO+C4H71-4 2.000 17213.22	4.0500e+05

CH2CHO+C4H8-1=>CH3CHO+C4H71-4 2.000 14563.23	6.9000e+04
C3H3+C4H8-1=>C3H4-A+C4H71-4 2.000 16525.10	8.1000e+04
HCCO+C4H8-1=>CH2CO+C4H71-4 2.000 7106.53	1.2840e+05
C2H5O2+C4H8-1=>C2H5O2H+C4H71-4 2.000 15598.15	2.2800e+05
C4H8-1+NC3H7O2=>C4H71-4+C3H7OOH 2.000 15707.62	2.2800e+05
C4H8-1+IC3H7O2=>C4H71-4+C3H7OOH 2.000 15707.62	2.2800e+05
C4H8-1+HCO3=>C4H71-4+HCO3H 2.000 9072.89	1.0200e+05
CH3CO3+C4H8-1=>CH3CO3H+C4H71-4 2.000 9072.89	1.0200e+05
CH3COCH2+C4H8-1=>CH3COCH3+C4H71-4 2.000 10690.26	6.9000e+04
C4H8-1+C6H5O=>C4H71-4+C6H5OH 2.000 15273.16	8.1000e+04
C4H8-1+C5H7=>C4H71-4+LC5H8 2.000 18136.38	8.1000e+04
C4H8-1+C7H7=>C4H71-4+C7H8 2.000 18635.34	4.0500e+04
C4H8-1+CH3C6H4=>C4H71-4+C7H8 1.000 3309.53	1.1100e+08
C4H8-1+RCRESOLO=>C4H71-4+CRESOL 2.000 15810.16	8.1000e+04
C4H8-1+C10H7=>C4H71-4+C10H8 1.000 3309.53	1.1100e+08
C4H8-1+INDENYL=>C4H71-4+INDENE 2.000 19190.53	3.9000e+04
C4H8-1+C10H6CH3=>C4H71-4+C10H7CH3 1.000 3864.72	1.1100e+08
H+C4H8-2=>H2+0.02CH3+0.02C3H4-P+0.98C4H71-3 2.000 4000.00	1.8000e+07
CH3+C4H8-2=>CH4+0.02CH3+0.02C3H4-P+0.98C4H71-3 2.000 5000.00	1.8000e+05

C2H3+C4H8-2=>0.02CH3+C2H4+0.02C3H4-P+0.98C4H71-3 2.000            3900.00	4.0680e+05
C2H5+C4H8-2=>0.02CH3+C2H6+0.02C3H4-P+0.98C4H71-3 2.000            6700.00	1.2000e+05
NC3H7+C4H8-2=>0.02CH3+C3H8+0.02C3H4-P+0.98C4H71-3 2.000            6700.00	8.1000e+04
IC3H7+C4H8-2=>0.02CH3+C3H8+0.02C3H4-P+0.98C4H71-3 2.000            9900.00	8.1000e+04
C3H5-S+C4H8-2=>0.02CH3+C3H6+0.02C3H4-P+0.98C4H71-3 2.000            4500.00	1.6200e+05
C3H5-T+C4H8-2=>0.02CH3+C3H6+0.02C3H4-P+0.98C4H71-3 2.000            4500.00	1.6200e+05
C3H5-A+C4H8-2=>0.02CH3+C3H6+0.02C3H4-P+0.98C4H71-3 2.000            12800.00	3.2340e+05
C4H8-2+C4H5=>0.02CH3+0.02C3H4-P+0.98C4H71-3+C4H6 2.000            4500.00	1.6200e+05
C4H8-2+C4H71-4=>0.02CH3+0.02C3H4-P+C4H8-1+0.98C4H71-3 2.000            6600.00	8.1000e+04
C4H8-2+C4H71-3=>0.02CH3+0.02C3H4-P+C4H8-2+0.98C4H71-3 2.000            13700.00	2.0400e+05
IC4H7+C4H8-2=>0.02CH3+0.02C3H4-P+IC4H8+0.98C4H71-3 2.000            13700.00	1.6200e+05
C4H8-2+C4H3=>0.02CH3+0.02C3H4-P+0.98C4H71-3+C4H4 2.000            5200.00	2.4540e+05
C4H8-2+C6H5=>0.02CH3+0.02C3H4-P+0.98C4H71-3+C6H6 1.000            2000.00	2.2200e+08
O+C4H8-2=>OH+0.02CH3+0.02C3H4-P+0.98C4H71-3 2.000            2500.00	1.4100e+07
O2+C4H8-2=>HO2+0.02CH3+0.02C3H4-P+0.98C4H71-3 2.000            44000.00	1.0200e+07
OH+C4H8-2=>H2O+0.02CH3+0.02C3H4-P+0.98C4H71-3 1.000            50.00	9.0000e+09
HO2+C4H8-2=>H2O2+0.02CH3+0.02C3H4-P+0.98C4H71-3 2.000            16000.00	4.8000e+06
CH3O+C4H8-2=>0.02CH3+CH3OH+0.02C3H4-P+0.98C4H71-3 2.000            1500.00	2.5680e+05
CH2OH+C4H8-2=>0.02CH3+CH3OH+0.02C3H4-P+0.98C4H71-3 2.000            10200.00	1.6980e+05

HCO+C4H8-2=>0.02CH3+CH2O+0.02C3H4-P+0.98C4H71-3 2.000 12300.00	7.5600e+05
CH3CO+C4H8-2=>0.02CH3+CH3CHO+0.02C3H4-P+0.98C4H71-3 2.000 14000.00	8.1000e+05
CH2CHO+C4H8-2=>0.02CH3+CH3CHO+0.02C3H4-P+0.98C4H71-3 2.000 11500.00	1.3800e+05
C3H3+C4H8-2=>0.02CH3+0.02C3H4-P+C3H4-A+0.98C4H71-3 2.000 14000.00	1.6200e+05
HCCO+C4H8-2=>0.02CH3+CH2CO+0.02C3H4-P+0.98C4H71-3 2.000 5200.00	2.5680e+05
CH3O2+C4H8-2=>0.02CH3+CH3O2H+0.02C3H4-P+0.98C4H71-3 2.000 12600.00	4.5600e+05
C2H5O2+C4H8-2=>0.02CH3+C2H5O2H+0.02C3H4-P+0.98C4H71-3 2.000 12600.00	4.5600e+05
C4H8-2+NC3H7O2=>0.02CH3+0.02C3H4-P+0.98C4H71-3+C3H7OOH 2.000 12600.00	4.5600e+05
C4H8-2+IC3H7O2=>0.02CH3+0.02C3H4-P+0.98C4H71-3+C3H7OOH 2.000 12600.00	4.5600e+05
C4H8-2+HCO3=>0.02CH3+0.02C3H4-P+0.98C4H71-3+HCO3H 2.000 6500.00	2.0400e+05
CH3CO3+C4H8-2=>0.02CH3+CH3CO3H+0.02C3H4-P+0.98C4H71-3 2.000 6500.00	2.0400e+05
CH3COCH2+C4H8-2=>0.02CH3+0.02C3H4-P+CH3COCH3+0.98C4H71-3 2.000 8000.00	1.3800e+05
C4H8-2+C6H5O=>0.02CH3+0.02C3H4-P+0.98C4H71-3+C6H5OH 2.000 12500.00	1.6200e+05
C4H8-2+C5H7=>0.02CH3+0.02C3H4-P+0.98C4H71-3+LC5H8 2.000 15000.00	1.6200e+05
C4H8-2+C7H7=>0.02CH3+0.02C3H4-P+0.98C4H71-3+C7H8 2.000 16000.00	8.1000e+04
C4H8-2+CH3C6H4=>0.02CH3+0.02C3H4-P+0.98C4H71-3+C7H8 1.000 2000.00	2.2200e+08
C4H8-2+RCRESOLO=>0.02CH3+0.02C3H4-P+0.98C4H71-3+CRE SOL 2.000 12800.00	1.6200e+05
C4H8-2+C10H7=>0.02CH3+0.02C3H4-P+0.98C4H71-3+C10H8 1.000 2000.00	2.2200e+08
C4H8-2+INDENYL=>0.02CH3+0.02C3H4-P+0.98C4H71-3+INDENE 2.000 16000.00	7.8000e+04

C4H8-2+C10H6CH3=>0.02CH3+0.02C3H4-P+0.98C4H71-3+C10H7CH3	2.2200e+08
1.000            2000.00	
C2H3+IC4H8=>C2H4+IC4H7	4.0680e+05
2.000            4567.03	
C2H5+IC4H8=>C2H6+IC4H7	1.2000e+05
2.000            6963.05	
NC3H7+IC4H8=>C3H8+IC4H7	8.1000e+04
2.000            6963.05	
IC3H7+IC4H8=>C3H8+IC4H7	8.1000e+04
2.000            10163.05	
IC4H8+C4H5=>IC4H7+C4H6	1.6200e+05
2.000            5167.03	
IC4H8+C4H71-4=>IC4H7+C4H8-1	8.1000e+04
2.000            6600.00	
IC4H8+C4H71-3=>IC4H7+C4H8-2	2.0400e+05
2.000            13700.00	
IC4H8+C4H3=>IC4H7+C4H4	2.4540e+05
2.000            5838.84	
IC4H8+C6H5=>IC4H7+C6H6	2.2200e+08
1.000            2667.03	
CH2OH+IC4H8=>CH3OH+IC4H7	1.6980e+05
2.000            10463.05	
HCO+IC4H8=>CH2O+IC4H7	7.5600e+05
2.000            12140.29	
CH3CO+IC4H8=>CH3CHO+IC4H7	8.1000e+05
2.000            13840.29	
CH2CHO+IC4H8=>CH3CHO+IC4H7	1.3800e+05
2.000            11340.29	
C3H3+IC4H8=>C3H4-A+IC4H7	1.6200e+05
2.000            14667.03	
HCCO+IC4H8=>CH2CO+IC4H7	2.5680e+05
2.000            5867.03	
C2H5O2+IC4H8=>C2H5O2H+IC4H7	4.5600e+05
2.000            12600.00	
IC4H8+NC3H7O2=>IC4H7+C3H7OOH	4.5600e+05
2.000            12468.47	
IC4H8+IC3H7O2=>IC4H7+C3H7OOH	4.5600e+05
2.000            12468.47	

IC4H8+HCO3=>IC4H7+HCO3H	2.0400e+05
2.000 6500.00	
CH3CO3+IC4H8=>CH3CO3H+IC4H7	2.0400e+05
2.000 6500.00	
CH3COCH2+IC4H8=>CH3COCH3+IC4H7	1.3800e+05
2.000 8000.00	
IC4H8+C6H5O=>IC4H7+C6H5OH	1.6200e+05
2.000 12763.05	
IC4H8+C5H7=>IC4H7+LC5H8	1.6200e+05
2.000 15000.00	
IC4H8+C7H7=>IC4H7+C7H8	8.1000e+04
2.000 16667.03	
IC4H8+CH3C6H4=>IC4H7+C7H8	2.2200e+08
1.000 2667.03	
IC4H8+RCRESOLO=>IC4H7+CRESOL	1.6200e+05
2.000 12800.00	
IC4H8+C10H7=>IC4H7+C10H8	2.2200e+08
1.000 2667.03	
IC4H8+INDENYL=>IC4H7+INDENE	7.8000e+04
2.000 16000.00	
IC4H8+C10H6CH3=>IC4H7+C10H7CH3	2.2200e+08
1.000 2000.00	
CH3+C5H6=>CH4+C5H5	3.0000e+05
2.000 5000.00	
C2H5+C5H6=>C2H6+C5H5	2.0000e+05
2.000 6700.00	
NC3H7+C5H6=>C3H8+C5H5	1.3500e+05
2.000 6700.00	
IC3H7+C5H6=>C3H8+C5H5	1.3500e+05
2.000 9900.00	
C3H5-S+C5H6=>C3H6+C5H5	2.7000e+05
2.000 4500.00	
C3H5-T+C5H6=>C3H6+C5H5	2.7000e+05
2.000 4500.00	
C3H5-A+C5H6=>C3H6+C5H5	5.3900e+05
2.000 12800.00	
C4H5+C5H6=>C4H6+C5H5	2.7000e+05
2.000 4500.00	



C4H71-4+C5H6=>C4H8-1+C5H5 2.000        6600.00	1.3500e+05
C4H71-3+C5H6=>C4H8-2+C5H5 2.000        13700.00	3.4000e+05
IC4H7+C5H6=>IC4H8+C5H5 2.000        13700.00	2.7000e+05
C4H3+C5H6=>C4H4+C5H5 2.000        5200.00	4.0900e+05
C6H5+C5H6=>C6H6+C5H5 1.000        2000.00	3.7000e+08
O+C5H6=>OH+C5H5 2.000        2500.00	2.3500e+07
O2+C5H6=>HO2+C5H5 2.000        44000.00	1.7000e+07
HO2+C5H6=>H2O2+C5H5 2.000        16000.00	8.0000e+06
CH3O+C5H6=>CH3OH+C5H5 2.000        1500.00	4.2800e+05
CH2OH+C5H6=>CH3OH+C5H5 2.000        10200.00	2.8300e+05
HCO+C5H6=>CH2O+C5H5 2.000        12300.00	1.2600e+06
CH3CO+C5H6=>CH3CHO+C5H5 2.000        14000.00	1.3500e+06
CH2CHO+C5H6=>CH3CHO+C5H5 2.000        11500.00	2.3000e+05
C3H3+C5H6=>C3H4-A+C5H5 2.000        14000.00	2.7000e+05
HCCO+C5H6=>CH2CO+C5H5 2.000        5200.00	4.2800e+05
CH3O2+C5H6=>CH3O2H+C5H5 2.000        12600.00	7.6000e+05
C2H5O2+C5H6=>C2H5O2H+C5H5 2.000        12600.00	7.6000e+05
C5H6+NC3H7O2=>C5H5+C3H7OOH 2.000        12600.00	7.6000e+05
C5H6+IC3H7O2=>C5H5+C3H7OOH 2.000        12600.00	7.6000e+05

C5H6+HCO3=>C5H5+HCO3H	3.4000e+05
2.000 6500.00	
CH3CO3+C5H6=>CH3CO3H+C5H5	3.4000e+05
2.000 6500.00	
CH3COCH2+C5H6=>CH3COCH3+C5H5	2.3000e+05
2.000 8000.00	
C5H6+C5H7=>C5H5+LC5H8	2.7000e+05
2.000 15000.00	
C5H6+C7H7=>C5H5+C7H8	1.3500e+05
2.000 16000.00	
C5H6+CH3C6H4=>C5H5+C7H8	3.7000e+08
1.000 2000.00	
C5H6+RCRESOLO=>C5H5+CRESOL	2.7000e+05
2.000 12800.00	
C5H6+C10H7=>C5H5+C10H8	3.7000e+08
1.000 2000.00	
C5H6+INDENYL=>C5H5+INDENE	1.3000e+05
2.000 16000.00	
C5H6+C10H6CH3=>C5H5+C10H7CH3	3.7000e+08
1.000 2000.00	
C2H3+C6H6=>C2H4+C6H5	1.0848e+06
2.000 7460.65	
C2H5+C6H6=>C2H6+C6H5	3.2000e+05
2.000 12330.09	
NC3H7+C6H6=>C3H8+C6H5	2.1600e+05
2.000 12330.09	
IC3H7+C6H6=>C3H8+C6H5	2.1600e+05
2.000 16129.68	
C3H5-S+C6H6=>C3H6+C6H5	4.3200e+05
2.000 10579.25	
C3H5-T+C6H6=>C3H6+C6H5	4.3200e+05
2.000 10579.25	
C3H5-A+C6H6=>C3H6+C6H5	8.6240e+05
2.000 20432.90	
C4H5+C6H6=>C4H6+C6H5	4.3200e+05
2.000 8207.64	
C4H71-4+C6H6=>C4H8-1+C6H5	2.1600e+05
2.000 13144.81	

C4H71-3+C6H6=>C4H8-2+C6H5	5.4400e+05
2.000 21467.03	
IC4H7+C6H6=>IC4H8+C6H5	4.3200e+05
2.000 21467.03	
C4H3+C6H6=>C4H4+C6H5	6.5440e+05
2.000 9170.82	
CH3O+C6H6=>CH3OH+C6H5	6.8480e+05
2.000 5819.99	
CH2OH+C6H6=>CH3OH+C6H5	4.5280e+05
2.000 16480.95	
CH3CO+C6H6=>CH3CHO+C6H5	2.1600e+06
2.000 22378.57	
CH2CHO+C6H6=>CH3CHO+C6H5	3.6800e+05
2.000 19498.26	
C3H3+C6H6=>C3H4-A+C6H5	4.3200e+05
2.000 19439.11	
HCCO+C6H6=>CH2CO+C6H5	6.8480e+05
2.000 9070.61	
CH3O2+C6H6=>CH3O2H+C6H5	1.2160e+06
2.000 20202.44	
C2H5O2+C6H6=>C2H5O2H+C6H5	1.2160e+06
2.000 20202.44	
C6H6+NC3H7O2=>C6H5+C3H7OOH	1.2160e+06
2.000 20670.08	
C6H6+IC3H7O2=>C6H5+C3H7OOH	1.2160e+06
2.000 20670.08	
C6H6+HCO3=>C6H5+HCO3H	5.4400e+05
2.000 13024.11	
CH3CO3+C6H6=>CH3CO3H+C6H5	5.4400e+05
2.000 13024.11	
C6H6+C6H5O=>C6H5+C6H5OH	4.3200e+05
2.000 19151.84	
C6H6+C5H7=>C6H5+LC5H8	4.3200e+05
2.000 22952.95	
C6H6+C7H7=>C6H5+C7H8	2.1600e+05
2.000 21718.66	
C6H6+CH3C6H4=>C6H5+C7H8	5.9200e+08
1.000 4356.78	

C6H6+RCRESOLO=>C6H5+CRESOL 2.000 20432.90	4.3200e+05
C6H6+C10H7=>C6H5+C10H8 1.000 4356.78	5.9200e+08
C6H6+INDENYL=>C6H5+INDENE 2.000 24090.27	2.0800e+05
C6H6+C10H6CH3=>C6H5+C10H7CH3 1.000 6728.39	5.9200e+08
H+MCPTD=>H2+H+C6H6 2.000 2825.33	3.0000e+07
CH3+MCPTD=>H+CH4+C6H6 2.000 3778.15	3.0000e+05
C2H3+MCPTD=>H+C2H4+C6H6 2.000 2730.26	6.7800e+05
C2H5+MCPTD=>H+C2H6+C6H6 2.000 5405.42	2.0000e+05
NC3H7+MCPTD=>H+C3H8+C6H6 2.000 5405.42	1.3500e+05
IC3H7+MCPTD=>H+C3H8+C6H6 2.000 8487.19	1.3500e+05
C3H5-S+MCPTD=>H+C3H6+C6H6 2.000 3301.28	2.7000e+05
C3H5-T+MCPTD=>H+C3H6+C6H6 2.000 3301.28	2.7000e+05
C3H5-A+MCPTD=>H+C3H6+C6H6 2.000 11294.92	5.3900e+05
C4H5+MCPTD=>H+C4H6+C6H6 2.000 3301.28	2.7000e+05
C4H71-4+MCPTD=>H+C4H8-1+C6H6 2.000 5309.47	1.3500e+05
C4H71-3+MCPTD=>H+C4H8-2+C6H6 2.000 12168.47	3.4000e+05
IC4H7+MCPTD=>H+IC4H8+C6H6 2.000 12168.47	2.7000e+05
C4H3+MCPTD=>H+C4H4+C6H6 2.000 3969.14	4.0900e+05
C6H5+MCPTD=>H+2C6H6 1.000 1067.64	3.7000e+08

O+MCPTD=>H+OH+C6H6 2.000        1404.15	2.3500e+07
O2+MCPTD=>H+HO2+C6H6 2.000        41863.68	1.7000e+07
OH+MCPTD=>H+H2O+C6H6 1.000        -695.37	1.5000e+10
HO2+MCPTD=>H+H2O2+C6H6 2.000        14404.74	8.0000e+06
CH3O+MCPTD=>H+CH3OH+C6H6 2.000        463.75	4.2800e+05
CH2OH+MCPTD=>H+CH3OH+C6H6 2.000        8777.08	2.8300e+05
HCO+MCPTD=>H+CH2O+C6H6 2.000        10810.03	1.2600e+06
CH3CO+MCPTD=>H+CH3CHO+C6H6 2.000        12459.86	1.3500e+06
CH2CHO+MCPTD=>H+CH3CHO+C6H6 2.000        10034.85	2.3000e+05
C3H3+MCPTD=>H+C3H4-A+C6H6 2.000        12459.86	2.7000e+05
HCCO+MCPTD=>H+CH2CO+C6H6 2.000        3969.14	4.2800e+05
CH3O2+MCPTD=>H+CH3O2H+C6H6 2.000        11100.93	7.6000e+05
C2H5O2+MCPTD=>H+C2H5O2H+C6H6 2.000        11100.93	7.6000e+05
MCPTD+NC3H7O2=>H+C6H6+C3H7OOH 2.000        11100.93	7.6000e+05
MCPTD+IC3H7O2=>H+C6H6+C3H7OOH 2.000        11100.93	7.6000e+05
MCPTD+HCO3=>H+C6H6+HCO3H 2.000        5213.56	3.4000e+05
CH3CO3+MCPTD=>H+CH3CO3H+C6H6 2.000        5213.56	3.4000e+05
CH3COCH2+MCPTD=>H+CH3COCH3+C6H6 2.000        6654.87	2.3000e+05
MCPTD+C6H5O=>H+C6H6+C6H5OH 2.000        11003.95	2.7000e+05

MCPTD+C5H7=>H+C6H6+LC5H8					2.7000e+05
2.000	13431.81				
MCPTD+C7H7=>H+C6H6+C7H8					1.3500e+05
2.000	14404.74				
MCPTD+CH3C6H4=>H+C6H6+C7H8					3.7000e+08
1.000	1067.64				
MCPTD+RCRESOLO=>H+C6H6+CRESOL					2.7000e+05
2.000	11294.92				
MCPTD+C10H7=>H+C6H6+C10H8					3.7000e+08
1.000	1067.64				
MCPTD+INDENYL=>H+C6H6+INDENE					1.3000e+05
2.000	14404.74				
MCPTD+C10H6CH3=>H+C6H6+C10H7CH3					3.7000e+08
1.000	1067.64				
O2+NC3H7=NC3H7O2					1.0000e+11
0.000	0.00				
PLOG /	1.000000e-02	9.200000e+08	4.050000e-01	-4.398650e+03	
/					
PLOG /	1.000000e-01	1.450000e+14	-9.840000e-01	-1.710800e+03	
/					
PLOG /	1.000000e+00	2.090000e+13	-4.990000e-01	-9.384230e+02	
/					
PLOG /	1.000000e+01	1.150000e+20	-2.420000e+00	2.451260e+03	
/					
PLOG /	1.000000e+02	2.070000e+16	-1.300000e+00	8.034190e+02	
/					
O2+IC3H7=IC3H7O2					1.0000e+11
0.000	0.00				
PLOG /	1.000000e-02	7.330000e+05	1.330000e+00	-6.345640e+03	
/					
PLOG /	1.000000e-01	2.240000e+11	-1.050000e-01	-3.697870e+03	
/					
PLOG /	1.000000e+00	1.540000e+18	-2.020000e+00	-4.985670e+02	
/					
PLOG /	1.000000e+01	6.740000e+27	-4.850000e+00	3.779820e+03	
/					
PLOG /	1.000000e+02	1.670000e+29	-5.150000e+00	5.036450e+03	
/					
IC3H7O2=HO2+C3H6					1.2240e+09
1.280	30000.00				
NC3H7O2=HO2+C3H6					6.2400e+08
1.250	29600.00				
CH3CO2H=>OH+CH3CO					1.0000e+16
0.000	109000.00				
CH3CO2H=CO2+CH4					4.1790e+14
0.310	72507.45				-

PLOG /	9.870000e-02	1.540000e+43	-8.780000e+00	8.708898e+04
/				
PLOG /	9.870000e-01	4.009000e+29	-4.750000e+00	8.001929e+04
/				
PLOG /	9.870000e+00	1.258000e+22	-2.490000e+00	7.672776e+04
/				
PLOG /	9.870000e+01	4.179000e+14	-3.100000e-01	7.250745e+04
/				
CH3CO2H=HOCO+CH3				7.0560e+36 -
5.890	105725.77			
PLOG /	9.870000e-02	4.006000e+59	-1.325000e+01	1.131570e+05
/				
PLOG /	9.870000e-01	6.430000e+56	-1.203000e+01	1.140569e+05
/				
PLOG /	9.870000e+00	1.184000e+48	-9.250000e+00	1.112172e+05
/				
PLOG /	9.870000e+01	7.056000e+36	-5.890000e+00	1.057258e+05
/				
CH3CO2H=H2O+CH2CO				9.4400e+12
0.250	73083.23			
PLOG /	9.870000e-02	3.618000e+43	-8.850000e+00	8.838112e+04
/				
PLOG /	9.870000e-01	4.301000e+32	-5.530000e+00	8.362398e+04
/				
PLOG /	9.870000e+00	2.220000e+21	-2.190000e+00	7.778320e+04
/				
PLOG /	9.870000e+01	9.440000e+12	2.500000e-01	7.308323e+04
/				
CH3O2+CH3CO3=>O2+CH2O+CH3CO2H				5.0000e+11
0.000	0.00			
O2+HCO=>HCO3				2.0000e+11
0.000	0.00			
HCO3=>O2+HCO				7.0000e+12
0.000	34000.00			
HO2+HCO3=>O2+HCO3H				2.0000e+11
0.000	0.00			
CH3O2+HCO3=>O2+OH+CO+CH3O				2.0000e+11
0.000	0.00			
HCO3H=>H+OH+CO2				2.0000e+14
0.000	38000.00			
CH3CO3H=>OH+CO2+CH3				1.0000e+15
0.000	37400.00			
HO2+CH3CO3=>O2+CH3CO3H				2.0000e+12
0.000	0.00			
HO2+CH3CO3=>O2+OH+CO2+CH3				1.0000e+12
0.000	0.00			

CH3O2+CH3CO3=>O2+CO2+CH3+CH3O 0.000            0.00	9.0000e+11
2CH3CO3=>O2+2CO2+2CH3 0.000            0.00	2.5000e+12
HO2+C3H6=>0.65NC3-QOOH+0.35IC3-QOOH 0.000            15000.00	5.0000e+11
CH2OHCOCH3=CH2OH+CH3CO 0.000            80000.00	1.0000e+16
CH2OHCOCH3=>CO+CH3+CH2OH 0.000            80000.00	1.0000e+16
CH2OHCOCH3=CH2O+CH3CHO 0.000            53000.00	4.0000e+13
CHOCH2CHO=HCO+CH2CHO 0.000            78000.00	1.0000e+16
CHOCH2CHO=HCO+CH3CO 0.000            78000.00	1.0000e+16
CH2OHCH2CHO=HCO+PC2H4OH 0.000            82000.00	1.0000e+16
CH2OHCH2CHO=CH2OH+CH2CHO 0.000            81000.00	1.0000e+16
CH2OHCH2CHO=H2O+C2H3CHO 0.000            51000.00	4.0000e+13
CH2OHCH2CHO=CH2O+CH3CHO 0.000            54000.00	4.0000e+13
C3H7OOH=>OH+CH2O+C2H5 0.000            45500.00	2.0000e+15
HO2+NC3H7=C3H7OOH 0.000            0.00	3.0000e+12
HO2+IC3H7=C3H7OOH 0.000            0.00	3.0000e+12
NC3H7O2=>NC3-QOOH 0.000            22400.00	3.0000e+11
IC3H7O2=>IC3-QOOH 0.000            28900.00	1.2000e+12
NC3-QOOH=>NC3H7O2 0.000            12000.00	5.0000e+10
IC3-QOOH=>IC3H7O2 0.000            19000.00	3.0000e+11



NC3-QOOH=>OH+C3H6O 0.000 17000.00	1.5000e+10
IC3-QOOH=>OH+C3H6O 0.000 18000.00	1.5000e+10
IC3-QOOH=>CH2OH+CH3CHO 0.000 25500.00	1.0000e+13
NC3-QOOH=>OH+CH2O+C2H4 0.000 22500.00	4.0000e+12
NC3-QOOH=>OH+C2H5CHO 0.000 22500.00	2.0000e+12
O2+IC3-QOOH=>IC3-OOQOOH 0.000 0.00	2.0000e+12
O2+NC3-QOOH=>NC3-OOQOOH 0.000 0.00	2.0000e+12
NC3-OOQOOH=>O2+NC3-QOOH 0.000 30000.00	1.2000e+14
NC3-OOQOOH=>OH+C3-OQOOH 0.000 25500.00	1.0000e+11
IC3-OOQOOH=>O2+IC3-QOOH 0.000 30000.00	1.2000e+14
IC3-OOQOOH=>OH+C3-OQOOH 0.000 25500.00	2.0000e+11
C3-OQOOH=>OH+CH2O+0.2CH3CO+0.8CH2CHO 0.000 42500.00	2.5000e+15
C3-OQOOH=>CH2O+CH3CO2H 2.130 27500.00	5.7000e+01
C3-OQOOH=>CH3CHO+HCOOH 2.150 25100.00	4.7000e+01
OH+C3-OQOOH=>H2O+OH+CO+C2H4O1-2 0.000 630.00	5.9000e+12
OH+C3-OQOOH=>H2O+OH+CHOCH2CHO 0.000 630.00	3.5000e+12
OH+C3-OQOOH=>H2O+HO2+C2H3CHO 0.000 630.00	1.7500e+12
OH+C3-OQOOH=>H2O+OH+CH2O+CH2CO 0.000 630.00	4.8000e+12
OH+C3-OQOOH=>H2O+OH+CO+CH3CHO 0.000 630.00	1.2000e+12

HO2+IC3H7O2=>O2+C3H7OOH 0.000        -1200.00	1.0000e+11
HO2+NC3H7O2=>O2+C3H7OOH 0.000        -1200.00	1.0000e+11
2NC3H7O2=>O2+2CH2O+2C2H5 0.000        0.00	2.5000e+10
2IC3H7O2=>O2+2CH2O+2C2H5 0.000        0.00	2.5000e+10
NC3H7O2+IC3H7O2=>O2+2CH2O+2C2H5 0.000        0.00	2.5000e+10
2NC3H7O2=>O2+C2H5CHO+NC3H7OH 0.000        0.00	2.5000e+10
2IC3H7O2=>O2+CH3COCH3+IC3H7OH 0.000        0.00	2.5000e+10
NC3H7O2+IC3H7O2=>O2+0.75C2H5CHO+0.25CH3COCH3+0.75NC3H7OH+0.25IC3H7OH 2.5000e+10    0.000        0.00	
CH3O2+NC3H7O2=>O2+CH3O+CH2O+C2H5 0.000        0.00	1.0000e+11
CH3O2+IC3H7O2=>O2+CH3O+CH2O+C2H5 0.000        0.00	1.0000e+11
CH3+NC3H7O2=>CH3O+CH2O+C2H5 0.000        -1200.00	1.0000e+12
CH3+IC3H7O2=>CH3O+CH2O+C2H5 0.000        -1200.00	1.0000e+12
HO2+IC3-OOQOOH=>O2+2OH+CH2O+CH3CHO 0.000        -1200.00	1.0000e+11
CH3O2+IC3-OOQOOH=>O2+CH3O2H+CH2O+CH3CHO 0.000        -1200.00	1.0000e+11
HO2+NC3-OOQOOH=>O2+2OH+CH2O+CH3CHO 0.000        -1200.00	1.0000e+11
CH3O2+NC3-OOQOOH=>O2+CH3O2H+CH2O+CH3CHO 0.000        -1200.00	1.0000e+11
OH+CH3CO2H=>H2O+CH2COOH 3.510        -196.29	1.8970e+01
H+CH3CO2H=>H2+CH2COOH 3.040        5794.45	1.9920e+03
CH3+CH3CO2H=>CH4+CH2COOH 3.160        8175.07	8.6930e+01

HO2+CH3CO2H=>H2O2+CH2COOH					2.2820e-01
3.830	17550.00				
O2+CH3CO2H=>HO2+CH2COOH					6.7070e+05
2.260	50638.87				
OH+CH3CO2H=>H2O+CO2+CH3					5.3700e+00
3.440	-761.33				
H+CH3CO2H=>H2+CO2+CH3					2.1380e+09
1.300	16754.75				
CH3+CH3CO2H=>CO2+CH4+CH3					2.9430e+04
2.330	13465.19				
HO2+CH3CO2H=>H2O2+CO2+CH3					8.8980e+03
2.330	23111.92				
O2+CH3CO2H=>HO2+CO2+CH3					1.7000e+06
2.000	50025.57				
CH3CO2H=>H+CH2COOH					1.3200e+41 -
7.570	114640.30				
PLOG /	9.870000e-02	2.630000e+57	-1.336000e+01	1.164189e+05	
/					
PLOG /	9.870000e-01	6.310000e+58	-1.325000e+01	1.200106e+05	
/					
PLOG /	9.870000e+00	8.510000e+52	-1.119000e+01	1.195450e+05	
/					
PLOG /	9.870000e+01	1.320000e+41	-7.570000e+00	1.146403e+05	
/					
H+CH2COOH=>CH3CO2H					7.9490e+33 -
6.070	10519.41				
PLOG /	9.870000e-02	5.125000e+51	-1.227000e+01	1.372870e+04	
/					
PLOG /	9.870000e-01	4.167000e+51	-1.175000e+01	1.611580e+04	
/					
PLOG /	9.870000e+00	1.150000e+45	-9.510000e+00	1.506945e+04	
/					
PLOG /	9.870000e+01	7.949000e+33	-6.070000e+00	1.051941e+04	
/					
CH2COOH=OH+CH2CO					1.7400e+29 -
4.370	60089.60				
PLOG /	9.870000e-02	9.770000e+46	-1.039000e+01	6.388170e+04	
/					
PLOG /	9.870000e-01	1.050000e+46	-9.700000e+00	6.568245e+04	
/					
PLOG /	9.870000e+00	4.370000e+39	-7.560000e+00	6.443470e+04	
/					
PLOG /	9.870000e+01	1.740000e+29	-4.370000e+00	6.008960e+04	
/					
CH2COOH=CO2+CH3					5.6200e+20 -
2.360	46013.60				
PLOG /	9.870000e-02	6.760000e+42	-9.230000e+00	5.441666e+04	
/					

PLOG /	9.870000e-01	1.380000e+37	-7.360000e+00	5.306372e+04	
/					
PLOG /	9.870000e+00	5.620000e+28	-4.770000e+00	4.968970e+04	
/					
PLOG /	9.870000e+01	5.620000e+20	-2.360000e+00	4.601360e+04	
/					
H+CH <sub>2</sub> COOH=H <sub>2</sub> O+CH <sub>2</sub> CO				1.6200e+18	-
1.440	11056.50				
PLOG /	9.870000e-02	2.451000e+21	-2.620000e+00	3.165930e+03	
/					
PLOG /	9.870000e-01	2.511000e+25	-3.690000e+00	7.510720e+03	
/					
PLOG /	9.870000e+00	5.245000e+26	-3.940000e+00	1.208940e+04	
/					
PLOG /	9.870000e+01	1.620000e+18	-1.440000e+00	1.105650e+04	
/					
H+CH <sub>2</sub> COOH=CO <sub>2</sub> +CH <sub>4</sub>				5.2450e+18	-
1.690	10183.10				
PLOG /	9.870000e-02	7.046000e+22	-3.120000e+00	3.588080e+03	
/					
PLOG /	9.870000e-01	3.981000e+26	-4.110000e+00	7.754050e+03	
/					
PLOG /	9.870000e+00	6.624000e+26	-4.070000e+00	1.134550e+04	
/					
PLOG /	9.870000e+01	5.245000e+18	-1.690000e+00	1.018310e+04	
/					
H+CH <sub>2</sub> COOH=HOCO+CH <sub>3</sub>				2.2400e+22	-
2.260	16097.74				
PLOG /	9.870000e-02	8.491000e+18	-1.540000e+00	5.894950e+03	
/					
PLOG /	9.870000e-01	3.017000e+22	-2.500000e+00	9.396200e+03	
/					
PLOG /	9.870000e+00	9.093000e+25	-3.390000e+00	1.449440e+04	
/					
PLOG /	9.870000e+01	2.240000e+22	-2.260000e+00	1.609774e+04	
/					
H+C <sub>3</sub> H <sub>7</sub> OOH=>H <sub>2</sub> +OH+CH <sub>3</sub> COCH <sub>3</sub>				3.0000e+06	
2.000	2825.33				
CH <sub>3</sub> +C <sub>3</sub> H <sub>7</sub> OOH=>OH+CH <sub>4</sub> +CH <sub>3</sub> COCH <sub>3</sub>				3.0000e+04	
2.000	3778.15				
C <sub>2</sub> H <sub>3</sub> +C <sub>3</sub> H <sub>7</sub> OOH=>OH+C <sub>2</sub> H <sub>4</sub> +CH <sub>3</sub> COCH <sub>3</sub>				6.7800e+04	
2.000	2730.26				
C <sub>2</sub> H <sub>5</sub> +C <sub>3</sub> H <sub>7</sub> OOH=>OH+C <sub>2</sub> H <sub>6</sub> +CH <sub>3</sub> COCH <sub>3</sub>				2.0000e+04	
2.000	5405.42				
NC <sub>3</sub> H <sub>7</sub> +C <sub>3</sub> H <sub>7</sub> OOH=>OH+C <sub>3</sub> H <sub>8</sub> +CH <sub>3</sub> COCH <sub>3</sub>				1.3500e+04	
2.000	5405.42				
IC <sub>3</sub> H <sub>7</sub> +C <sub>3</sub> H <sub>7</sub> OOH=>OH+C <sub>3</sub> H <sub>8</sub> +CH <sub>3</sub> COCH <sub>3</sub>				1.3500e+04	
2.000	8487.19				

C3H5-S+C3H7OOH=>OH+C3H6+CH3COCH3 2.000        3301.28	2.7000e+04
C3H5-T+C3H7OOH=>OH+C3H6+CH3COCH3 2.000        3301.28	2.7000e+04
C3H5-A+C3H7OOH=>OH+C3H6+CH3COCH3 2.000        11294.92	5.3900e+04
C4H5+C3H7OOH=>OH+CH3COCH3+C4H6 2.000        3301.28	2.7000e+04
C4H71-4+C3H7OOH=>OH+CH3COCH3+C4H8-1 2.000        5309.47	1.3500e+04
C4H71-3+C3H7OOH=>OH+CH3COCH3+C4H8-2 2.000        12168.47	3.4000e+04
IC4H7+C3H7OOH=>OH+CH3COCH3+IC4H8 2.000        12168.47	2.7000e+04
C4H3+C3H7OOH=>OH+CH3COCH3+C4H4 2.000        3969.14	4.0900e+04
C6H5+C3H7OOH=>OH+CH3COCH3+C6H6 1.000        1067.64	3.7000e+07
O+C3H7OOH=>2OH+CH3COCH3 2.000        1404.15	2.3500e+06
O2+C3H7OOH=>OH+HO2+CH3COCH3 2.000        41863.68	1.7000e+06
OH+C3H7OOH=>H2O+OH+CH3COCH3 1.000        -695.37	1.5000e+09
HO2+C3H7OOH=>OH+H2O2+CH3COCH3 2.000        14404.74	8.0000e+05
CH3O+C3H7OOH=>OH+CH3OH+CH3COCH3 2.000        463.75	4.2800e+04
CH2OH+C3H7OOH=>OH+CH3OH+CH3COCH3 2.000        8777.08	2.8300e+04
HCO+C3H7OOH=>OH+CH2O+CH3COCH3 2.000        10810.03	1.2600e+05
CH3CO+C3H7OOH=>OH+CH3CHO+CH3COCH3 2.000        12459.86	1.3500e+05
CH2CHO+C3H7OOH=>OH+CH3CHO+CH3COCH3 2.000        10034.85	2.3000e+04
C3H3+C3H7OOH=>OH+C3H4-A+CH3COCH3 2.000        12459.86	2.7000e+04

HCCO+C3H7OOH=>OH+CH2CO+CH3COCH3 2.000        3969.14	4.2800e+04
CH3O2+C3H7OOH=>OH+CH3O2H+CH3COCH3 2.000        11100.93	7.6000e+04
C2H5O2+C3H7OOH=>OH+C2H5O2H+CH3COCH3 2.000        11100.93	7.6000e+04
NC3H7O2+C3H7OOH=>OH+CH3COCH3+C3H7OOH 2.000        11100.93	7.6000e+04
IC3H7O2+C3H7OOH=>OH+CH3COCH3+C3H7OOH 2.000        11100.93	7.6000e+04
C3H7OOH+HCO3=>OH+CH3COCH3+HCO3H 2.000        5213.56	3.4000e+04
CH3CO3+C3H7OOH=>OH+CH3CO3H+CH3COCH3 2.000        5213.56	3.4000e+04
CH3COCH2+C3H7OOH=>OH+2CH3COCH3 2.000        6654.87	2.3000e+04
C3H7OOH+C6H5O=>OH+CH3COCH3+C6H5OH 2.000        11003.95	2.7000e+04
C3H7OOH+C5H7=>OH+CH3COCH3+LC5H8 2.000        13431.81	2.7000e+04
C3H7OOH+C7H7=>OH+CH3COCH3+C7H8 2.000        14404.74	1.3500e+04
C3H7OOH+CH3C6H4=>OH+CH3COCH3+C7H8 1.000        1067.64	3.7000e+07
C3H7OOH+RCRESOLO=>OH+CH3COCH3+CRESOL 2.000        11294.92	2.7000e+04
C3H7OOH+C10H7=>OH+CH3COCH3+C10H8 1.000        1067.64	3.7000e+07
C3H7OOH+INDENYL=>OH+CH3COCH3+INDENE 2.000        14404.74	1.3000e+04
C3H7OOH+C10H6CH3=>OH+CH3COCH3+C10H7CH3 1.000        1067.64	3.7000e+07
H+C3H7OOH=>H2+OH+C2H5CHO 2.000        4000.00	3.0000e+06
CH3+C3H7OOH=>OH+CH4+C2H5CHO 2.000        5000.00	3.0000e+04
C2H3+C3H7OOH=>OH+C2H4+C2H5CHO 2.000        3900.00	6.7800e+04

C2H5+C3H7OOH=>OH+C2H6+C2H5CHO 2.000            6700.00	2.0000e+04
NC3H7+C3H7OOH=>OH+C3H8+C2H5CHO 2.000            6700.00	1.3500e+04
IC3H7+C3H7OOH=>OH+C3H8+C2H5CHO 2.000            9900.00	1.3500e+04
C3H5-S+C3H7OOH=>OH+C3H6+C2H5CHO 2.000            4500.00	2.7000e+04
C3H5-T+C3H7OOH=>OH+C3H6+C2H5CHO 2.000            4500.00	2.7000e+04
C3H5-A+C3H7OOH=>OH+C3H6+C2H5CHO 2.000            12800.00	5.3900e+04
C4H5+C3H7OOH=>OH+C2H5CHO+C4H6 2.000            4500.00	2.7000e+04
C4H71-4+C3H7OOH=>OH+C2H5CHO+C4H8-1 2.000            6600.00	1.3500e+04
C4H71-3+C3H7OOH=>OH+C2H5CHO+C4H8-2 2.000            13700.00	3.4000e+04
IC4H7+C3H7OOH=>OH+C2H5CHO+IC4H8 2.000            13700.00	2.7000e+04
C4H3+C3H7OOH=>OH+C2H5CHO+C4H4 2.000            5200.00	4.0900e+04
C6H5+C3H7OOH=>OH+C2H5CHO+C6H6 1.000            2000.00	3.7000e+07
O+C3H7OOH=>2OH+C2H5CHO 2.000            2500.00	2.3500e+06
O2+C3H7OOH=>OH+HO2+C2H5CHO 2.000            44000.00	1.7000e+06
OH+C3H7OOH=>H2O+OH+C2H5CHO 1.000            50.00	1.5000e+09
HO2+C3H7OOH=>OH+H2O2+C2H5CHO 2.000            16000.00	8.0000e+05
CH3O+C3H7OOH=>OH+CH3OH+C2H5CHO 2.000            1500.00	4.2800e+04
CH2OH+C3H7OOH=>OH+CH3OH+C2H5CHO 2.000            10200.00	2.8300e+04
HCO+C3H7OOH=>OH+CH2O+C2H5CHO 2.000            12300.00	1.2600e+05

CH3CO+C3H7OOH=>OH+CH3CHO+C2H5CHO	1.3500e+05
2.000 14000.00	
CH2CHO+C3H7OOH=>OH+CH3CHO+C2H5CHO	2.3000e+04
2.000 11500.00	
C3H3+C3H7OOH=>OH+C3H4-A+C2H5CHO	2.7000e+04
2.000 14000.00	
HCCO+C3H7OOH=>OH+CH2CO+C2H5CHO	4.2800e+04
2.000 5200.00	
CH3O2+C3H7OOH=>OH+CH3O2H+C2H5CHO	7.6000e+04
2.000 12600.00	
C2H5O2+C3H7OOH=>OH+C2H5O2H+C2H5CHO	7.6000e+04
2.000 12600.00	
NC3H7O2+C3H7OOH=>OH+C2H5CHO+C3H7OOH	7.6000e+04
2.000 12600.00	
IC3H7O2+C3H7OOH=>OH+C2H5CHO+C3H7OOH	7.6000e+04
2.000 12600.00	
C3H7OOH+HCO3=>OH+C2H5CHO+HCO3H	3.4000e+04
2.000 6500.00	
CH3CO3+C3H7OOH=>OH+CH3CO3H+C2H5CHO	3.4000e+04
2.000 6500.00	
CH3COCH2+C3H7OOH=>OH+C2H5CHO+CH3COCH3	2.3000e+04
2.000 8000.00	
C3H7OOH+C6H5O=>OH+C2H5CHO+C6H5OH	2.7000e+04
2.000 12500.00	
C3H7OOH+C5H7=>OH+C2H5CHO+LC5H8	2.7000e+04
2.000 15000.00	
C3H7OOH+C7H7=>OH+C2H5CHO+C7H8	1.3500e+04
2.000 16000.00	
C3H7OOH+CH3C6H4=>OH+C2H5CHO+C7H8	3.7000e+07
1.000 2000.00	
C3H7OOH+RCRESOLO=>OH+C2H5CHO+CRESOL	2.7000e+04
2.000 12800.00	
C3H7OOH+C10H7=>OH+C2H5CHO+C10H8	3.7000e+07
1.000 2000.00	
C3H7OOH+INDENYL=>OH+C2H5CHO+INDENE	1.3000e+04
2.000 16000.00	
C3H7OOH+C10H6CH3=>OH+C2H5CHO+C10H7CH3	3.7000e+07
1.000 2000.00	



H+CH3CO2H=>H2+0.75OH+0.25CO2+0.25CH3+0.75CH2CO 2.000 6349.34	1.2000e+07
CH3+CH3CO2H=>0.75OH+0.25CO2+CH4+0.25CH3+0.75CH2CO 2.000 7443.70	1.2000e+05
C2H3+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+C2H4+0.75CH2CO 2.000 6239.48	2.7120e+05
C2H5+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+C2H6+0.75CH2CO 2.000 9289.16	8.0000e+04
NC3H7+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C3H8 2.000 9289.16	5.4000e+04
IC3H7+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C3H8 2.000 12725.62	5.4000e+04
C3H5-S+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C3H6 2.000 6897.45	1.0800e+05
C3H5-T+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C3H6 2.000 6897.45	1.0800e+05
C3H5-A+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C3H6 2.000 15810.16	2.1560e+05
C4H5+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C4H6 2.000 6897.45	1.0800e+05
C4H71-4+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C4H8-1 2.000 9181.05	5.4000e+04
C4H71-3+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C4H8-2 2.000 16763.05	1.3600e+05
IC4H7+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+IC4H8 2.000 16763.05	1.0800e+05
C4H3+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C4H4 2.000 7661.72	1.6360e+05
C6H5+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C6H6 1.000 3864.72	1.4800e+08
O+CH3CO2H=>1.75OH+0.25CO2+0.25CH3+0.75CH2CO 2.000 4691.70	9.4000e+06
O2+CH3CO2H=>0.75OH+HO2+0.25CO2+0.25CH3+0.75CH2CO 2.000 48272.65	6.8000e+06
OH+CH3CO2H=>H2O+0.75OH+0.25CO2+0.25CH3+0.75CH2CO 1.000 1540.75	6.0000e+09
HO2+CH3CO2H=>0.75OH+H2O2+0.25CO2+0.25CH3+0.75CH2CO 2.000 19190.53	3.2000e+06

CH3O+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+CH3OH+0.75CH2CO	1.7120e+05
2.000 3572.50	
CH2OH+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+CH3OH+0.75CH2CO	1.1320e+05
2.000 13045.84	
HCO+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+CH2O+0.75CH2CO	5.0400e+05
2.000 15279.95	
CH3CO+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+CH3CHO+0.75CH2CO	5.4000e+05
2.000 17080.28	
CH2CHO+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+CH3CHO+0.75CH2CO	9.2000e+04
2.000 14430.30	
C3H3+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C3H4-A	1.0800e+05
2.000 17080.28	
HCCO+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+1.75CH2CO	1.7120e+05
2.000 7661.72	
CH3O2+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+CH3O2H+0.75CH2CO	3.0400e+05
2.000 15598.15	
C2H5O2+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+C2H5O2H+0.75CH2CO	3.0400e+05
2.000 15598.15	
NC3H7O2+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C3H7OOH	3.0400e+05
2.000 15598.15	
IC3H7O2+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C3H7OOH	3.0400e+05
2.000 15598.15	
CH3CO2H+HCO3=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+HCO3H	1.3600e+05
2.000 9072.89	
CH3CO3+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+CH3CO3H	1.3600e+05
2.000 9072.89	
CH3COCH2+CH3CO2H=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+CH3COCH3	9.2000e+04
2.000 10690.26	
CH3CO2H+C6H5O=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C6H5OH	1.0800e+05
2.000 15492.11	
CH3CO2H+C5H7=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+LC5H8	1.0800e+05
2.000 18136.38	
CH3CO2H+C7H7=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C7H8	5.4000e+04
2.000 19190.53	
CH3CO2H+CH3C6H4=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C7H8	1.4800e+08
1.000 3864.72	
CH3CO2H+RCRESOLO=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+CRESOL	1.0800e+05
2.000 15810.16	

CH3CO2H+C10H7=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C10H8	1.4800e+08
1.000 3864.72	
CH3CO2H+INDENYL=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+INDENE	5.2000e+04
2.000 19190.53	
CH3CO2H+C10H6CH3=>0.75OH+0.25CO2+0.25CH3+0.75CH2CO+C10H7CH3	1.4800e+08
1.000 3864.72	
H+CH2OHCH2CHO=>H2+CO+PC2H4OH	8.4000e+06
2.000 2573.61	
CH3+CH2OHCH2CHO=>CO+CH4+PC2H4OH	8.4000e+04
2.000 3516.32	
C2H3+CH2OHCH2CHO=>CO+C2H4+PC2H4OH	1.8984e+05
2.000 2479.60	
C2H5+CH2OHCH2CHO=>CO+C2H6+PC2H4OH	5.6000e+04
2.000 5128.01	
NC3H7+CH2OHCH2CHO=>CO+PC2H4OH+C3H8	3.7800e+04
2.000 5128.01	
IC3H7+CH2OHCH2CHO=>CO+PC2H4OH+C3H8	3.7800e+04
2.000 8184.45	
C3H5-S+CH2OHCH2CHO=>CO+PC2H4OH+C3H6	7.5600e+04
2.000 3044.41	
C3H5-T+CH2OHCH2CHO=>CO+PC2H4OH+C3H6	7.5600e+04
2.000 3044.41	
C3H5-A+CH2OHCH2CHO=>CO+PC2H4OH+C3H6	1.5092e+05
2.000 10972.41	
C4H5+CH2OHCH2CHO=>CO+PC2H4OH+C4H6	7.5600e+04
2.000 3044.41	
C4H71-4+CH2OHCH2CHO=>CO+PC2H4OH+C4H8-1	3.7800e+04
2.000 5032.93	
C4H71-3+CH2OHCH2CHO=>CO+PC2H4OH+C4H8-2	9.5200e+04
2.000 11840.29	
IC4H7+CH2OHCH2CHO=>CO+PC2H4OH+IC4H8	7.5600e+04
2.000 11840.29	
C4H3+CH2OHCH2CHO=>CO+PC2H4OH+C4H4	1.1452e+05
2.000 3705.38	
C6H5+CH2OHCH2CHO=>CO+PC2H4OH+C6H6	1.0360e+08
1.000 867.85	
O+CH2OHCH2CHO=>OH+CO+PC2H4OH	6.5800e+06
2.000 1169.32	

O2+CH2OHCH2CHO=>H2O+CO+PC2H4OH	4.7600e+06
2.000 41405.89	
OH+CH2OHCH2CHO=>H2O+CO+PC2H4OH	4.2000e+09
1.000 -855.10	
H2O2+CH2OHCH2CHO=>H2O2+CO+PC2H4OH	2.2400e+06
2.000 14062.89	
CH3O+CH2OHCH2CHO=>CO+CH3OH+PC2H4OH	1.1984e+05
2.000 241.70	
CH2OH+CH2OHCH2CHO=>CO+CH3OH+PC2H4OH	7.9240e+04
2.000 8472.17	
HCO+CH2OHCH2CHO=>CO+CH2O+PC2H4OH	3.5280e+05
2.000 10490.75	
CH3CO+CH2OHCH2CHO=>CO+PC2H4OH+CH3CHO	3.7800e+05
2.000 12129.83	
CH2CHO+CH2OHCH2CHO=>CO+PC2H4OH+CH3CHO	6.4400e+04
2.000 9720.89	
C3H3+CH2OHCH2CHO=>CO+PC2H4OH+C3H4-A	7.5600e+04
2.000 12129.83	
HCCO+CH2OHCH2CHO=>CO+PC2H4OH+CH2CO	1.1984e+05
2.000 3705.38	
CH3O2+CH2OHCH2CHO=>CO+CH3O2H+PC2H4OH	2.1280e+05
2.000 10779.70	
C2H5O2+CH2OHCH2CHO=>CO+C2H5O2H+PC2H4OH	2.1280e+05
2.000 10779.70	
NC3H7O2+CH2OHCH2CHO=>CO+PC2H4OH+C3H7OOH	2.1280e+05
2.000 10779.70	
IC3H7O2+CH2OHCH2CHO=>CO+PC2H4OH+C3H7OOH	2.1280e+05
2.000 10779.70	
CH2OHCH2CHO+HCO3=>CO+PC2H4OH+HCO3H	9.5200e+04
2.000 4937.89	
CH3CO3+CH2OHCH2CHO=>CO+PC2H4OH+CH3CO3H	9.5200e+04
2.000 4937.89	
CH3COCH2+CH2OHCH2CHO=>CO+PC2H4OH+CH3COCH3	6.4400e+04
2.000 6366.63	
CH2OHCH2CHO+C6H5O=>CO+PC2H4OH+C6H5OH	7.5600e+04
2.000 10683.36	
CH2OHCH2CHO+C5H7=>CO+PC2H4OH+LC5H8	7.5600e+04
2.000 13095.77	

CH2OHCH2CHO+C7H7=>CO+PC2H4OH+C7H8	3.7800e+04
2.000 14062.89	
CH2OHCH2CHO+CH3C6H4=>CO+PC2H4OH+C7H8	1.0360e+08
1.000 867.85	
CH2OHCH2CHO+RCRESOLO=>CO+PC2H4OH+CRESOL	7.5600e+04
2.000 10972.41	
CH2OHCH2CHO+C10H7=>CO+PC2H4OH+C10H8	1.0360e+08
1.000 867.85	
CH2OHCH2CHO+INDENYL=>CO+PC2H4OH+INDENE	3.6400e+04
2.000 14062.89	
CH2OHCH2CHO+C10H6CH3=>CO+PC2H4OH+C10H7CH3	1.0360e+08
1.000 867.85	
H+CH2OHCH2CHO=>H2+0.5OH+0.5CO2+0.5C2H5+0.5C2H3CHO	6.0000e+06
2.000 4000.00	
CH3+CH2OHCH2CHO=>0.5OH+0.5CO2+CH4+0.5C2H5+0.5C2H3CHO	6.0000e+04
2.000 5000.00	
C2H3+CH2OHCH2CHO=>0.5OH+0.5CO2+0.5C2H5+C2H4+0.5C2H3CHO	1.3560e+05
2.000 3900.00	
C2H5+CH2OHCH2CHO=>0.5OH+0.5CO2+C2H6+0.5C2H5+0.5C2H3CHO	4.0000e+04
2.000 6700.00	
NC3H7+CH2OHCH2CHO=>0.5OH+0.5CO2+0.5C2H5+C3H8+0.5C2H3CHO	2.7000e+04
2.000 6700.00	
IC3H7+CH2OHCH2CHO=>0.5OH+0.5CO2+0.5C2H5+C3H8+0.5C2H3CHO	2.7000e+04
2.000 9900.00	
C3H5-S+CH2OHCH2CHO=>0.5OH+0.5CO2+0.5C2H5+C3H6+0.5C2H3CHO	5.4000e+04
2.000 4500.00	
C3H5-T+CH2OHCH2CHO=>0.5OH+0.5CO2+0.5C2H5+C3H6+0.5C2H3CHO	5.4000e+04
2.000 4500.00	
C3H5-A+CH2OHCH2CHO=>0.5OH+0.5CO2+0.5C2H5+C3H6+0.5C2H3CHO	1.0780e+05
2.000 12800.00	
C4H5+CH2OHCH2CHO=>0.5OH+0.5CO2+0.5C2H5+0.5C2H3CHO+C4H6	5.4000e+04
2.000 4500.00	
C4H71-4+CH2OHCH2CHO=>0.5OH+0.5CO2+0.5C2H5+0.5C2H3CHO+C4H8-1	2.7000e+04
2.000 6600.00	
C4H71-3+CH2OHCH2CHO=>0.5OH+0.5CO2+0.5C2H5+0.5C2H3CHO+C4H8-2	6.8000e+04
2.000 13700.00	
IC4H7+CH2OHCH2CHO=>0.5OH+0.5CO2+0.5C2H5+0.5C2H3CHO+IC4H8	5.4000e+04
2.000 13700.00	

$C_4H_3+CH_2OHCH_2CHO \Rightarrow 0.5OH+0.5CO_2+0.5C_2H_5+0.5C_2H_3CHO+C_4H_4$  8.1800e+04  
 2.000 5200.00

$C_6H_5+CH_2OHCH_2CHO \Rightarrow 0.5OH+0.5CO_2+0.5C_2H_5+0.5C_2H_3CHO+C_6H_6$  7.4000e+07  
 1.000 2000.00

$O+CH_2OHCH_2CHO \Rightarrow 1.5OH+0.5CO_2+0.5C_2H_5+0.5C_2H_3CHO$  4.7000e+06  
 2.000 2500.00

$O_2+CH_2OHCH_2CHO \Rightarrow 0.5OH+HO_2+0.5CO_2+0.5C_2H_5+0.5C_2H_3CHO$  3.4000e+06  
 2.000 44000.00

$OH+CH_2OHCH_2CHO \Rightarrow H_2O+0.5OH+0.5CO_2+0.5C_2H_5+0.5C_2H_3CHO$  3.0000e+09  
 1.000 50.00

$HO_2+CH_2OHCH_2CHO \Rightarrow 0.5OH+H_2O_2+0.5CO_2+0.5C_2H_5+0.5C_2H_3CHO$  1.6000e+06  
 2.000 16000.00

$CH_3O+CH_2OHCH_2CHO \Rightarrow 0.5OH+0.5CO_2+CH_3OH+0.5C_2H_5+0.5C_2H_3CHO$  8.5600e+04  
 2.000 1500.00

$CH_2OH+CH_2OHCH_2CHO \Rightarrow 0.5OH+0.5CO_2+CH_3OH+0.5C_2H_5+0.5C_2H_3CHO$  5.6600e+04  
 2.000 10200.00

$HCO+CH_2OHCH_2CHO \Rightarrow 0.5OH+0.5CO_2+CH_2O+0.5C_2H_5+0.5C_2H_3CHO$  2.5200e+05  
 2.000 12300.00

$CH_3CO+CH_2OHCH_2CHO \Rightarrow 0.5OH+0.5CO_2+0.5C_2H_5+CH_3CHO+0.5C_2H_3CHO$  2.7000e+05  
 2.000 14000.00

$CH_2CHO+CH_2OHCH_2CHO \Rightarrow 0.5OH+0.5CO_2+0.5C_2H_5+CH_3CHO+0.5C_2H_3CHO$  4.6000e+04  
 2.000 11500.00

$C_3H_3+CH_2OHCH_2CHO \Rightarrow 0.5OH+0.5CO_2+0.5C_2H_5+C_3H_4-A+0.5C_2H_3CHO$  5.4000e+04  
 2.000 14000.00

$HCCO+CH_2OHCH_2CHO \Rightarrow 0.5OH+0.5CO_2+0.5C_2H_5+CH_2CO+0.5C_2H_3CHO$  8.5600e+04  
 2.000 5200.00

$CH_3O_2+CH_2OHCH_2CHO \Rightarrow 0.5OH+0.5CO_2+CH_3O_2H+0.5C_2H_5+0.5C_2H_3CHO$  1.5200e+05  
 2.000 12600.00

$C_2H_5O_2+CH_2OHCH_2CHO \Rightarrow 0.5OH+0.5CO_2+0.5C_2H_5+C_2H_5O_2H+0.5C_2H_3CHO$  1.5200e+05  
 2.000 12600.00

$NC_3H_7O_2+CH_2OHCH_2CHO \Rightarrow 0.5OH+0.5CO_2+0.5C_2H_5+0.5C_2H_3CHO+C_3H_7OOH$  1.5200e+05  
 2.000 12600.00

$IC_3H_7O_2+CH_2OHCH_2CHO \Rightarrow 0.5OH+0.5CO_2+0.5C_2H_5+0.5C_2H_3CHO+C_3H_7OOH$  1.5200e+05  
 2.000 12600.00

$CH_2OHCH_2CHO+HCO_3 \Rightarrow 0.5OH+0.5CO_2+0.5C_2H_5+0.5C_2H_3CHO+HCO_3H$  6.8000e+04  
 2.000 6500.00

$CH_3CO_3+CH_2OHCH_2CHO \Rightarrow 0.5OH+0.5CO_2+0.5C_2H_5+CH_3CO_3H+0.5C_2H_3CHO$  6.8000e+04  
 2.000 6500.00

CH3COCH2+CH2OHCH2CHO=>0.5OH+0.5CO2+0.5C2H5+0.5C2H3CHO+CH3COCH3 4.6000e+04  
2.000 8000.00

CH2OHCH2CHO+C6H5O=>0.5OH+0.5CO2+0.5C2H5+0.5C2H3CHO+C6H5OH 5.4000e+04  
2.000 12500.00

CH2OHCH2CHO+C5H7=>0.5OH+0.5CO2+0.5C2H5+0.5C2H3CHO+LC5H8 5.4000e+04  
2.000 15000.00

CH2OHCH2CHO+C7H7=>0.5OH+0.5CO2+0.5C2H5+0.5C2H3CHO+C7H8 2.7000e+04  
2.000 16000.00

CH2OHCH2CHO+CH3C6H4=>0.5OH+0.5CO2+0.5C2H5+0.5C2H3CHO+C7H8 7.4000e+07  
1.000 2000.00

CH2OHCH2CHO+RCRESOLO=>0.5OH+0.5CO2+0.5C2H5+0.5C2H3CHO+CRE SOL 5.4000e+04  
2.000 12800.00

CH2OHCH2CHO+C10H7=>0.5OH+0.5CO2+0.5C2H5+0.5C2H3CHO+C10H8 7.4000e+07  
1.000 2000.00

CH2OHCH2CHO+INDENYL=>0.5OH+0.5CO2+0.5C2H5+0.5C2H3CHO+INDENE 2.6000e+04  
2.000 16000.00

CH2OHCH2CHO+C10H6CH3=>0.5OH+0.5CO2+0.5C2H5+0.5C2H3CHO+C10H7CH3 7.4000e+07  
1.000 2000.00

H+CH2OHCH2CHO=>H2+0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO 1.1100e+07  
2.000 4000.00

CH3+CH2OHCH2CHO=>CH4+0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO 1.1100e+05  
2.000 5000.00

C2H3+CH2OHCH2CHO=>0.2CH2O+0.8HCO+C2H4+0.8CH3CHO+0.2CH2CHO 2.5086e+05  
2.000 3900.00

C2H5+CH2OHCH2CHO=>0.2CH2O+0.8HCO+C2H6+0.8CH3CHO+0.2CH2CHO 7.4000e+04  
2.000 6700.00

NC3H7+CH2OHCH2CHO=>0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO+C3H8 4.9950e+04  
2.000 6700.00

IC3H7+CH2OHCH2CHO=>0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO+C3H8 4.9950e+04  
2.000 9900.00

C3H5-S+CH2OHCH2CHO=>0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO+C3H6 9.9900e+04  
2.000 4500.00

C3H5-T+CH2OHCH2CHO=>0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO+C3H6 9.9900e+04  
2.000 4500.00

C3H5-A+CH2OHCH2CHO=>0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO+C3H6 1.9943e+05  
2.000 12800.00

C4H5+CH2OHCH2CHO=>0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO+C4H6 9.9900e+04  
2.000 4500.00

C4H71-4+CH2OHCH2CHO=>0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO+C4H8-1 4.9950e+04  
2.000 6600.00

C4H71-3+CH2OHCH2CHO=>0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO+C4H8-2 1.2580e+05  
2.000 13700.00

IC4H7+CH2OHCH2CHO=>0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO+IC4H8 9.9900e+04  
2.000 13700.00

C4H3+CH2OHCH2CHO=>0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO+C4H4 1.5133e+05  
2.000 5200.00

C6H5+CH2OHCH2CHO=>0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO+C6H6 1.3690e+08  
1.000 2000.00

O+CH2OHCH2CHO=>OH+0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO 8.6950e+06  
2.000 2500.00

O2+CH2OHCH2CHO=>HO2+0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO 6.2900e+06  
2.000 44000.00

OH+CH2OHCH2CHO=>H2O+0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO 5.5500e+09  
1.000 50.00

HO2+CH2OHCH2CHO=>H2O2+0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO 2.9600e+06  
2.000 16000.00

CH3O+CH2OHCH2CHO=>CH3OH+0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO 1.5836e+05  
2.000 1500.00

CH2OH+CH2OHCH2CHO=>CH3OH+0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO 1.0471e+05  
2.000 10200.00

HCO+CH2OHCH2CHO=>1.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO 4.6620e+05  
2.000 12300.00

CH3CO+CH2OHCH2CHO=>0.2CH2O+0.8HCO+1.8CH3CHO+0.2CH2CHO 4.9950e+05  
2.000 14000.00

CH2CHO+CH2OHCH2CHO=>0.2CH2O+0.8HCO+1.8CH3CHO+0.2CH2CHO 8.5100e+04  
2.000 11500.00

C3H3+CH2OHCH2CHO=>0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO+C3H4-A 9.9900e+04  
2.000 14000.00

HCCO+CH2OHCH2CHO=>0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO+CH2CO 1.5836e+05  
2.000 5200.00

CH3O2+CH2OHCH2CHO=>CH3O2H+0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO 2.8120e+05  
2.000 12600.00

C2H5O2+CH2OHCH2CHO=>0.2CH2O+0.8HCO+C2H5O2H+0.8CH3CHO+0.2CH2CHO 2.8120e+05  
2.000 12600.00

NC3H7O2+CH2OHCH2CHO=>0.2CH2O+0.8HCO+0.8CH3CHO+0.2CH2CHO+C3H7OOH  
2.8120e+05 2.000 12600.00



$\text{IC}_3\text{H}_7\text{O}_2 + \text{CH}_2\text{OHCH}_2\text{CHO} \Rightarrow 0.2\text{CH}_2\text{O} + 0.8\text{HCO} + 0.8\text{CH}_3\text{CHO} + 0.2\text{CH}_2\text{CHO} + \text{C}_3\text{H}_7\text{OOH}$   
 2.8120e+05      2.000      12600.00

$\text{CH}_2\text{OHCH}_2\text{CHO} + \text{HCO}_3 \Rightarrow 0.2\text{CH}_2\text{O} + 0.8\text{HCO} + 0.8\text{CH}_3\text{CHO} + 0.2\text{CH}_2\text{CHO} + \text{HCO}_3\text{H}$  1.2580e+05  
 2.000      6500.00

$\text{CH}_3\text{CO}_3 + \text{CH}_2\text{OHCH}_2\text{CHO} \Rightarrow 0.2\text{CH}_2\text{O} + 0.8\text{HCO} + 0.8\text{CH}_3\text{CHO} + 0.2\text{CH}_2\text{CHO} + \text{CH}_3\text{CO}_3\text{H}$  1.2580e+05  
 2.000      6500.00

$\text{CH}_3\text{COCH}_2 + \text{CH}_2\text{OHCH}_2\text{CHO} \Rightarrow 0.2\text{CH}_2\text{O} + 0.8\text{HCO} + 0.8\text{CH}_3\text{CHO} + 0.2\text{CH}_2\text{CHO} + \text{CH}_3\text{COCH}_3$   
 8.5100e+04      2.000      8000.00

$\text{CH}_2\text{OHCH}_2\text{CHO} + \text{C}_6\text{H}_5\text{O} \Rightarrow 0.2\text{CH}_2\text{O} + 0.8\text{HCO} + 0.8\text{CH}_3\text{CHO} + 0.2\text{CH}_2\text{CHO} + \text{C}_6\text{H}_5\text{OH}$  9.9900e+04  
 2.000      12500.00

$\text{CH}_2\text{OHCH}_2\text{CHO} + \text{C}_5\text{H}_7 \Rightarrow 0.2\text{CH}_2\text{O} + 0.8\text{HCO} + 0.8\text{CH}_3\text{CHO} + 0.2\text{CH}_2\text{CHO} + \text{LC}_5\text{H}_8$  9.9900e+04  
 2.000      15000.00

$\text{CH}_2\text{OHCH}_2\text{CHO} + \text{C}_7\text{H}_7 \Rightarrow 0.2\text{CH}_2\text{O} + 0.8\text{HCO} + 0.8\text{CH}_3\text{CHO} + 0.2\text{CH}_2\text{CHO} + \text{C}_7\text{H}_8$  4.9950e+04  
 2.000      16000.00

$\text{CH}_2\text{OHCH}_2\text{CHO} + \text{CH}_3\text{C}_6\text{H}_4 \Rightarrow 0.2\text{CH}_2\text{O} + 0.8\text{HCO} + 0.8\text{CH}_3\text{CHO} + 0.2\text{CH}_2\text{CHO} + \text{C}_7\text{H}_8$  1.3690e+08  
 1.000      2000.00

$\text{CH}_2\text{OHCH}_2\text{CHO} + \text{RCRESOLO} \Rightarrow 0.2\text{CH}_2\text{O} + 0.8\text{HCO} + 0.8\text{CH}_3\text{CHO} + 0.2\text{CH}_2\text{CHO} + \text{CRESOL}$   
 9.9900e+04      2.000      12800.00

$\text{CH}_2\text{OHCH}_2\text{CHO} + \text{C}_{10}\text{H}_7 \Rightarrow 0.2\text{CH}_2\text{O} + 0.8\text{HCO} + 0.8\text{CH}_3\text{CHO} + 0.2\text{CH}_2\text{CHO} + \text{C}_{10}\text{H}_8$  1.3690e+08  
 1.000      2000.00

$\text{CH}_2\text{OHCH}_2\text{CHO} + \text{INDENYL} \Rightarrow 0.2\text{CH}_2\text{O} + 0.8\text{HCO} + 0.8\text{CH}_3\text{CHO} + 0.2\text{CH}_2\text{CHO} + \text{INDENE}$  4.8100e+04  
 2.000      16000.00

$\text{CH}_2\text{OHCH}_2\text{CHO} + \text{C}_{10}\text{H}_6\text{CH}_3 \Rightarrow 0.2\text{CH}_2\text{O} + 0.8\text{HCO} + 0.8\text{CH}_3\text{CHO} + 0.2\text{CH}_2\text{CHO} + \text{C}_{10}\text{H}_7\text{CH}_3$   
 1.3690e+08      1.000      2000.00

$\text{H} + \text{CHOCH}_2\text{CHO} \Rightarrow \text{H}_2 + \text{CO} + 0.25\text{CH}_3\text{CO} + 0.75\text{CH}_2\text{CHO}$  2.4000e+07  
 2.000      2573.61

$\text{CH}_3 + \text{CHOCH}_2\text{CHO} \Rightarrow \text{CO} + \text{CH}_4 + 0.25\text{CH}_3\text{CO} + 0.75\text{CH}_2\text{CHO}$  2.4000e+05  
 2.000      3516.32

$\text{C}_2\text{H}_3 + \text{CHOCH}_2\text{CHO} \Rightarrow \text{CO} + \text{C}_2\text{H}_4 + 0.25\text{CH}_3\text{CO} + 0.75\text{CH}_2\text{CHO}$  5.4240e+05  
 2.000      2479.60

$\text{C}_2\text{H}_5 + \text{CHOCH}_2\text{CHO} \Rightarrow \text{CO} + \text{C}_2\text{H}_6 + 0.25\text{CH}_3\text{CO} + 0.75\text{CH}_2\text{CHO}$  1.6000e+05  
 2.000      5128.01

$\text{NC}_3\text{H}_7 + \text{CHOCH}_2\text{CHO} \Rightarrow \text{CO} + 0.25\text{CH}_3\text{CO} + 0.75\text{CH}_2\text{CHO} + \text{C}_3\text{H}_8$  1.0800e+05  
 2.000      5128.01

$\text{IC}_3\text{H}_7 + \text{CHOCH}_2\text{CHO} \Rightarrow \text{CO} + 0.25\text{CH}_3\text{CO} + 0.75\text{CH}_2\text{CHO} + \text{C}_3\text{H}_8$  1.0800e+05  
 2.000      8184.45

$\text{C}_3\text{H}_5\text{-S} + \text{CHOCH}_2\text{CHO} \Rightarrow \text{CO} + 0.25\text{CH}_3\text{CO} + 0.75\text{CH}_2\text{CHO} + \text{C}_3\text{H}_6$  2.1600e+05  
 2.000      3044.41

C3H5-T+CHOCH2CHO=>CO+0.25CH3CO+0.75CH2CHO+C3H6 2.000            3044.41	2.1600e+05
C3H5-A+CHOCH2CHO=>CO+0.25CH3CO+0.75CH2CHO+C3H6 2.000            10972.41	4.3120e+05
C4H5+CHOCH2CHO=>CO+0.25CH3CO+0.75CH2CHO+C4H6 2.000            3044.41	2.1600e+05
C4H71-4+CHOCH2CHO=>CO+0.25CH3CO+0.75CH2CHO+C4H8-1 2.000            5032.93	1.0800e+05
C4H71-3+CHOCH2CHO=>CO+0.25CH3CO+0.75CH2CHO+C4H8-2 2.000            11840.29	2.7200e+05
IC4H7+CHOCH2CHO=>CO+0.25CH3CO+0.75CH2CHO+IC4H8 2.000            11840.29	2.1600e+05
C4H3+CHOCH2CHO=>CO+0.25CH3CO+0.75CH2CHO+C4H4 2.000            3705.38	3.2720e+05
C6H5+CHOCH2CHO=>CO+0.25CH3CO+0.75CH2CHO+C6H6 1.000            867.85	2.9600e+08
O+CHOCH2CHO=>OH+CO+0.25CH3CO+0.75CH2CHO 2.000            1169.32	1.8800e+07
O2+CHOCH2CHO=>HO2+CO+0.25CH3CO+0.75CH2CHO 2.000            41405.89	1.3600e+07
OH+CHOCH2CHO=>H2O+CO+0.25CH3CO+0.75CH2CHO 1.000            -855.10	1.2000e+10
HO2+CHOCH2CHO=>H2O2+CO+0.25CH3CO+0.75CH2CHO 2.000            14062.89	6.4000e+06
CH3O+CHOCH2CHO=>CO+CH3OH+0.25CH3CO+0.75CH2CHO 2.000            241.70	3.4240e+05
CH2OH+CHOCH2CHO=>CO+CH3OH+0.25CH3CO+0.75CH2CHO 2.000            8472.17	2.2640e+05
HCO+CHOCH2CHO=>CO+CH2O+0.25CH3CO+0.75CH2CHO 2.000            10490.75	1.0080e+06
CH3CO+CHOCH2CHO=>CO+CH3CHO+0.25CH3CO+0.75CH2CHO 2.000            12129.83	1.0800e+06
CH2CHO+CHOCH2CHO=>CO+CH3CHO+0.25CH3CO+0.75CH2CHO 2.000            9720.89	1.8400e+05
C3H3+CHOCH2CHO=>CO+0.25CH3CO+0.75CH2CHO+C3H4-A 2.000            12129.83	2.1600e+05
HCCO+CHOCH2CHO=>CO+0.25CH3CO+0.75CH2CHO+CH2CO 2.000            3705.38	3.4240e+05

CH3O2+CHOCH2CHO=>CO+CH3O2H+0.25CH3CO+0.75CH2CHO	6.0800e+05
2.000 10779.70	
C2H5O2+CHOCH2CHO=>CO+C2H5O2H+0.25CH3CO+0.75CH2CHO	6.0800e+05
2.000 10779.70	
NC3H7O2+CHOCH2CHO=>CO+0.25CH3CO+0.75CH2CHO+C3H7OOH	6.0800e+05
2.000 10779.70	
IC3H7O2+CHOCH2CHO=>CO+0.25CH3CO+0.75CH2CHO+C3H7OOH	6.0800e+05
2.000 10779.70	
CHOCH2CHO+HCO3=>CO+0.25CH3CO+0.75CH2CHO+HCO3H	2.7200e+05
2.000 4937.89	
CH3CO3+CHOCH2CHO=>CO+0.25CH3CO+0.75CH2CHO+CH3CO3H	2.7200e+05
2.000 4937.89	
CH3COCH2+CHOCH2CHO=>CO+0.25CH3CO+0.75CH2CHO+CH3COCH3	1.8400e+05
2.000 6366.63	
CHOCH2CHO+C6H5O=>CO+0.25CH3CO+0.75CH2CHO+C6H5OH	2.1600e+05
2.000 10683.36	
CHOCH2CHO+C5H7=>CO+0.25CH3CO+0.75CH2CHO+LC5H8	2.1600e+05
2.000 13095.77	
CHOCH2CHO+C7H7=>CO+0.25CH3CO+0.75CH2CHO+C7H8	1.0800e+05
2.000 14062.89	
CHOCH2CHO+CH3C6H4=>CO+0.25CH3CO+0.75CH2CHO+C7H8	2.9600e+08
1.000 867.85	
CHOCH2CHO+RCRESOLO=>CO+0.25CH3CO+0.75CH2CHO+CRESOL	2.1600e+05
2.000 10972.41	
CHOCH2CHO+C10H7=>CO+0.25CH3CO+0.75CH2CHO+C10H8	2.9600e+08
1.000 867.85	
CHOCH2CHO+INDENYL=>CO+0.25CH3CO+0.75CH2CHO+INDENE	1.0400e+05
2.000 14062.89	
CHOCH2CHO+C10H6CH3=>CO+0.25CH3CO+0.75CH2CHO+C10H7CH3	2.9600e+08
1.000 867.85	
H+CH2OHCOCH3=>H2+CH2O+CH3CO	2.1000e+06
2.000 6349.34	
CH3+CH2OHCOCH3=>CH4+CH2O+CH3CO	2.1000e+04
2.000 7443.70	
C2H3+CH2OHCOCH3=>CH2O+C2H4+CH3CO	4.7460e+04
2.000 6239.48	
C2H5+CH2OHCOCH3=>CH2O+C2H6+CH3CO	1.4000e+04
2.000 9289.16	

NC3H7+CH2OHCOCH3=>CH2O+CH3CO+C3H8	9.4500e+03
2.000 9289.16	
IC3H7+CH2OHCOCH3=>CH2O+CH3CO+C3H8	9.4500e+03
2.000 12725.62	
C3H5-S+CH2OHCOCH3=>CH2O+CH3CO+C3H6	1.8900e+04
2.000 6897.45	
C3H5-T+CH2OHCOCH3=>CH2O+CH3CO+C3H6	1.8900e+04
2.000 6897.45	
C3H5-A+CH2OHCOCH3=>CH2O+CH3CO+C3H6	3.7730e+04
2.000 15810.16	
C4H5+CH2OHCOCH3=>CH2O+CH3CO+C4H6	1.8900e+04
2.000 6897.45	
C4H71-4+CH2OHCOCH3=>CH2O+CH3CO+C4H8-1	9.4500e+03
2.000 9181.05	
C4H71-3+CH2OHCOCH3=>CH2O+CH3CO+C4H8-2	2.3800e+04
2.000 16763.05	
IC4H7+CH2OHCOCH3=>CH2O+CH3CO+IC4H8	1.8900e+04
2.000 16763.05	
C4H3+CH2OHCOCH3=>CH2O+CH3CO+C4H4	2.8630e+04
2.000 7661.72	
C6H5+CH2OHCOCH3=>CH2O+CH3CO+C6H6	2.5900e+07
1.000 3864.72	
O+CH2OHCOCH3=>OH+CH2O+CH3CO	1.6450e+06
2.000 4691.70	
O2+CH2OHCOCH3=>HO2+CH2O+CH3CO	1.1900e+06
2.000 48272.65	
OH+CH2OHCOCH3=>H2O+CH2O+CH3CO	1.0500e+09
1.000 1540.75	
HO2+CH2OHCOCH3=>H2O2+CH2O+CH3CO	5.6000e+05
2.000 19190.53	
CH3O+CH2OHCOCH3=>CH3OH+CH2O+CH3CO	2.9960e+04
2.000 3572.50	
CH2OH+CH2OHCOCH3=>CH3OH+CH2O+CH3CO	1.9810e+04
2.000 13045.84	
HCO+CH2OHCOCH3=>2CH2O+CH3CO	8.8200e+04
2.000 15279.95	
CH3CO+CH2OHCOCH3=>CH2O+CH3CHO+CH3CO	9.4500e+04
2.000 17080.28	

CH2CHO+CH2OHCOCH3=>CH2O+CH3CHO+CH3CO	1.6100e+04
2.000 14430.30	
C3H3+CH2OHCOCH3=>CH2O+CH3CO+C3H4-A	1.8900e+04
2.000 17080.28	
HCCO+CH2OHCOCH3=>CH2O+CH3CO+CH2CO	2.9960e+04
2.000 7661.72	
CH3O2+CH2OHCOCH3=>CH3O2H+CH2O+CH3CO	5.3200e+04
2.000 15598.15	
C2H5O2+CH2OHCOCH3=>CH2O+C2H5O2H+CH3CO	5.3200e+04
2.000 15598.15	
NC3H7O2+CH2OHCOCH3=>CH2O+CH3CO+C3H7OOH	5.3200e+04
2.000 15598.15	
IC3H7O2+CH2OHCOCH3=>CH2O+CH3CO+C3H7OOH	5.3200e+04
2.000 15598.15	
HCO3+CH2OHCOCH3=>CH2O+CH3CO+HCO3H	2.3800e+04
2.000 9072.89	
CH3CO3+CH2OHCOCH3=>CH2O+CH3CO+CH3CO3H	2.3800e+04
2.000 9072.89	
CH3COCH2+CH2OHCOCH3=>CH2O+CH3CO+CH3COCH3	1.6100e+04
2.000 10690.26	
CH2OHCOCH3+C6H5O=>CH2O+CH3CO+C6H5OH	1.8900e+04
2.000 15492.11	
CH2OHCOCH3+C5H7=>CH2O+CH3CO+LC5H8	1.8900e+04
2.000 18136.38	
CH2OHCOCH3+C7H7=>CH2O+CH3CO+C7H8	9.4500e+03
2.000 19190.53	
CH2OHCOCH3+CH3C6H4=>CH2O+CH3CO+C7H8	2.5900e+07
1.000 3864.72	
CH2OHCOCH3+RCRESOLO=>CH2O+CH3CO+CRESOL	1.8900e+04
2.000 15810.16	
CH2OHCOCH3+C10H7=>CH2O+CH3CO+C10H8	2.5900e+07
1.000 3864.72	
CH2OHCOCH3+INDENYL=>CH2O+CH3CO+INDENE	9.1000e+03
2.000 19190.53	
CH2OHCOCH3+C10H6CH3=>CH2O+CH3CO+C10H7CH3	2.5900e+07
1.000 3864.72	
H+CH2OHCOCH3=>H2+0.25H+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO	9.0000e+06
2.000 6349.34	

CH3+CH2OHCOCH3=>0.25H+0.25CO2+CH4+0.75CH2OH+0.25C2H4+0.75CH2CO 9.0000e+04  
2.000 7443.70

C2H3+CH2OHCOCH3=>0.25H+0.25CO2+0.75CH2OH+1.25C2H4+0.75CH2CO 2.0340e+05  
2.000 6239.48

C2H5+CH2OHCOCH3=>0.25H+0.25CO2+0.75CH2OH+C2H6+0.25C2H4+0.75CH2CO  
6.0000e+04 2.000 9289.16

NC3H7+CH2OHCOCH3=>0.25H+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO+C3H8  
4.0500e+04 2.000 9289.16

IC3H7+CH2OHCOCH3=>0.25H+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO+C3H8  
4.0500e+04 2.000 12725.62

C3H5-S+CH2OHCOCH3=>0.25H+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO+C3H6  
8.1000e+04 2.000 6897.45

C3H5-T+CH2OHCOCH3=>0.25H+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO+C3H6  
8.1000e+04 2.000 6897.45

C3H5-A+CH2OHCOCH3=>0.25H+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO+C3H6  
1.6170e+05 2.000 15810.16

C4H5+CH2OHCOCH3=>0.25H+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO+C4H6  
8.1000e+04 2.000 6897.45

C4H71-4+CH2OHCOCH3=>0.25H+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO+C4H8-1  
4.0500e+04 2.000 9181.05

C4H71-3+CH2OHCOCH3=>0.25H+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO+C4H8-2  
1.0200e+05 2.000 16763.05

IC4H7+CH2OHCOCH3=>0.25H+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO+IC4H8  
8.1000e+04 2.000 16763.05

C4H3+CH2OHCOCH3=>0.25H+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO+C4H4  
1.2270e+05 2.000 7661.72

C6H5+CH2OHCOCH3=>0.25H+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO+C6H6  
1.1100e+08 1.000 3864.72

O+CH2OHCOCH3=>0.25H+OH+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO 7.0500e+06  
2.000 4691.70

O2+CH2OHCOCH3=>0.25H+HO2+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO 5.1000e+06  
2.000 48272.65

OH+CH2OHCOCH3=>0.25H+H2O+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO 4.5000e+09  
1.000 1540.75

HO2+CH2OHCOCH3=>0.25H+H2O2+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO  
2.4000e+06 2.000 19190.53

CH3O+CH2OHCOCH3=>0.25H+0.25CO2+CH3OH+0.75CH2OH+0.25C2H4+0.75CH2CO  
1.2840e+05 2.000 3572.50

$\text{CH}_2\text{OH}+\text{CH}_2\text{OHCOCH}_3\Rightarrow 0.25\text{H}+0.25\text{CO}_2+\text{CH}_3\text{OH}+0.75\text{CH}_2\text{OH}+0.25\text{C}_2\text{H}_4+0.75\text{CH}_2\text{CO}$   
 8.4900e+04      2.000      13045.84

$\text{HCO}+\text{CH}_2\text{OHCOCH}_3\Rightarrow 0.25\text{H}+0.25\text{CO}_2+0.75\text{CH}_2\text{OH}+\text{CH}_2\text{O}+0.25\text{C}_2\text{H}_4+0.75\text{CH}_2\text{CO}$   
 3.7800e+05      2.000      15279.95

$\text{CH}_3\text{CO}+\text{CH}_2\text{OHCOCH}_3\Rightarrow 0.25\text{H}+0.25\text{CO}_2+0.75\text{CH}_2\text{OH}+0.25\text{C}_2\text{H}_4+\text{CH}_3\text{CHO}+0.75\text{CH}_2\text{CO}$   
 4.0500e+05      2.000      17080.28

$\text{CH}_2\text{CHO}+\text{CH}_2\text{OHCOCH}_3\Rightarrow 0.25\text{H}+0.25\text{CO}_2+0.75\text{CH}_2\text{OH}+0.25\text{C}_2\text{H}_4+\text{CH}_3\text{CHO}+0.75\text{CH}_2\text{CO}$   
 6.9000e+04      2.000      14430.30

$\text{C}_3\text{H}_3+\text{CH}_2\text{OHCOCH}_3\Rightarrow 0.25\text{H}+0.25\text{CO}_2+0.75\text{CH}_2\text{OH}+0.25\text{C}_2\text{H}_4+0.75\text{CH}_2\text{CO}+\text{C}_3\text{H}_4\text{-A}$   
 8.1000e+04      2.000      17080.28

$\text{HCCO}+\text{CH}_2\text{OHCOCH}_3\Rightarrow 0.25\text{H}+0.25\text{CO}_2+0.75\text{CH}_2\text{OH}+0.25\text{C}_2\text{H}_4+1.75\text{CH}_2\text{CO}$  1.2840e+05  
 2.000      7661.72

$\text{CH}_3\text{O}_2+\text{CH}_2\text{OHCOCH}_3\Rightarrow 0.25\text{H}+0.25\text{CO}_2+\text{CH}_3\text{O}_2\text{H}+0.75\text{CH}_2\text{OH}+0.25\text{C}_2\text{H}_4+0.75\text{CH}_2\text{CO}$   
 2.2800e+05      2.000      15598.15

$\text{C}_2\text{H}_5\text{O}_2+\text{CH}_2\text{OHCOCH}_3\Rightarrow 0.25\text{H}+0.25\text{CO}_2+0.75\text{CH}_2\text{OH}+\text{C}_2\text{H}_5\text{O}_2\text{H}+0.25\text{C}_2\text{H}_4+0.75\text{CH}_2\text{CO}$   
 2.2800e+05      2.000      15598.15

$\text{NC}_3\text{H}_7\text{O}_2+\text{CH}_2\text{OHCOCH}_3\Rightarrow 0.25\text{H}+0.25\text{CO}_2+0.75\text{CH}_2\text{OH}+0.25\text{C}_2\text{H}_4+0.75\text{CH}_2\text{CO}+\text{C}_3\text{H}_7\text{OOH}$   
 2.2800e+05      2.000      15598.15

$\text{IC}_3\text{H}_7\text{O}_2+\text{CH}_2\text{OHCOCH}_3\Rightarrow 0.25\text{H}+0.25\text{CO}_2+0.75\text{CH}_2\text{OH}+0.25\text{C}_2\text{H}_4+0.75\text{CH}_2\text{CO}+\text{C}_3\text{H}_7\text{OOH}$   
 2.2800e+05      2.000      15598.15

$\text{HCO}_3+\text{CH}_2\text{OHCOCH}_3\Rightarrow 0.25\text{H}+0.25\text{CO}_2+0.75\text{CH}_2\text{OH}+0.25\text{C}_2\text{H}_4+0.75\text{CH}_2\text{CO}+\text{HCO}_3\text{H}$   
 1.0200e+05      2.000      9072.89

$\text{CH}_3\text{CO}_3+\text{CH}_2\text{OHCOCH}_3\Rightarrow 0.25\text{H}+0.25\text{CO}_2+0.75\text{CH}_2\text{OH}+0.25\text{C}_2\text{H}_4+0.75\text{CH}_2\text{CO}+\text{CH}_3\text{CO}_3\text{H}$   
 1.0200e+05      2.000      9072.89

$\text{CH}_3\text{COCH}_2+\text{CH}_2\text{OHCOCH}_3\Rightarrow 0.25\text{H}+0.25\text{CO}_2+0.75\text{CH}_2\text{OH}+0.25\text{C}_2\text{H}_4+0.75\text{CH}_2\text{CO}+\text{CH}_3\text{COCH}_3$   
 6.9000e+04      2.000      10690.26

$\text{CH}_2\text{OHCOCH}_3+\text{C}_6\text{H}_5\text{O}\Rightarrow 0.25\text{H}+0.25\text{CO}_2+0.75\text{CH}_2\text{OH}+0.25\text{C}_2\text{H}_4+0.75\text{CH}_2\text{CO}+\text{C}_6\text{H}_5\text{OH}$   
 8.1000e+04      2.000      15492.11

$\text{CH}_2\text{OHCOCH}_3+\text{C}_5\text{H}_7\Rightarrow 0.25\text{H}+0.25\text{CO}_2+0.75\text{CH}_2\text{OH}+0.25\text{C}_2\text{H}_4+0.75\text{CH}_2\text{CO}+\text{LC}_5\text{H}_8$   
 8.1000e+04      2.000      18136.38

$\text{CH}_2\text{OHCOCH}_3+\text{C}_7\text{H}_7\Rightarrow 0.25\text{H}+0.25\text{CO}_2+0.75\text{CH}_2\text{OH}+0.25\text{C}_2\text{H}_4+0.75\text{CH}_2\text{CO}+\text{C}_7\text{H}_8$   
 4.0500e+04      2.000      19190.53

$\text{CH}_2\text{OHCOCH}_3+\text{CH}_3\text{C}_6\text{H}_4\Rightarrow 0.25\text{H}+0.25\text{CO}_2+0.75\text{CH}_2\text{OH}+0.25\text{C}_2\text{H}_4+0.75\text{CH}_2\text{CO}+\text{C}_7\text{H}_8$   
 1.1100e+08      1.000      3864.72

$\text{CH}_2\text{OHCOCH}_3+\text{RCRESOLO}\Rightarrow 0.25\text{H}+0.25\text{CO}_2+0.75\text{CH}_2\text{OH}+0.25\text{C}_2\text{H}_4+0.75\text{CH}_2\text{CO}+\text{CRESOL}$   
 8.1000e+04      2.000      15810.16

$\text{CH}_2\text{OHCOCH}_3+\text{C}_{10}\text{H}_7\Rightarrow 0.25\text{H}+0.25\text{CO}_2+0.75\text{CH}_2\text{OH}+0.25\text{C}_2\text{H}_4+0.75\text{CH}_2\text{CO}+\text{C}_{10}\text{H}_8$   
 1.1100e+08      1.000      3864.72

CH2OHCOCH3+INDENYL=>0.25H+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO+INDENE  
3.9000e+04 2.000 19190.53

CH2OHCOCH3+C10H6CH3=>0.25H+0.25CO2+0.75CH2OH+0.25C2H4+0.75CH2CO+C10H7CH3  
1.1100e+08 1.000 3864.72

H+C3-OQOOH=>H2+OH+CO+C2H4O1-2 6.0000e+06  
2.000 2573.61

CH3+C3-OQOOH=>OH+CO+CH4+C2H4O1-2 6.0000e+04  
2.000 3516.32

C2H3+C3-OQOOH=>OH+CO+C2H4+C2H4O1-2 1.3560e+05  
2.000 2479.60

C2H5+C3-OQOOH=>OH+CO+C2H6+C2H4O1-2 4.0000e+04  
2.000 5128.01

NC3H7+C3-OQOOH=>OH+CO+C2H4O1-2+C3H8 2.7000e+04  
2.000 5128.01

IC3H7+C3-OQOOH=>OH+CO+C2H4O1-2+C3H8 2.7000e+04  
2.000 8184.45

C3H5-S+C3-OQOOH=>OH+CO+C2H4O1-2+C3H6 5.4000e+04  
2.000 3044.41

C3H5-T+C3-OQOOH=>OH+CO+C2H4O1-2+C3H6 5.4000e+04  
2.000 3044.41

C3H5-A+C3-OQOOH=>OH+CO+C2H4O1-2+C3H6 1.0780e+05  
2.000 10972.41

C4H5+C3-OQOOH=>OH+CO+C2H4O1-2+C4H6 5.4000e+04  
2.000 3044.41

C4H71-4+C3-OQOOH=>OH+CO+C2H4O1-2+C4H8-1 2.7000e+04  
2.000 5032.93

C4H71-3+C3-OQOOH=>OH+CO+C2H4O1-2+C4H8-2 6.8000e+04  
2.000 11840.29

IC4H7+C3-OQOOH=>OH+CO+C2H4O1-2+IC4H8 5.4000e+04  
2.000 11840.29

C4H3+C3-OQOOH=>OH+CO+C2H4O1-2+C4H4 8.1800e+04  
2.000 3705.38

C6H5+C3-OQOOH=>OH+CO+C2H4O1-2+C6H6 7.4000e+07  
1.000 867.85

O+C3-OQOOH=>2OH+CO+C2H4O1-2 4.7000e+06  
2.000 1169.32

O2+C3-OQOOH=>OH+HO2+CO+C2H4O1-2 3.4000e+06  
2.000 41405.89



H <sub>2</sub> O <sub>2</sub> +C <sub>3</sub> -O <sub>2</sub> QOOH=>OH+H <sub>2</sub> O <sub>2</sub> +CO+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub>	1.6000e+06
2.000        14062.89	
CH <sub>3</sub> O+C <sub>3</sub> -O <sub>2</sub> QOOH=>OH+CO+CH <sub>3</sub> OH+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub>	8.5600e+04
2.000        241.70	
CH <sub>2</sub> OH+C <sub>3</sub> -O <sub>2</sub> QOOH=>OH+CO+CH <sub>3</sub> OH+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub>	5.6600e+04
2.000        8472.17	
HCO+C <sub>3</sub> -O <sub>2</sub> QOOH=>OH+CO+CH <sub>2</sub> O+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub>	2.5200e+05
2.000        10490.75	
CH <sub>3</sub> CO+C <sub>3</sub> -O <sub>2</sub> QOOH=>OH+CO+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub> +CH <sub>3</sub> CHO	2.7000e+05
2.000        12129.83	
CH <sub>2</sub> CHO+C <sub>3</sub> -O <sub>2</sub> QOOH=>OH+CO+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub> +CH <sub>3</sub> CHO	4.6000e+04
2.000        9720.89	
C <sub>3</sub> H <sub>3</sub> +C <sub>3</sub> -O <sub>2</sub> QOOH=>OH+CO+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub> +C <sub>3</sub> H <sub>4</sub> -A	5.4000e+04
2.000        12129.83	
HCCO+C <sub>3</sub> -O <sub>2</sub> QOOH=>OH+CO+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub> +CH <sub>2</sub> CO	8.5600e+04
2.000        3705.38	
CH <sub>3</sub> O <sub>2</sub> +C <sub>3</sub> -O <sub>2</sub> QOOH=>OH+CO+CH <sub>3</sub> O <sub>2</sub> H+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub>	1.5200e+05
2.000        10779.70	
C <sub>2</sub> H <sub>5</sub> O <sub>2</sub> +C <sub>3</sub> -O <sub>2</sub> QOOH=>OH+CO+C <sub>2</sub> H <sub>5</sub> O <sub>2</sub> H+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub>	1.5200e+05
2.000        10779.70	
NC <sub>3</sub> H <sub>7</sub> O <sub>2</sub> +C <sub>3</sub> -O <sub>2</sub> QOOH=>OH+CO+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub> +C <sub>3</sub> H <sub>7</sub> OOH	1.5200e+05
2.000        10779.70	
IC <sub>3</sub> H <sub>7</sub> O <sub>2</sub> +C <sub>3</sub> -O <sub>2</sub> QOOH=>OH+CO+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub> +C <sub>3</sub> H <sub>7</sub> OOH	1.5200e+05
2.000        10779.70	
C <sub>3</sub> -O <sub>2</sub> QOOH+HCO <sub>3</sub> =>OH+CO+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub> +HCO <sub>3</sub> H	6.8000e+04
2.000        4937.89	
CH <sub>3</sub> CO <sub>3</sub> +C <sub>3</sub> -O <sub>2</sub> QOOH=>OH+CO+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub> +CH <sub>3</sub> CO <sub>3</sub> H	6.8000e+04
2.000        4937.89	
CH <sub>3</sub> COCH <sub>2</sub> +C <sub>3</sub> -O <sub>2</sub> QOOH=>OH+CO+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub> +CH <sub>3</sub> COCH <sub>3</sub>	4.6000e+04
2.000        6366.63	
C <sub>3</sub> -O <sub>2</sub> QOOH+C <sub>6</sub> H <sub>5</sub> O=>OH+CO+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub> +C <sub>6</sub> H <sub>5</sub> OH	5.4000e+04
2.000        10683.36	
C <sub>3</sub> -O <sub>2</sub> QOOH+C <sub>5</sub> H <sub>7</sub> =>OH+CO+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub> +LC <sub>5</sub> H <sub>8</sub>	5.4000e+04
2.000        13095.77	
C <sub>3</sub> -O <sub>2</sub> QOOH+C <sub>7</sub> H <sub>7</sub> =>OH+CO+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub> +C <sub>7</sub> H <sub>8</sub>	2.7000e+04
2.000        14062.89	
C <sub>3</sub> -O <sub>2</sub> QOOH+CH <sub>3</sub> C <sub>6</sub> H <sub>4</sub> =>OH+CO+C <sub>2</sub> H <sub>4</sub> O <sub>1</sub> - <sub>2</sub> +C <sub>7</sub> H <sub>8</sub>	7.4000e+07
1.000        867.85	

C3-OQOOH+RCRESOLO=>OH+CO+C2H4O1-2+CRESOL 2.000        10972.41	5.4000e+04
C3-OQOOH+C10H7=>OH+CO+C2H4O1-2+C10H8 1.000        867.85	7.4000e+07
C3-OQOOH+INDENYL=>OH+CO+C2H4O1-2+INDENE 2.000        14062.89	2.6000e+04
C3-OQOOH+C10H6CH3=>OH+CO+C2H4O1-2+C10H7CH3 1.000        867.85	7.4000e+07
H+C3-OQOOH=>H2+OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO 2.000        2573.61	6.0000e+06
CH3+C3-OQOOH=>OH+0.2CO+CH4+0.8CH2O+0.2CH3CHO+0.8CH2CO 2.000        3516.32	6.0000e+04
C2H3+C3-OQOOH=>OH+0.2CO+0.8CH2O+C2H4+0.2CH3CHO+0.8CH2CO 2.000        2479.60	1.3560e+05
C2H5+C3-OQOOH=>OH+0.2CO+0.8CH2O+C2H6+0.2CH3CHO+0.8CH2CO 2.000        5128.01	4.0000e+04
NC3H7+C3-OQOOH=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C3H8 2.000        5128.01	2.7000e+04
IC3H7+C3-OQOOH=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C3H8 2.000        8184.45	2.7000e+04
C3H5-S+C3-OQOOH=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C3H6 2.000        3044.41	5.4000e+04
C3H5-T+C3-OQOOH=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C3H6 2.000        3044.41	5.4000e+04
C3H5-A+C3-OQOOH=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C3H6 2.000        10972.41	1.0780e+05
C4H5+C3-OQOOH=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C4H6 2.000        3044.41	5.4000e+04
C4H71-4+C3-OQOOH=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C4H8-1 2.000        5032.93	2.7000e+04
C4H71-3+C3-OQOOH=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C4H8-2 2.000        11840.29	6.8000e+04
IC4H7+C3-OQOOH=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+IC4H8 2.000        11840.29	5.4000e+04
C4H3+C3-OQOOH=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C4H4 2.000        3705.38	8.1800e+04
C6H5+C3-OQOOH=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C6H6 1.000        867.85	7.4000e+07

O+C3-OQOOH=>2OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO	4.7000e+06
2.000 1169.32	
O2+C3-OQOOH=>OH+HO2+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO	3.4000e+06
2.000 41405.89	
OH+C3-OQOOH=>H2O+OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO	3.0000e+09
1.000 -855.10	
HO2+C3-OQOOH=>OH+H2O2+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO	1.6000e+06
2.000 14062.89	
CH3O+C3-OQOOH=>OH+0.2CO+CH3OH+0.8CH2O+0.2CH3CHO+0.8CH2CO	8.5600e+04
2.000 241.70	
CH2OH+C3-OQOOH=>OH+0.2CO+CH3OH+0.8CH2O+0.2CH3CHO+0.8CH2CO	5.6600e+04
2.000 8472.17	
HCO+C3-OQOOH=>OH+0.2CO+1.8CH2O+0.2CH3CHO+0.8CH2CO	2.5200e+05
2.000 10490.75	
CH3CO+C3-OQOOH=>OH+0.2CO+0.8CH2O+1.2CH3CHO+0.8CH2CO	2.7000e+05
2.000 12129.83	
CH2CHO+C3-OQOOH=>OH+0.2CO+0.8CH2O+1.2CH3CHO+0.8CH2CO	4.6000e+04
2.000 9720.89	
C3H3+C3-OQOOH=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C3H4-A	5.4000e+04
2.000 12129.83	
HCCO+C3-OQOOH=>OH+0.2CO+0.8CH2O+0.2CH3CHO+1.8CH2CO	8.5600e+04
2.000 3705.38	
CH3O2+C3-OQOOH=>OH+0.2CO+CH3O2H+0.8CH2O+0.2CH3CHO+0.8CH2CO	1.5200e+05
2.000 10779.70	
C2H5O2+C3-OQOOH=>OH+0.2CO+0.8CH2O+C2H5O2H+0.2CH3CHO+0.8CH2CO	1.5200e+05
2.000 10779.70	
NC3H7O2+C3-OQOOH=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C3H7OOH	1.5200e+05
2.000 10779.70	
IC3H7O2+C3-OQOOH=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C3H7OOH	1.5200e+05
2.000 10779.70	
C3-OQOOH+HCO3=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+HCO3H	6.8000e+04
2.000 4937.89	
CH3CO3+C3-OQOOH=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+CH3CO3H	6.8000e+04
2.000 4937.89	
CH3COCH2+C3-OQOOH=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+CH3COCH3	4.6000e+04
2.000 2.000 6366.63	
C3-OQOOH+C6H5O=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C6H5OH	5.4000e+04
2.000 10683.36	

C3-OQOOH+C5H7=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+LC5H8 5.4000e+04  
 2.000 13095.77

C3-OQOOH+C7H7=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C7H8 2.7000e+04  
 2.000 14062.89

C3-OQOOH+CH3C6H4=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C7H8 7.4000e+07  
 1.000 867.85

C3-OQOOH+RCRESOLO=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+CRESOL 5.4000e+04  
 2.000 10972.41

C3-OQOOH+C10H7=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C10H8 7.4000e+07  
 1.000 867.85

C3-OQOOH+INDENYL=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+INDENE 2.6000e+04  
 2.000 14062.89

C3-OQOOH+C10H6CH3=>OH+0.2CO+0.8CH2O+0.2CH3CHO+0.8CH2CO+C10H7CH3  
 7.4000e+07 1.000 867.85

H+C3-OQOOH=>H2+0.67OH+0.33HO2+0.33C2H3CHO+0.67CHOCH2CHO 9.0000e+06  
 2.000 4000.00

CH3+C3-OQOOH=>0.67OH+0.33HO2+CH4+0.33C2H3CHO+0.67CHOCH2CHO 9.0000e+04  
 2.000 5000.00

C2H3+C3-OQOOH=>0.67OH+0.33HO2+C2H4+0.33C2H3CHO+0.67CHOCH2CHO 2.0340e+05  
 2.000 3900.00

C2H5+C3-OQOOH=>0.67OH+0.33HO2+C2H6+0.33C2H3CHO+0.67CHOCH2CHO 6.0000e+04  
 2.000 6700.00

NC3H7+C3-OQOOH=>0.67OH+0.33HO2+C3H8+0.33C2H3CHO+0.67CHOCH2CHO 4.0500e+04  
 2.000 6700.00

IC3H7+C3-OQOOH=>0.67OH+0.33HO2+C3H8+0.33C2H3CHO+0.67CHOCH2CHO 4.0500e+04  
 2.000 9900.00

C3H5-S+C3-OQOOH=>0.67OH+0.33HO2+C3H6+0.33C2H3CHO+0.67CHOCH2CHO 8.1000e+04  
 2.000 4500.00

C3H5-T+C3-OQOOH=>0.67OH+0.33HO2+C3H6+0.33C2H3CHO+0.67CHOCH2CHO 8.1000e+04  
 2.000 4500.00

C3H5-A+C3-OQOOH=>0.67OH+0.33HO2+C3H6+0.33C2H3CHO+0.67CHOCH2CHO 1.6170e+05  
 2.000 12800.00

C4H5+C3-OQOOH=>0.67OH+0.33HO2+0.33C2H3CHO+C4H6+0.67CHOCH2CHO 8.1000e+04  
 2.000 4500.00

C4H71-4+C3-OQOOH=>0.67OH+0.33HO2+0.33C2H3CHO+C4H8-1+0.67CHOCH2CHO  
 4.0500e+04 2.000 6600.00

C4H71-3+C3-OQOOH=>0.67OH+0.33HO2+0.33C2H3CHO+C4H8-2+0.67CHOCH2CHO  
 1.0200e+05 2.000 13700.00

IC4H7+C3-OQOOH=>0.67OH+0.33HO2+0.33C2H3CHO+IC4H8+0.67CHOCH2CHO 8.1000e+04  
2.000 13700.00

C4H3+C3-OQOOH=>0.67OH+0.33HO2+0.33C2H3CHO+C4H4+0.67CHOCH2CHO 1.2270e+05  
2.000 5200.00

C6H5+C3-OQOOH=>0.67OH+0.33HO2+0.33C2H3CHO+C6H6+0.67CHOCH2CHO 1.1100e+08  
1.000 2000.00

O+C3-OQOOH=>1.67OH+0.33HO2+0.33C2H3CHO+0.67CHOCH2CHO 7.0500e+06  
2.000 2500.00

O2+C3-OQOOH=>0.67OH+1.33HO2+0.33C2H3CHO+0.67CHOCH2CHO 5.1000e+06  
2.000 44000.00

OH+C3-OQOOH=>H2O+0.67OH+0.33HO2+0.33C2H3CHO+0.67CHOCH2CHO 4.5000e+09  
1.000 50.00

HO2+C3-OQOOH=>0.67OH+H2O2+0.33HO2+0.33C2H3CHO+0.67CHOCH2CHO 2.4000e+06  
2.000 16000.00

CH3O+C3-OQOOH=>0.67OH+0.33HO2+CH3OH+0.33C2H3CHO+0.67CHOCH2CHO 1.2840e+05  
2.000 1500.00

CH2OH+C3-OQOOH=>0.67OH+0.33HO2+CH3OH+0.33C2H3CHO+0.67CHOCH2CHO 8.4900e+04  
2.000 10200.00

HCO+C3-OQOOH=>0.67OH+0.33HO2+CH2O+0.33C2H3CHO+0.67CHOCH2CHO 3.7800e+05  
2.000 12300.00

CH3CO+C3-OQOOH=>0.67OH+0.33HO2+CH3CHO+0.33C2H3CHO+0.67CHOCH2CHO  
4.0500e+05 2.000 14000.00

CH2CHO+C3-OQOOH=>0.67OH+0.33HO2+CH3CHO+0.33C2H3CHO+0.67CHOCH2CHO  
6.9000e+04 2.000 11500.00

C3H3+C3-OQOOH=>0.67OH+0.33HO2+C3H4-A+0.33C2H3CHO+0.67CHOCH2CHO 8.1000e+04  
2.000 14000.00

HCCO+C3-OQOOH=>0.67OH+0.33HO2+CH2CO+0.33C2H3CHO+0.67CHOCH2CHO 1.2840e+05  
2.000 5200.00

CH3O2+C3-OQOOH=>0.67OH+0.33HO2+CH3O2H+0.33C2H3CHO+0.67CHOCH2CHO  
2.2800e+05 2.000 12600.00

C2H5O2+C3-OQOOH=>0.67OH+0.33HO2+C2H5O2H+0.33C2H3CHO+0.67CHOCH2CHO  
2.2800e+05 2.000 12600.00

NC3H7O2+C3-OQOOH=>0.67OH+0.33HO2+0.33C2H3CHO+C3H7OOH+0.67CHOCH2CHO  
2.2800e+05 2.000 12600.00

IC3H7O2+C3-OQOOH=>0.67OH+0.33HO2+0.33C2H3CHO+C3H7OOH+0.67CHOCH2CHO  
2.2800e+05 2.000 12600.00

C3-OQOOH+HCO3=>0.67OH+0.33HO2+0.33C2H3CHO+0.67CHOCH2CHO+HCO3H 1.0200e+05  
2.000 6500.00

$\text{CH}_3\text{CO}_3 + \text{C}_3\text{-OQOOH} \Rightarrow 0.67\text{OH} + 0.33\text{HO}_2 + \text{CH}_3\text{CO}_3\text{H} + 0.33\text{C}_2\text{H}_3\text{CHO} + 0.67\text{CHOCH}_2\text{CHO}$   
 1.0200e+05      2.000      6500.00

$\text{CH}_3\text{COCH}_2 + \text{C}_3\text{-OQOOH} \Rightarrow 0.67\text{OH} + 0.33\text{HO}_2 + 0.33\text{C}_2\text{H}_3\text{CHO} + \text{CH}_3\text{COCH}_3 + 0.67\text{CHOCH}_2\text{CHO}$   
 6.9000e+04      2.000      8000.00

$\text{C}_3\text{-OQOOH} + \text{C}_6\text{H}_5\text{O} \Rightarrow 0.67\text{OH} + 0.33\text{HO}_2 + 0.33\text{C}_2\text{H}_3\text{CHO} + 0.67\text{CHOCH}_2\text{CHO} + \text{C}_6\text{H}_5\text{OH}$   
 8.1000e+04      2.000      12500.00

$\text{C}_3\text{-OQOOH} + \text{C}_5\text{H}_7 \Rightarrow 0.67\text{OH} + 0.33\text{HO}_2 + 0.33\text{C}_2\text{H}_3\text{CHO} + 0.67\text{CHOCH}_2\text{CHO} + \text{LC}_5\text{H}_8$  8.1000e+04  
 2.000      15000.00

$\text{C}_3\text{-OQOOH} + \text{C}_7\text{H}_7 \Rightarrow 0.67\text{OH} + 0.33\text{HO}_2 + 0.33\text{C}_2\text{H}_3\text{CHO} + 0.67\text{CHOCH}_2\text{CHO} + \text{C}_7\text{H}_8$  4.0500e+04  
 2.000      16000.00

$\text{C}_3\text{-OQOOH} + \text{CH}_3\text{C}_6\text{H}_4 \Rightarrow 0.67\text{OH} + 0.33\text{HO}_2 + 0.33\text{C}_2\text{H}_3\text{CHO} + 0.67\text{CHOCH}_2\text{CHO} + \text{C}_7\text{H}_8$   
 1.1100e+08      1.000      2000.00

$\text{C}_3\text{-OQOOH} + \text{RCRESOLO} \Rightarrow 0.67\text{OH} + 0.33\text{HO}_2 + 0.33\text{C}_2\text{H}_3\text{CHO} + 0.67\text{CHOCH}_2\text{CHO} + \text{CRESOL}$   
 8.1000e+04      2.000      12800.00

$\text{C}_3\text{-OQOOH} + \text{C}_{10}\text{H}_7 \Rightarrow 0.67\text{OH} + 0.33\text{HO}_2 + 0.33\text{C}_2\text{H}_3\text{CHO} + \text{C}_{10}\text{H}_8 + 0.67\text{CHOCH}_2\text{CHO}$  1.1100e+08  
 1.000      2000.00

$\text{C}_3\text{-OQOOH} + \text{INDENYL} \Rightarrow 0.67\text{OH} + 0.33\text{HO}_2 + 0.33\text{C}_2\text{H}_3\text{CHO} + 0.67\text{CHOCH}_2\text{CHO} + \text{INDENE}$   
 3.9000e+04      2.000      16000.00

$\text{C}_3\text{-OQOOH} + \text{C}_{10}\text{H}_6\text{CH}_3 \Rightarrow 0.67\text{OH} + 0.33\text{HO}_2 + 0.33\text{C}_2\text{H}_3\text{CHO} + 0.67\text{CHOCH}_2\text{CHO} + \text{C}_{10}\text{H}_7\text{CH}_3$   
 1.1100e+08      1.000      2000.00

$\text{HO}_2 + \text{IC}_3\text{H}_5\text{CHO} \Rightarrow \text{CO} + \text{NC}_3\text{-QOOH}$  8.0000e+12  
 0.000      15000.00

$\text{HO}_2 + \text{LC}_5\text{H}_8 \Rightarrow \text{OH} + 0.25\text{CO} + 0.25\text{C}_4\text{H}_2 + 0.75\text{NC}_5\text{H}_{10}\text{-O}$  8.0000e+12  
 0.000      15000.00

$\text{O}_2 + \text{PC}_4\text{H}_9 \Rightarrow \text{NC}_4\text{H}_9\text{-OO}$  1.0000e+12  
 0.000      0.00

$\text{O}_2 + \text{SC}_4\text{H}_9 \Rightarrow \text{NC}_4\text{H}_9\text{-OO}$  1.0000e+12  
 0.000      0.00

$\text{NC}_4\text{H}_9\text{-OO} \Rightarrow \text{O}_2 + 0.25\text{PC}_4\text{H}_9 + 0.75\text{SC}_4\text{H}_9$  3.0000e+13  
 0.000      29000.00

$\text{NC}_4\text{H}_9\text{-OO} \Rightarrow \text{NC}_4\text{-QOOH}$  2.0000e+11  
 0.000      20500.00

$\text{NC}_4\text{-QOOH} \Rightarrow \text{NC}_4\text{H}_9\text{-OO}$  2.5000e+10  
 0.000      13500.00

$\text{HO}_2 + \text{C}_4\text{H}_8\text{-1} \Rightarrow 0.1\text{OH} + 0.025\text{C}_2\text{H}_4 + 0.05\text{CH}_3\text{COCH}_3 + 0.9\text{NC}_4\text{-QOOH} + 0.05\text{C}_4\text{H}_8\text{O}$  7.0000e+11  
 0.000      15000.00

$\text{HO}_2 + \text{C}_4\text{H}_8\text{-2} \Rightarrow 0.1\text{OH} + 0.025\text{C}_2\text{H}_4 + 0.05\text{CH}_3\text{COCH}_3 + 0.9\text{NC}_4\text{-QOOH} + 0.05\text{C}_4\text{H}_8\text{O}$  7.0000e+11  
 0.000      15000.00

NC4-QOOH=>HO2+0.5C4H8-1+0.5C4H8-2 0.000 23400.00	2.0000e+13
NC4-QOOH=>OH+C4H8O 0.000 17000.00	8.0000e+10
NC4-QOOH=>OH+0.33CH2O+0.65C2H4+0.65CH3CHO+0.33C3H6+0.02C3H7CHO 0.000 24000.00	4.5000e+13
O2+NC4-QOOH=>NC4-OOQOOH 0.000 0.00	1.0000e+12
NC4-OOQOOH=>O2+NC4-QOOH 0.000 29500.00	1.0000e+14
NC4-OOQOOH=>OH+NC4-OQOOH 0.000 23000.00	3.0000e+11
NC4-OQOOH=>OH+0.2CO+CH2O+0.2C2H5+0.8CH3COCH2 0.000 44000.00	9.0000e+14
NC4-OQOOH=>OH+CH3CHO+0.3CH3CO+0.7CH2CHO 0.000 44000.00	1.6000e+15
NC4-OQOOH=>OH+HCO+C2H5CHO 0.000 44000.00	2.2000e+14
NC4-OQOOH=>CH2O+CH2OHCOCH3 0.000 28500.00	1.0000e+08
NC4-OQOOH=>HCOOH+CH3COCH3 1.130 26100.00	1.7000e+05
NC4-OQOOH=>CH3CHO+CH3CO2H 0.939 28700.00	1.4000e+06
HO2+NC4H9-OO=>O2+C4H9OOH 0.000 -1200.00	1.0000e+11
CH3O2+NC4H9-OO=>O2+CH3O+0.5CH2O+0.5C2H5+0.5CH3CHO+0.5NC3H7 0.000 -1200.00	1.0000e+11
CH3O2+NC4H9-OO=>O2+CH2O+N1C4H9OH 0.000 -1200.00	5.0000e+10
CH3O2+NC4H9-OO=>O2+CH3OH+MEK 0.000 -1800.00	1.5000e+11
2NC4H9-OO=>O2+0.4CH2O+1.6C2H5+1.6CH3CHO+0.4NC3H7 0.000 -1200.00	1.0000e+11
2NC4H9-OO=>O2+N1C4H9OH+MEK 0.000 -1200.00	5.0000e+10
HO2+NC4-OOQOOH=>O2+2OH+0.5CH2O+CH3CHO+0.5C2H5CHO 0.000 -1200.00	1.0000e+11

CH3O2+NC4-OOQOOH=>O2+OH+CH3O+0.5CH2O+CH3CHO+0.5C2H5CHO	1.0000e+11
0.000 -1200.00	
C4H9OOH=>OH+C2H5+CH3CHO	5.0000e+14
0.000 44500.00	
C4H9OOH=>OH+0.34CH3+0.66CH2O+0.66NC3H7+0.34C2H5CHO	5.0000e+14
0.000 44500.00	
CO+NC4H9-OO=>CO2+0.33CH2O+0.67C2H5+0.67CH3CHO+0.33NC3H7	1.0000e+14
0.000 22500.00	
O2+IC4H9=>IC4H9P-OO	1.5000e+12
0.000 0.00	
O2+TC4H9=>IC4H9T-OO	1.5000e+12
0.000 0.00	
IC4H9P-OO=>O2+IC4H9	3.0000e+13
0.000 30000.00	
IC4H9T-OO=>O2+TC4H9	3.0000e+13
0.000 30000.00	
IC4H9P-OO=>IC4P-QOOH	6.0000e+11
0.000 22500.00	
IC4P-QOOH=>IC4H9P-OO	5.0000e+10
0.000 15000.00	
IC4H9T-OO=>IC4T-QOOH	6.0000e+12
0.000 28600.00	
IC4T-QOOH=>IC4H9T-OO	3.0000e+11
0.000 18100.00	
O2+IC4H9P-OO=>HO2+CH2O+CH3COCH3	3.0000e+12
0.000 14500.00	
O2+IC4H9T-OO=>HO2+CH2O+CH3COCH3	1.0000e+13
0.000 14500.00	
HO2+IC4H8=>0.4IC4T-QOOH+0.6IC4P-QOOH	6.0000e+11
0.000 15000.00	
IC4P-QOOH=>HO2+IC4H8	2.0000e+13
0.000 23000.00	
IC4P-QOOH=>OH+C4H8O	1.0000e+11
0.000 16000.00	
IC4P-QOOH=>OH+CH2O+C3H6	5.0000e+13
0.000 24000.00	
O2+IC4P-QOOH=>IC4P-OOQOOH	1.5000e+12
0.000 0.00	



IC4P-OOQOOH=>O2+IC4P-QOOH 0.000 30000.00	3.0000e+13
IC4T-QOOH=>HO2+IC4H8 0.000 23000.00	3.0000e+13
IC4T-QOOH=>OH+C4H8O 0.000 17000.00	2.0000e+11
O2+IC4T-QOOH=>IC4T-OOQOOH 0.000 0.00	1.5000e+12
IC4T-OOQOOH=>O2+IC4T-QOOH 0.000 30000.00	3.0000e+13
IC4P-OOQOOH=>OH+IC4-OQOOH 0.000 21500.00	3.0000e+11
IC4-OQOOH=>OH+0.5CO+0.5CH2O+0.5HCO+0.5C2H5+0.5CH3COCH3 0.000 42000.00	8.0000e+14
IC4T-OOQOOH=>HO2+CH2O+CH3COCH3 0.000 20000.00	1.0000e+11
O2+NC5H11=>NC5H12OO 0.000 0.00	2.0000e+12
NC5H12OO=>O2+NC5H11 0.000 30000.00	3.0000e+13
NC5H12OO=>NC5-QOOH 0.000 24100.00	3.0000e+12
NC5-QOOH=>NC5H12OO 0.000 16100.00	9.0000e+10
HO2+NC5H10=>NC5-QOOH 0.000 13000.00	1.0000e+12
NC5-QOOH=>HO2+NC5H10 0.000 23500.00	2.0000e+13
NC5-QOOH=>OH+NC5H10-O 0.000 15000.00	9.0000e+10
NC5-QOOH=>OH+CH3CHO+C3H6 0.000 24000.00	3.0000e+13
NC5-QOOH=>OH+0.5CH2O+0.5C2H4+0.5C2H5CHO+0.5C4H8-1 0.000 24000.00	2.0000e+13
O2+NC5-QOOH=>NC5-OOQOOH 0.000 0.00	2.0000e+12
NC5-OOQOOH=>O2+NC5-QOOH 0.000 29500.00	1.0000e+14

NC5-OQOOH=>OH+NC5-OQOOH	9.0000e+11
0.000 24000.00	
NC5-OQOOH=>OH+CH2CHO+C2H5CHO	5.4000e+14
0.000 43000.00	
NC5-OQOOH=>OH+CO+C2H5+CH3CHO	1.1200e+15
0.000 43000.00	
NC5-OQOOH=>OH+CH2O+0.5C2H4+CH3COCH2	3.4000e+14
0.000 43000.00	
NC5-OQOOH=>C2H5CHO+CH3CO2H	5.1000e+05
1.130 26100.00	
NC5-OQOOH=>CH3COCH3+CH3CO2H	1.0000e+05
1.130 26100.00	
NC5-OQOOH=>CH3CHO+CH2OHCH2CHO	5.1000e+05
1.130 26100.00	
HO2+NC5H12OO=>O2+NC5H11OOH	1.0000e+11
0.000 -1200.00	
CH3O2+NC5H12OO=>O2+CH3CHO+N1C4H9OH	5.0000e+10
0.000 -1200.00	
CH3O2+NC5H12OO=>O2+C2H5OH+MEK	5.0000e+10
0.000 -1200.00	
CH3O2+NC5H12OO=>O2+CH3O+0.5CH2O+0.5CH3CHO+0.5NC3H7+0.5PC4H9	1.0000e+11
0.000 -1200.00	
2NC5H12OO=>O2+0.4CH2O+1.6CH3CHO+1.6NC3H7+0.4PC4H9	1.0000e+11
0.000 -1200.00	
2NC5H12OO=>O2+C4H9CHO+C5H11OH	5.0000e+10
0.000 -1200.00	
HO2+NC5-OQOOH=>O2+2OH+0.5CH2O+0.5CH3CHO+0.5C2H5CHO+0.5C3H7CHO	1.0000e+11
0.000 -1200.00	
CH3O2+NC5-OQOOH=>O2+OH+CH3O+0.5CH2O+0.5CH3CHO+0.5C2H5CHO+0.5C3H7CHO	1.0000e+11
0.000 0.000 -1200.00	
NC5H11OOH=>OH+0.5CH2O+0.5C2H5+0.5C2H5CHO+0.5PC4H9	2.0000e+14
0.000 44000.00	
NC5H11OOH=>OH+CH3CHO+NC3H7	2.0000e+14
0.000 44000.00	
O2+NC5H9-3=>C5EN-OO	1.0000e+12
0.000 0.00	
C5EN-OO=>O2+NC5H9-3	5.0000e+13
0.000 30000.00	

C5EN-OO=>C5EN-QOOH 0.000 20000.00	2.5000e+10
C5EN-QOOH=>C5EN-OO 0.000 12000.00	2.0000e+10
O2+C5EN-QOOH=>C5EN-OOQOOH-35 0.000 0.00	1.0000e+12
C5EN-OOQOOH-35=>O2+C5EN-QOOH 0.000 30000.00	5.0000e+13
C5EN-OOQOOH-35=>OH+C5EN-OQOOH-35 0.000 16000.00	2.5000e+10
C5EN-OQOOH-35=>OH+CH2O+C2H3+CH2CO 0.000 42000.00	5.0000e+14
C5EN-OQOOH-35=>OH+CH2CHO+C2H3CHO 0.000 42000.00	5.0000e+14
C5EN-QOOH=>OH+C2H4+C2H3CHO 0.000 16000.00	5.0000e+11
C5EN-QOOH=>HO2+0.8CYC5H8+0.2LC5H8 0.000 18000.00	2.0000e+12
C5EN-QOOH=>OH+C5H8O 0.000 17000.00	2.5000e+11
O2+NEOC5H11=>NEOC5H11-OO 0.000 0.00	1.5000e+12
NEOC5H11-OO=>O2+NEOC5H11 0.000 31000.00	3.0000e+13
NEOC5H11-OO=>NEOC5-QOOH 0.000 22800.00	2.0000e+12
NEOC5-QOOH=>NEOC5H11-OO 0.000 12500.00	3.0000e+10
NEOC5-QOOH=>OH+NEOC5H10-O 0.000 15000.00	1.6000e+11
NEOC5-QOOH=>OH+CH2O+IC4H8 0.000 24000.00	3.0000e+13
O2+NEOC5-QOOH=>NEOC5-OOQOOH 0.000 0.00	1.5000e+12
NEOC5-OOQOOH=>O2+NEOC5-QOOH 0.000 31000.00	3.0000e+13
NEOC5-OOQOOH=>OH+2CH2O+CH3COCH3 0.000 23500.00	5.0000e+11

NEOC5-OQOOH=>OH+NEOC5-OQOOH	6.5000e+10
0.000 20500.00	
NEOC5-OQOOH=>H+OH+CH2O+IC3H5CHO	4.0000e+14
0.000 43300.00	
NEOC5-OQOOH=>H+OH+CO+CH3COCH3+0.25IC4H8	2.0000e+14
0.000 42300.00	
NEOC5-OQOOH=>2OH+CO+IC4H8	8.0000e+13
0.000 41000.00	
OH+IC4H7=>0.5C4H8O+0.5IC3H7CHO	2.0000e+12
0.000 0.00	
O+C4H8-2=>C4H8O	1.0000e+12
0.000 5000.00	
O+C4H8-1=>C4H8O	1.0000e+12
0.000 5000.00	
O+IC4H8=>C4H8O	1.0000e+12
0.000 5000.00	
H+NC4-OQOOH=>H2+0.8OH+0.2HO2+0.8CH2O+0.8C2H3CHO+0.2C3H5CHO	7.5000e+06
2.000 4000.00	
CH3+NC4-OQOOH=>0.8OH+0.2HO2+CH4+0.8CH2O+0.8C2H3CHO+0.2C3H5CHO	7.5000e+04
2.000 5000.00	
C2H3+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+C2H4+0.8C2H3CHO+0.2C3H5CHO	
1.6950e+05 2.000 3900.00	
C2H5+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+C2H6+0.8C2H3CHO+0.2C3H5CHO	
5.0000e+04 2.000 6700.00	
NC3H7+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+C3H8+0.8C2H3CHO+0.2C3H5CHO	
3.3750e+04 2.000 6700.00	
IC3H7+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+C3H8+0.8C2H3CHO+0.2C3H5CHO	
3.3750e+04 2.000 9900.00	
C3H5-S+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+C3H6+0.8C2H3CHO+0.2C3H5CHO	
6.7500e+04 2.000 4500.00	
C3H5-T+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+C3H6+0.8C2H3CHO+0.2C3H5CHO	
6.7500e+04 2.000 4500.00	
C3H5-A+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+C3H6+0.8C2H3CHO+0.2C3H5CHO	
1.3475e+05 2.000 12800.00	
C4H5+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+0.8C2H3CHO+C4H6+0.2C3H5CHO	
6.7500e+04 2.000 4500.00	
C4H71-4+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+0.8C2H3CHO+C4H8-1+0.2C3H5CHO	
3.3750e+04 2.000 6600.00	

C4H71-3+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+0.8C2H3CHO+C4H8-2+0.2C3H5CHO  
8.5000e+04 2.000 13700.00

IC4H7+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+0.8C2H3CHO+IC4H8+0.2C3H5CHO  
6.7500e+04 2.000 13700.00

C4H3+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+0.8C2H3CHO+C4H4+0.2C3H5CHO  
1.0225e+05 2.000 5200.00

C6H5+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+0.8C2H3CHO+C6H6+0.2C3H5CHO  
9.2500e+07 1.000 2000.00

O+NC4-OQOOH=>1.8OH+0.2HO2+0.8CH2O+0.8C2H3CHO+0.2C3H5CHO 5.8750e+06  
2.000 2500.00

O2+NC4-OQOOH=>0.8OH+1.2HO2+0.8CH2O+0.8C2H3CHO+0.2C3H5CHO 4.2500e+06  
2.000 44000.00

OH+NC4-OQOOH=>H2O+0.8OH+0.2HO2+0.8CH2O+0.8C2H3CHO+0.2C3H5CHO 3.7500e+09  
1.000 50.00

HO2+NC4-OQOOH=>0.8OH+H2O2+0.2HO2+0.8CH2O+0.8C2H3CHO+0.2C3H5CHO 2.0000e+06  
2.000 16000.00

CH3O+NC4-OQOOH=>0.8OH+0.2HO2+CH3OH+0.8CH2O+0.8C2H3CHO+0.2C3H5CHO  
1.0700e+05 2.000 1500.00

CH2OH+NC4-OQOOH=>0.8OH+0.2HO2+CH3OH+0.8CH2O+0.8C2H3CHO+0.2C3H5CHO  
7.0750e+04 2.000 10200.00

HCO+NC4-OQOOH=>0.8OH+0.2HO2+1.8CH2O+0.8C2H3CHO+0.2C3H5CHO 3.1500e+05  
2.000 12300.00

CH3CO+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+CH3CHO+0.8C2H3CHO+0.2C3H5CHO  
3.3750e+05 2.000 14000.00

CH2CHO+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+CH3CHO+0.8C2H3CHO+0.2C3H5CHO  
5.7500e+04 2.000 11500.00

C3H3+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+C3H4-A+0.8C2H3CHO+0.2C3H5CHO  
6.7500e+04 2.000 14000.00

HCCO+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+CH2CO+0.8C2H3CHO+0.2C3H5CHO  
1.0700e+05 2.000 5200.00

CH3O2+NC4-OQOOH=>0.8OH+0.2HO2+CH3O2H+0.8CH2O+0.8C2H3CHO+0.2C3H5CHO  
1.9000e+05 2.000 12600.00

C2H5O2+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+C2H5O2H+0.8C2H3CHO+0.2C3H5CHO  
1.9000e+05 2.000 12600.00

NC3H7O2+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+0.8C2H3CHO+C3H7OOH+0.2C3H5CHO  
1.9000e+05 2.000 12600.00

IC3H7O2+NC4-OQOOH=>0.8OH+0.2HO2+0.8CH2O+0.8C2H3CHO+C3H7OOH+0.2C3H5CHO  
1.9000e+05 2.000 12600.00

$\text{HCO}_3 + \text{NC}_4 - \text{OQOOH} \Rightarrow 0.8\text{OH} + 0.2\text{HO}_2 + 0.8\text{CH}_2\text{O} + 0.8\text{C}_2\text{H}_3\text{CHO} + \text{HCO}_3\text{H} + 0.2\text{C}_3\text{H}_5\text{CHO}$   
 8.5000e+04      2.000      6500.00

$\text{CH}_3\text{CO}_3 + \text{NC}_4 - \text{OQOOH} \Rightarrow 0.8\text{OH} + 0.2\text{HO}_2 + 0.8\text{CH}_2\text{O} + \text{CH}_3\text{CO}_3\text{H} + 0.8\text{C}_2\text{H}_3\text{CHO} + 0.2\text{C}_3\text{H}_5\text{CHO}$   
 8.5000e+04      2.000      6500.00

$\text{CH}_3\text{COCH}_2 + \text{NC}_4 - \text{OQOOH} \Rightarrow 0.8\text{OH} + 0.2\text{HO}_2 + 0.8\text{CH}_2\text{O} + 0.8\text{C}_2\text{H}_3\text{CHO} + \text{CH}_3\text{COCH}_3 + 0.2\text{C}_3\text{H}_5\text{CHO}$   
 5.7500e+04      2.000      8000.00

$\text{NC}_4 - \text{OQOOH} + \text{C}_6\text{H}_5\text{O} \Rightarrow 0.8\text{OH} + 0.2\text{HO}_2 + 0.8\text{CH}_2\text{O} + 0.8\text{C}_2\text{H}_3\text{CHO} + 0.2\text{C}_3\text{H}_5\text{CHO} + \text{C}_6\text{H}_5\text{OH}$   
 6.7500e+04      2.000      12500.00

$\text{NC}_4 - \text{OQOOH} + \text{C}_5\text{H}_7 \Rightarrow 0.8\text{OH} + 0.2\text{HO}_2 + 0.8\text{CH}_2\text{O} + 0.8\text{C}_2\text{H}_3\text{CHO} + 0.2\text{C}_3\text{H}_5\text{CHO} + \text{LC}_5\text{H}_8$   
 6.7500e+04      2.000      15000.00

$\text{NC}_4 - \text{OQOOH} + \text{C}_7\text{H}_7 \Rightarrow 0.8\text{OH} + 0.2\text{HO}_2 + 0.8\text{CH}_2\text{O} + 0.8\text{C}_2\text{H}_3\text{CHO} + 0.2\text{C}_3\text{H}_5\text{CHO} + \text{C}_7\text{H}_8$   
 3.3750e+04      2.000      16000.00

$\text{NC}_4 - \text{OQOOH} + \text{CH}_3\text{C}_6\text{H}_4 \Rightarrow 0.8\text{OH} + 0.2\text{HO}_2 + 0.8\text{CH}_2\text{O} + 0.8\text{C}_2\text{H}_3\text{CHO} + 0.2\text{C}_3\text{H}_5\text{CHO} + \text{C}_7\text{H}_8$   
 9.2500e+07      1.000      2000.00

$\text{NC}_4 - \text{OQOOH} + \text{RCRESOLO} \Rightarrow 0.8\text{OH} + 0.2\text{HO}_2 + 0.8\text{CH}_2\text{O} + 0.8\text{C}_2\text{H}_3\text{CHO} + 0.2\text{C}_3\text{H}_5\text{CHO} + \text{CRESOL}$   
 6.7500e+04      2.000      12800.00

$\text{NC}_4 - \text{OQOOH} + \text{C}_{10}\text{H}_7 \Rightarrow 0.8\text{OH} + 0.2\text{HO}_2 + 0.8\text{CH}_2\text{O} + 0.8\text{C}_2\text{H}_3\text{CHO} + \text{C}_{10}\text{H}_8 + 0.2\text{C}_3\text{H}_5\text{CHO}$   
 9.2500e+07      1.000      2000.00

$\text{NC}_4 - \text{OQOOH} + \text{INDENYL} \Rightarrow 0.8\text{OH} + 0.2\text{HO}_2 + 0.8\text{CH}_2\text{O} + 0.8\text{C}_2\text{H}_3\text{CHO} + 0.2\text{C}_3\text{H}_5\text{CHO} + \text{INDENE}$   
 3.2500e+04      2.000      16000.00

$\text{NC}_4 - \text{OQOOH} + \text{C}_{10}\text{H}_6\text{CH}_3 \Rightarrow 0.8\text{OH} + 0.2\text{HO}_2 + 0.8\text{CH}_2\text{O} + 0.8\text{C}_2\text{H}_3\text{CHO} + 0.2\text{C}_3\text{H}_5\text{CHO} + \text{C}_{10}\text{H}_7\text{CH}_3$   
 9.2500e+07      1.000      2000.00

$\text{H} + \text{NC}_4 - \text{OQOOH} \Rightarrow \text{H}_2 + \text{OH} + \text{CH}_3\text{CHO} + \text{CH}_2\text{CO}$  1.2000e+07  
 2.000      2573.61

$\text{CH}_3 + \text{NC}_4 - \text{OQOOH} \Rightarrow \text{OH} + \text{CH}_4 + \text{CH}_3\text{CHO} + \text{CH}_2\text{CO}$  1.2000e+05  
 2.000      3516.32

$\text{C}_2\text{H}_3 + \text{NC}_4 - \text{OQOOH} \Rightarrow \text{OH} + \text{C}_2\text{H}_4 + \text{CH}_3\text{CHO} + \text{CH}_2\text{CO}$  2.7120e+05  
 2.000      2479.60

$\text{C}_2\text{H}_5 + \text{NC}_4 - \text{OQOOH} \Rightarrow \text{OH} + \text{C}_2\text{H}_6 + \text{CH}_3\text{CHO} + \text{CH}_2\text{CO}$  8.0000e+04  
 2.000      5128.01

$\text{NC}_3\text{H}_7 + \text{NC}_4 - \text{OQOOH} \Rightarrow \text{OH} + \text{CH}_3\text{CHO} + \text{CH}_2\text{CO} + \text{C}_3\text{H}_8$  5.4000e+04  
 2.000      5128.01

$\text{IC}_3\text{H}_7 + \text{NC}_4 - \text{OQOOH} \Rightarrow \text{OH} + \text{CH}_3\text{CHO} + \text{CH}_2\text{CO} + \text{C}_3\text{H}_8$  5.4000e+04  
 2.000      8184.45

$\text{C}_3\text{H}_5 - \text{S} + \text{NC}_4 - \text{OQOOH} \Rightarrow \text{OH} + \text{CH}_3\text{CHO} + \text{CH}_2\text{CO} + \text{C}_3\text{H}_6$  1.0800e+05  
 2.000      3044.41

$\text{C}_3\text{H}_5 - \text{T} + \text{NC}_4 - \text{OQOOH} \Rightarrow \text{OH} + \text{CH}_3\text{CHO} + \text{CH}_2\text{CO} + \text{C}_3\text{H}_6$  1.0800e+05  
 2.000      3044.41

C3H5-A+NC4-OQOOH=>OH+CH3CHO+CH2CO+C3H6 2.000 10972.41	2.1560e+05
C4H5+NC4-OQOOH=>OH+CH3CHO+CH2CO+C4H6 2.000 3044.41	1.0800e+05
C4H71-4+NC4-OQOOH=>OH+CH3CHO+CH2CO+C4H8-1 2.000 5032.93	5.4000e+04
C4H71-3+NC4-OQOOH=>OH+CH3CHO+CH2CO+C4H8-2 2.000 11840.29	1.3600e+05
IC4H7+NC4-OQOOH=>OH+CH3CHO+CH2CO+IC4H8 2.000 11840.29	1.0800e+05
C4H3+NC4-OQOOH=>OH+CH3CHO+CH2CO+C4H4 2.000 3705.38	1.6360e+05
C6H5+NC4-OQOOH=>OH+CH3CHO+CH2CO+C6H6 1.000 867.85	1.4800e+08
O+NC4-OQOOH=>2OH+CH3CHO+CH2CO 2.000 1169.32	9.4000e+06
O2+NC4-OQOOH=>OH+HO2+CH3CHO+CH2CO 2.000 41405.89	6.8000e+06
OH+NC4-OQOOH=>H2O+OH+CH3CHO+CH2CO 1.000 -855.10	6.0000e+09
HO2+NC4-OQOOH=>OH+H2O2+CH3CHO+CH2CO 2.000 14062.89	3.2000e+06
CH3O+NC4-OQOOH=>OH+CH3OH+CH3CHO+CH2CO 2.000 241.70	1.7120e+05
CH2OH+NC4-OQOOH=>OH+CH3OH+CH3CHO+CH2CO 2.000 8472.17	1.1320e+05
HCO+NC4-OQOOH=>OH+CH2O+CH3CHO+CH2CO 2.000 10490.75	5.0400e+05
CH3CO+NC4-OQOOH=>OH+2CH3CHO+CH2CO 2.000 12129.83	5.4000e+05
CH2CHO+NC4-OQOOH=>OH+2CH3CHO+CH2CO 2.000 9720.89	9.2000e+04
C3H3+NC4-OQOOH=>OH+CH3CHO+CH2CO+C3H4-A 2.000 12129.83	1.0800e+05
HCCO+NC4-OQOOH=>OH+CH3CHO+2CH2CO 2.000 3705.38	1.7120e+05
CH3O2+NC4-OQOOH=>OH+CH3O2H+CH3CHO+CH2CO 2.000 10779.70	3.0400e+05

C2H5O2+NC4-OQOOH=>OH+C2H5O2H+CH3CHO+CH2CO	3.0400e+05
2.000 10779.70	
NC3H7O2+NC4-OQOOH=>OH+CH3CHO+CH2CO+C3H7OOH	3.0400e+05
2.000 10779.70	
IC3H7O2+NC4-OQOOH=>OH+CH3CHO+CH2CO+C3H7OOH	3.0400e+05
2.000 10779.70	
HCO3+NC4-OQOOH=>OH+CH3CHO+CH2CO+HCO3H	1.3600e+05
2.000 4937.89	
CH3CO3+NC4-OQOOH=>OH+CH3CHO+CH2CO+CH3CO3H	1.3600e+05
2.000 4937.89	
CH3COCH2+NC4-OQOOH=>OH+CH3CHO+CH2CO+CH3COCH3	9.2000e+04
2.000 6366.63	
NC4-OQOOH+C6H5O=>OH+CH3CHO+CH2CO+C6H5OH	1.0800e+05
2.000 10683.36	
NC4-OQOOH+C5H7=>OH+CH3CHO+CH2CO+LC5H8	1.0800e+05
2.000 13095.77	
NC4-OQOOH+C7H7=>OH+CH3CHO+CH2CO+C7H8	5.4000e+04
2.000 14062.89	
NC4-OQOOH+CH3C6H4=>OH+CH3CHO+CH2CO+C7H8	1.4800e+08
1.000 867.85	
NC4-OQOOH+RCRESOLO=>OH+CH3CHO+CH2CO+CRESOL	1.0800e+05
2.000 10972.41	
NC4-OQOOH+C10H7=>OH+CH3CHO+CH2CO+C10H8	1.4800e+08
1.000 867.85	
NC4-OQOOH+INDENYL=>OH+CH3CHO+CH2CO+INDENE	5.2000e+04
2.000 14062.89	
NC4-OQOOH+C10H6CH3=>OH+CH3CHO+CH2CO+C10H7CH3	1.4800e+08
1.000 867.85	
H+NC4-OQOOH=>H2+0.5OH+0.5CO+0.5HCO+0.5C2H5OH+0.5C4H6O2	6.0000e+06
2.000 4000.00	
CH3+NC4-OQOOH=>0.5OH+0.5CO+CH4+0.5HCO+0.5C2H5OH+0.5C4H6O2	6.0000e+04
2.000 5000.00	
C2H3+NC4-OQOOH=>0.5OH+0.5CO+0.5HCO+C2H4+0.5C2H5OH+0.5C4H6O2	1.3560e+05
2.000 3900.00	
C2H5+NC4-OQOOH=>0.5OH+0.5CO+0.5HCO+C2H6+0.5C2H5OH+0.5C4H6O2	4.0000e+04
2.000 6700.00	
NC3H7+NC4-OQOOH=>0.5OH+0.5CO+0.5HCO+0.5C2H5OH+C3H8+0.5C4H6O2	2.7000e+04
2.000 6700.00	



$\text{IC3H7} + \text{NC4-OQOOH} \Rightarrow 0.5\text{OH} + 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C2H5OH} + \text{C3H8} + 0.5\text{C4H6O2}$  2.7000e+04  
 2.000 9900.00

$\text{C3H5-S} + \text{NC4-OQOOH} \Rightarrow 0.5\text{OH} + 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C2H5OH} + \text{C3H6} + 0.5\text{C4H6O2}$  5.4000e+04  
 2.000 4500.00

$\text{C3H5-T} + \text{NC4-OQOOH} \Rightarrow 0.5\text{OH} + 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C2H5OH} + \text{C3H6} + 0.5\text{C4H6O2}$  5.4000e+04  
 2.000 4500.00

$\text{C3H5-A} + \text{NC4-OQOOH} \Rightarrow 0.5\text{OH} + 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C2H5OH} + \text{C3H6} + 0.5\text{C4H6O2}$  1.0780e+05  
 2.000 12800.00

$\text{C4H5} + \text{NC4-OQOOH} \Rightarrow 0.5\text{OH} + 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C2H5OH} + \text{C4H6} + 0.5\text{C4H6O2}$  5.4000e+04  
 2.000 4500.00

$\text{C4H71-4} + \text{NC4-OQOOH} \Rightarrow 0.5\text{OH} + 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C2H5OH} + \text{C4H8-1} + 0.5\text{C4H6O2}$   
 2.7000e+04 2.000 6600.00

$\text{C4H71-3} + \text{NC4-OQOOH} \Rightarrow 0.5\text{OH} + 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C2H5OH} + \text{C4H8-2} + 0.5\text{C4H6O2}$   
 6.8000e+04 2.000 13700.00

$\text{IC4H7} + \text{NC4-OQOOH} \Rightarrow 0.5\text{OH} + 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C2H5OH} + \text{IC4H8} + 0.5\text{C4H6O2}$  5.4000e+04  
 2.000 13700.00

$\text{C4H3} + \text{NC4-OQOOH} \Rightarrow 0.5\text{OH} + 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C2H5OH} + \text{C4H4} + 0.5\text{C4H6O2}$  8.1800e+04  
 2.000 5200.00

$\text{C6H5} + \text{NC4-OQOOH} \Rightarrow 0.5\text{OH} + 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C2H5OH} + \text{C6H6} + 0.5\text{C4H6O2}$  7.4000e+07  
 1.000 2000.00

$\text{O} + \text{NC4-OQOOH} \Rightarrow 1.5\text{OH} + 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C2H5OH} + 0.5\text{C4H6O2}$  4.7000e+06  
 2.000 2500.00

$\text{O2} + \text{NC4-OQOOH} \Rightarrow 0.5\text{OH} + \text{HO2} + 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C2H5OH} + 0.5\text{C4H6O2}$  3.4000e+06  
 2.000 44000.00

$\text{OH} + \text{NC4-OQOOH} \Rightarrow \text{H2O} + 0.5\text{OH} + 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C2H5OH} + 0.5\text{C4H6O2}$  3.0000e+09  
 1.000 50.00

$\text{HO2} + \text{NC4-OQOOH} \Rightarrow 0.5\text{OH} + \text{H2O2} + 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C2H5OH} + 0.5\text{C4H6O2}$  1.6000e+06  
 2.000 16000.00

$\text{CH3O} + \text{NC4-OQOOH} \Rightarrow 0.5\text{OH} + 0.5\text{CO} + \text{CH3OH} + 0.5\text{HCO} + 0.5\text{C2H5OH} + 0.5\text{C4H6O2}$  8.5600e+04  
 2.000 1500.00

$\text{CH2OH} + \text{NC4-OQOOH} \Rightarrow 0.5\text{OH} + 0.5\text{CO} + \text{CH3OH} + 0.5\text{HCO} + 0.5\text{C2H5OH} + 0.5\text{C4H6O2}$  5.6600e+04  
 2.000 10200.00

$\text{HCO} + \text{NC4-OQOOH} \Rightarrow 0.5\text{OH} + 0.5\text{CO} + \text{CH2O} + 0.5\text{HCO} + 0.5\text{C2H5OH} + 0.5\text{C4H6O2}$  2.5200e+05  
 2.000 12300.00

$\text{CH3CO} + \text{NC4-OQOOH} \Rightarrow 0.5\text{OH} + 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C2H5OH} + \text{CH3CHO} + 0.5\text{C4H6O2}$  2.7000e+05  
 2.000 14000.00

$\text{CH2CHO} + \text{NC4-OQOOH} \Rightarrow 0.5\text{OH} + 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C2H5OH} + \text{CH3CHO} + 0.5\text{C4H6O2}$   
 4.6000e+04 2.000 11500.00

$C_3H_3+NC_4-O_2 \Rightarrow 0.5OH+0.5CO+0.5HCO+0.5C_2H_5OH+C_3H_4-A+0.5C_4H_6O_2$  5.4000e+04  
 2.000 14000.00

$HCCO+NC_4-O_2 \Rightarrow 0.5OH+0.5CO+0.5HCO+0.5C_2H_5OH+CH_2CO+0.5C_4H_6O_2$  8.5600e+04  
 2.000 5200.00

$CH_3O_2+NC_4-O_2 \Rightarrow 0.5OH+0.5CO+CH_3O_2H+0.5HCO+0.5C_2H_5OH+0.5C_4H_6O_2$  1.5200e+05  
 2.000 12600.00

$C_2H_5O_2+NC_4-O_2 \Rightarrow 0.5OH+0.5CO+0.5HCO+C_2H_5O_2H+0.5C_2H_5OH+0.5C_4H_6O_2$   
 1.5200e+05 2.000 12600.00

$NC_3H_7O_2+NC_4-O_2 \Rightarrow 0.5OH+0.5CO+0.5HCO+0.5C_2H_5OH+C_3H_7OOH+0.5C_4H_6O_2$   
 1.5200e+05 2.000 12600.00

$IC_3H_7O_2+NC_4-O_2 \Rightarrow 0.5OH+0.5CO+0.5HCO+0.5C_2H_5OH+C_3H_7OOH+0.5C_4H_6O_2$   
 1.5200e+05 2.000 12600.00

$HCO_3+NC_4-O_2 \Rightarrow 0.5OH+0.5CO+0.5HCO+0.5C_2H_5OH+HCO_3H+0.5C_4H_6O_2$  6.8000e+04  
 2.000 6500.00

$CH_3CO_3+NC_4-O_2 \Rightarrow 0.5OH+0.5CO+0.5HCO+0.5C_2H_5OH+CH_3CO_3H+0.5C_4H_6O_2$   
 6.8000e+04 2.000 6500.00

$CH_3COCH_2+NC_4-O_2 \Rightarrow 0.5OH+0.5CO+0.5HCO+0.5C_2H_5OH+CH_3COCH_3+0.5C_4H_6O_2$   
 4.6000e+04 2.000 8000.00

$NC_4-O_2+C_6H_5O \Rightarrow 0.5OH+0.5CO+0.5HCO+0.5C_2H_5OH+0.5C_4H_6O_2+C_6H_5OH$  5.4000e+04  
 2.000 12500.00

$NC_4-O_2+C_5H_7 \Rightarrow 0.5OH+0.5CO+0.5HCO+0.5C_2H_5OH+0.5C_4H_6O_2+LC_5H_8$  5.4000e+04  
 2.000 15000.00

$NC_4-O_2+C_7H_7 \Rightarrow 0.5OH+0.5CO+0.5HCO+0.5C_2H_5OH+0.5C_4H_6O_2+C_7H_8$  2.7000e+04  
 2.000 16000.00

$NC_4-O_2+CH_3C_6H_4 \Rightarrow 0.5OH+0.5CO+0.5HCO+0.5C_2H_5OH+0.5C_4H_6O_2+C_7H_8$  7.4000e+07  
 1.000 2000.00

$NC_4-O_2+RCRESOLO \Rightarrow 0.5OH+0.5CO+0.5HCO+0.5C_2H_5OH+0.5C_4H_6O_2+CRESOL$   
 5.4000e+04 2.000 12800.00

$NC_4-O_2+C_{10}H_7 \Rightarrow 0.5OH+0.5CO+0.5HCO+0.5C_2H_5OH+C_{10}H_8+0.5C_4H_6O_2$  7.4000e+07  
 1.000 2000.00

$NC_4-O_2+INDENYL \Rightarrow 0.5OH+0.5CO+0.5HCO+0.5C_2H_5OH+0.5C_4H_6O_2+INDENE$   
 2.6000e+04 2.000 16000.00

$NC_4-O_2+C_{10}H_6CH_3 \Rightarrow 0.5OH+0.5CO+0.5HCO+0.5C_2H_5OH+0.5C_4H_6O_2+C_{10}H_7CH_3$   
 7.4000e+07 1.000 2000.00

$H+C_4H_9OOH \Rightarrow H_2+OH+0.5C_3H_7CHO+0.5MEK$  6.0000e+06  
 2.000 4000.00

$CH_3+C_4H_9OOH \Rightarrow OH+CH_4+0.5C_3H_7CHO+0.5MEK$  6.0000e+04  
 2.000 5000.00

C2H3+C4H9OOH=>OH+C2H4+0.5C3H7CHO+0.5MEK 2.000 3900.00	1.3560e+05
C2H5+C4H9OOH=>OH+C2H6+0.5C3H7CHO+0.5MEK 2.000 6700.00	4.0000e+04
NC3H7+C4H9OOH=>OH+C3H8+0.5C3H7CHO+0.5MEK 2.000 6700.00	2.7000e+04
IC3H7+C4H9OOH=>OH+C3H8+0.5C3H7CHO+0.5MEK 2.000 9900.00	2.7000e+04
C3H5-S+C4H9OOH=>OH+C3H6+0.5C3H7CHO+0.5MEK 2.000 4500.00	5.4000e+04
C3H5-T+C4H9OOH=>OH+C3H6+0.5C3H7CHO+0.5MEK 2.000 4500.00	5.4000e+04
C3H5-A+C4H9OOH=>OH+C3H6+0.5C3H7CHO+0.5MEK 2.000 12800.00	1.0780e+05
C4H5+C4H9OOH=>OH+C4H6+0.5C3H7CHO+0.5MEK 2.000 4500.00	5.4000e+04
C4H71-4+C4H9OOH=>OH+C4H8-1+0.5C3H7CHO+0.5MEK 2.000 6600.00	2.7000e+04
C4H71-3+C4H9OOH=>OH+C4H8-2+0.5C3H7CHO+0.5MEK 2.000 13700.00	6.8000e+04
IC4H7+C4H9OOH=>OH+IC4H8+0.5C3H7CHO+0.5MEK 2.000 13700.00	5.4000e+04
C4H3+C4H9OOH=>OH+C4H4+0.5C3H7CHO+0.5MEK 2.000 5200.00	8.1800e+04
C6H5+C4H9OOH=>OH+C6H6+0.5C3H7CHO+0.5MEK 1.000 2000.00	7.4000e+07
O+C4H9OOH=>2OH+0.5C3H7CHO+0.5MEK 2.000 2500.00	4.7000e+06
O2+C4H9OOH=>OH+HO2+0.5C3H7CHO+0.5MEK 2.000 44000.00	3.4000e+06
OH+C4H9OOH=>H2O+OH+0.5C3H7CHO+0.5MEK 1.000 50.00	3.0000e+09
HO2+C4H9OOH=>OH+H2O2+0.5C3H7CHO+0.5MEK 2.000 16000.00	1.6000e+06
CH3O+C4H9OOH=>OH+CH3OH+0.5C3H7CHO+0.5MEK 2.000 1500.00	8.5600e+04
CH2OH+C4H9OOH=>OH+CH3OH+0.5C3H7CHO+0.5MEK 2.000 10200.00	5.6600e+04

HCO+C4H9OOH=>OH+CH2O+0.5C3H7CHO+0.5MEK 2.000 12300.00	2.5200e+05
CH3CO+C4H9OOH=>OH+CH3CHO+0.5C3H7CHO+0.5MEK 2.000 14000.00	2.7000e+05
CH2CHO+C4H9OOH=>OH+CH3CHO+0.5C3H7CHO+0.5MEK 2.000 11500.00	4.6000e+04
C3H3+C4H9OOH=>OH+C3H4-A+0.5C3H7CHO+0.5MEK 2.000 14000.00	5.4000e+04
HCCO+C4H9OOH=>OH+CH2CO+0.5C3H7CHO+0.5MEK 2.000 5200.00	8.5600e+04
CH3O2+C4H9OOH=>OH+CH3O2H+0.5C3H7CHO+0.5MEK 2.000 12600.00	1.5200e+05
C2H5O2+C4H9OOH=>OH+C2H5O2H+0.5C3H7CHO+0.5MEK 2.000 12600.00	1.5200e+05
NC3H7O2+C4H9OOH=>OH+C3H7OOH+0.5C3H7CHO+0.5MEK 2.000 12600.00	1.5200e+05
IC3H7O2+C4H9OOH=>OH+C3H7OOH+0.5C3H7CHO+0.5MEK 2.000 12600.00	1.5200e+05
HCO3+C4H9OOH=>OH+HCO3H+0.5C3H7CHO+0.5MEK 2.000 6500.00	6.8000e+04
CH3CO3+C4H9OOH=>OH+CH3CO3H+0.5C3H7CHO+0.5MEK 2.000 6500.00	6.8000e+04
CH3COCH2+C4H9OOH=>OH+CH3COCH3+0.5C3H7CHO+0.5MEK 2.000 8000.00	4.6000e+04
C4H9OOH+C6H5O=>OH+0.5C3H7CHO+0.5MEK+C6H5OH 2.000 12500.00	5.4000e+04
C4H9OOH+C5H7=>OH+0.5C3H7CHO+0.5MEK+LC5H8 2.000 15000.00	5.4000e+04
C4H9OOH+C7H7=>OH+0.5C3H7CHO+0.5MEK+C7H8 2.000 16000.00	2.7000e+04
C4H9OOH+CH3C6H4=>OH+0.5C3H7CHO+0.5MEK+C7H8 1.000 2000.00	7.4000e+07
C4H9OOH+RCRESOLO=>OH+0.5C3H7CHO+0.5MEK+CRESOL 2.000 12800.00	5.4000e+04
C4H9OOH+C10H7=>OH+C10H8+0.5C3H7CHO+0.5MEK 1.000 2000.00	7.4000e+07
C4H9OOH+INDENYL=>OH+0.5C3H7CHO+0.5MEK+INDENE 2.000 16000.00	2.6000e+04

C4H9OOH+C10H6CH3=>OH+0.5C3H7CHO+0.5MEK+C10H7CH3 1.000            2000.00	7.4000e+07
H+NC5-OQOOH=>H2+OH+C4H6O2+0.2NC5H10 2.000            4000.00	3.0000e+06
CH3+NC5-OQOOH=>OH+CH4+C4H6O2+0.2NC5H10 2.000            5000.00	3.0000e+04
C2H3+NC5-OQOOH=>OH+C2H4+C4H6O2+0.2NC5H10 2.000            3900.00	6.7800e+04
C2H5+NC5-OQOOH=>OH+C2H6+C4H6O2+0.2NC5H10 2.000            6700.00	2.0000e+04
NC3H7+NC5-OQOOH=>OH+C3H8+C4H6O2+0.2NC5H10 2.000            6700.00	1.3500e+04
IC3H7+NC5-OQOOH=>OH+C3H8+C4H6O2+0.2NC5H10 2.000            9900.00	1.3500e+04
C3H5-S+NC5-OQOOH=>OH+C3H6+C4H6O2+0.2NC5H10 2.000            4500.00	2.7000e+04
C3H5-T+NC5-OQOOH=>OH+C3H6+C4H6O2+0.2NC5H10 2.000            4500.00	2.7000e+04
C3H5-A+NC5-OQOOH=>OH+C3H6+C4H6O2+0.2NC5H10 2.000            12800.00	5.3900e+04
C4H5+NC5-OQOOH=>OH+C4H6+C4H6O2+0.2NC5H10 2.000            4500.00	2.7000e+04
C4H71-4+NC5-OQOOH=>OH+C4H8-1+C4H6O2+0.2NC5H10 2.000            6600.00	1.3500e+04
C4H71-3+NC5-OQOOH=>OH+C4H8-2+C4H6O2+0.2NC5H10 2.000            13700.00	3.4000e+04
IC4H7+NC5-OQOOH=>OH+IC4H8+C4H6O2+0.2NC5H10 2.000            13700.00	2.7000e+04
C4H3+NC5-OQOOH=>OH+C4H4+C4H6O2+0.2NC5H10 2.000            5200.00	4.0900e+04
C6H5+NC5-OQOOH=>OH+C6H6+C4H6O2+0.2NC5H10 1.000            2000.00	3.7000e+07
O+NC5-OQOOH=>2OH+C4H6O2+0.2NC5H10 2.000            2500.00	2.3500e+06
O2+NC5-OQOOH=>OH+HO2+C4H6O2+0.2NC5H10 2.000            44000.00	1.7000e+06
OH+NC5-OQOOH=>H2O+OH+C4H6O2+0.2NC5H10 1.000            50.00	1.5000e+09

HO2+NC5-OQOOH=>OH+H2O2+C4H6O2+0.2NC5H10 2.000        16000.00	8.0000e+05
CH3O+NC5-OQOOH=>OH+CH3OH+C4H6O2+0.2NC5H10 2.000        1500.00	4.2800e+04
CH2OH+NC5-OQOOH=>OH+CH3OH+C4H6O2+0.2NC5H10 2.000        10200.00	2.8300e+04
HCO+NC5-OQOOH=>OH+CH2O+C4H6O2+0.2NC5H10 2.000        12300.00	1.2600e+05
CH3CO+NC5-OQOOH=>OH+CH3CHO+C4H6O2+0.2NC5H10 2.000        14000.00	1.3500e+05
CH2CHO+NC5-OQOOH=>OH+CH3CHO+C4H6O2+0.2NC5H10 2.000        11500.00	2.3000e+04
C3H3+NC5-OQOOH=>OH+C3H4-A+C4H6O2+0.2NC5H10 2.000        14000.00	2.7000e+04
HCCO+NC5-OQOOH=>OH+CH2CO+C4H6O2+0.2NC5H10 2.000        5200.00	4.2800e+04
CH3O2+NC5-OQOOH=>OH+CH3O2H+C4H6O2+0.2NC5H10 2.000        12600.00	7.6000e+04
C2H5O2+NC5-OQOOH=>OH+C2H5O2H+C4H6O2+0.2NC5H10 2.000        12600.00	7.6000e+04
NC3H7O2+NC5-OQOOH=>OH+C3H7OOH+C4H6O2+0.2NC5H10 2.000        12600.00	7.6000e+04
IC3H7O2+NC5-OQOOH=>OH+C3H7OOH+C4H6O2+0.2NC5H10 2.000        12600.00	7.6000e+04
HCO3+NC5-OQOOH=>OH+HCO3H+C4H6O2+0.2NC5H10 2.000        6500.00	3.4000e+04
CH3CO3+NC5-OQOOH=>OH+CH3CO3H+C4H6O2+0.2NC5H10 2.000        6500.00	3.4000e+04
CH3COCH2+NC5-OQOOH=>OH+CH3COCH3+C4H6O2+0.2NC5H10 2.000        8000.00	2.3000e+04
NC5-OQOOH+C6H5O=>OH+C4H6O2+0.2NC5H10+C6H5OH 2.000        12500.00	2.7000e+04
NC5-OQOOH+C5H7=>OH+C4H6O2+0.2NC5H10+LC5H8 2.000        15000.00	2.7000e+04
NC5-OQOOH+C7H7=>OH+C4H6O2+0.2NC5H10+C7H8 2.000        16000.00	1.3500e+04
NC5-OQOOH+CH3C6H4=>OH+C4H6O2+0.2NC5H10+C7H8 1.000        2000.00	3.7000e+07

NC5-OQOOH+RCRESOLO=>OH+C4H6O2+0.2NC5H10+CRESOL 2.000        12800.00	2.7000e+04
NC5-OQOOH+C10H7=>OH+C10H8+C4H6O2+0.2NC5H10 1.000        2000.00	3.7000e+07
NC5-OQOOH+INDENYL=>OH+C4H6O2+0.2NC5H10+INDENE 2.000        16000.00	1.3000e+04
NC5-OQOOH+C10H6CH3=>OH+C4H6O2+0.2NC5H10+C10H7CH3 1.000        2000.00	3.7000e+07
H+C4H8O=>H2+0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A 2.000        4000.00	1.0800e+07
CH3+C4H8O=>CH4+0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A 2.000        5000.00	1.0800e+05
C2H3+C4H8O=>0.6CH2O+0.4HCO+C2H4+0.4C3H6+0.6C3H5-A 2.000        3900.00	2.4408e+05
C2H5+C4H8O=>0.6CH2O+0.4HCO+C2H6+0.4C3H6+0.6C3H5-A 2.000        6700.00	7.2000e+04
NC3H7+C4H8O=>0.6CH2O+0.4HCO+C3H8+0.4C3H6+0.6C3H5-A 2.000        6700.00	4.8600e+04
IC3H7+C4H8O=>0.6CH2O+0.4HCO+C3H8+0.4C3H6+0.6C3H5-A 2.000        9900.00	4.8600e+04
C3H5-S+C4H8O=>0.6CH2O+0.4HCO+1.4C3H6+0.6C3H5-A 2.000        4500.00	9.7200e+04
C3H5-T+C4H8O=>0.6CH2O+0.4HCO+1.4C3H6+0.6C3H5-A 2.000        4500.00	9.7200e+04
C3H5-A+C4H8O=>0.6CH2O+0.4HCO+1.4C3H6+0.6C3H5-A 2.000        12800.00	1.9404e+05
C4H5+C4H8O=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+C4H6 2.000        4500.00	9.7200e+04
C4H71-4+C4H8O=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+C4H8-1 2.000        6600.00	4.8600e+04
C4H71-3+C4H8O=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+C4H8-2 2.000        13700.00	1.2240e+05
IC4H7+C4H8O=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+IC4H8 2.000        13700.00	9.7200e+04
C4H3+C4H8O=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+C4H4 2.000        5200.00	1.4724e+05
C6H5+C4H8O=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+C6H6 1.000        2000.00	1.3320e+08

O+C4H8O=>OH+0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A 2.000            2500.00	8.4600e+06
O2+C4H8O=>HO2+0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A 2.000            44000.00	6.1200e+06
OH+C4H8O=>H2O+0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A 1.000            50.00	5.4000e+09
HO2+C4H8O=>H2O2+0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A 2.000            16000.00	2.8800e+06
CH3O+C4H8O=>CH3OH+0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A 2.000            1500.00	1.5408e+05
CH2OH+C4H8O=>CH3OH+0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A 2.000            10200.00	1.0188e+05
HCO+C4H8O=>1.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A 2.000            12300.00	4.5360e+05
CH3CO+C4H8O=>0.6CH2O+0.4HCO+CH3CHO+0.4C3H6+0.6C3H5-A 2.000            14000.00	4.8600e+05
CH2CHO+C4H8O=>0.6CH2O+0.4HCO+CH3CHO+0.4C3H6+0.6C3H5-A 2.000            11500.00	8.2800e+04
C3H3+C4H8O=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+C3H4-A 2.000            14000.00	9.7200e+04
HCCO+C4H8O=>0.6CH2O+0.4HCO+CH2CO+0.4C3H6+0.6C3H5-A 2.000            5200.00	1.5408e+05
CH3O2+C4H8O=>CH3O2H+0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A 2.000            12600.00	2.7360e+05
C2H5O2+C4H8O=>0.6CH2O+0.4HCO+C2H5O2H+0.4C3H6+0.6C3H5-A 2.000            12600.00	2.7360e+05
NC3H7O2+C4H8O=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+C3H7OOH 2.000            12600.00	2.7360e+05
IC3H7O2+C4H8O=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+C3H7OOH 2.000            12600.00	2.7360e+05
HCO3+C4H8O=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+HCO3H 2.000            6500.00	1.2240e+05
CH3CO3+C4H8O=>0.6CH2O+0.4HCO+CH3CO3H+0.4C3H6+0.6C3H5-A 2.000            6500.00	1.2240e+05
CH3COCH2+C4H8O=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+CH3COCH3 2.000            8000.00	8.2800e+04
C4H8O+C6H5O=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+C6H5OH 2.000            12500.00	9.7200e+04



C4H8O+C5H7=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+LC5H8	9.7200e+04
2.000 15000.00	
C4H8O+C7H7=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+C7H8	4.8600e+04
2.000 16000.00	
C4H8O+CH3C6H4=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+C7H8	1.3320e+08
1.000 2000.00	
C4H8O+RCRESOLO=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+CRESOL	9.7200e+04
2.000 12800.00	
C4H8O+C10H7=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+C10H8	1.3320e+08
1.000 2000.00	
C4H8O+INDENYL=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+INDENE	4.6800e+04
2.000 16000.00	
C4H8O+C10H6CH3=>0.6CH2O+0.4HCO+0.4C3H6+0.6C3H5-A+C10H7CH3	1.3320e+08
1.000 2000.00	
H+C4H8O=>H2+0.75CH3+0.25C2H4+0.25CH2CHO+0.75C2H3CHO	3.6000e+06
2.000 4000.00	
CH3+C4H8O=>CH4+0.75CH3+0.25C2H4+0.25CH2CHO+0.75C2H3CHO	3.6000e+04
2.000 5000.00	
C2H3+C4H8O=>0.75CH3+1.25C2H4+0.25CH2CHO+0.75C2H3CHO	8.1360e+04
2.000 3900.00	
C2H5+C4H8O=>0.75CH3+C2H6+0.25C2H4+0.25CH2CHO+0.75C2H3CHO	2.4000e+04
2.000 6700.00	
NC3H7+C4H8O=>0.75CH3+0.25C2H4+0.25CH2CHO+C3H8+0.75C2H3CHO	1.6200e+04
2.000 6700.00	
IC3H7+C4H8O=>0.75CH3+0.25C2H4+0.25CH2CHO+C3H8+0.75C2H3CHO	1.6200e+04
2.000 9900.00	
C3H5-S+C4H8O=>0.75CH3+0.25C2H4+0.25CH2CHO+C3H6+0.75C2H3CHO	3.2400e+04
2.000 4500.00	
C3H5-T+C4H8O=>0.75CH3+0.25C2H4+0.25CH2CHO+C3H6+0.75C2H3CHO	3.2400e+04
2.000 4500.00	
C3H5-A+C4H8O=>0.75CH3+0.25C2H4+0.25CH2CHO+C3H6+0.75C2H3CHO	6.4680e+04
2.000 12800.00	
C4H5+C4H8O=>0.75CH3+0.25C2H4+0.25CH2CHO+0.75C2H3CHO+C4H6	3.2400e+04
2.000 4500.00	
C4H71-4+C4H8O=>0.75CH3+0.25C2H4+0.25CH2CHO+0.75C2H3CHO+C4H8-1	1.6200e+04
2.000 6600.00	
C4H71-3+C4H8O=>0.75CH3+0.25C2H4+0.25CH2CHO+0.75C2H3CHO+C4H8-2	4.0800e+04
2.000 13700.00	

IC4H7+C4H8O=>0.75CH3+0.25C2H4+0.25CH2CHO+0.75C2H3CHO+IC4H8 3.2400e+04  
2.000 13700.00

C4H3+C4H8O=>0.75CH3+0.25C2H4+0.25CH2CHO+0.75C2H3CHO+C4H4 4.9080e+04  
2.000 5200.00

C6H5+C4H8O=>0.75CH3+0.25C2H4+0.25CH2CHO+0.75C2H3CHO+C6H6 4.4400e+07  
1.000 2000.00

O+C4H8O=>OH+0.75CH3+0.25C2H4+0.25CH2CHO+0.75C2H3CHO 2.8200e+06  
2.000 2500.00

O2+C4H8O=>HO2+0.75CH3+0.25C2H4+0.25CH2CHO+0.75C2H3CHO 2.0400e+06  
2.000 44000.00

OH+C4H8O=>H2O+0.75CH3+0.25C2H4+0.25CH2CHO+0.75C2H3CHO 1.8000e+09  
1.000 50.00

HO2+C4H8O=>H2O2+0.75CH3+0.25C2H4+0.25CH2CHO+0.75C2H3CHO 9.6000e+05  
2.000 16000.00

CH3O+C4H8O=>0.75CH3+CH3OH+0.25C2H4+0.25CH2CHO+0.75C2H3CHO 5.1360e+04  
2.000 1500.00

CH2OH+C4H8O=>0.75CH3+CH3OH+0.25C2H4+0.25CH2CHO+0.75C2H3CHO 3.3960e+04  
2.000 10200.00

HCO+C4H8O=>0.75CH3+CH2O+0.25C2H4+0.25CH2CHO+0.75C2H3CHO 1.5120e+05  
2.000 12300.00

CH3CO+C4H8O=>0.75CH3+0.25C2H4+CH3CHO+0.25CH2CHO+0.75C2H3CHO 1.6200e+05  
2.000 14000.00

CH2CHO+C4H8O=>0.75CH3+0.25C2H4+CH3CHO+0.25CH2CHO+0.75C2H3CHO 2.7600e+04  
2.000 11500.00

C3H3+C4H8O=>0.75CH3+0.25C2H4+0.25CH2CHO+C3H4-A+0.75C2H3CHO 3.2400e+04  
2.000 14000.00

HCCO+C4H8O=>0.75CH3+0.25C2H4+0.25CH2CHO+CH2CO+0.75C2H3CHO 5.1360e+04  
2.000 5200.00

CH3O2+C4H8O=>0.75CH3+CH3O2H+0.25C2H4+0.25CH2CHO+0.75C2H3CHO 9.1200e+04  
2.000 12600.00

C2H5O2+C4H8O=>0.75CH3+C2H5O2H+0.25C2H4+0.25CH2CHO+0.75C2H3CHO 9.1200e+04  
2.000 12600.00

NC3H7O2+C4H8O=>0.75CH3+0.25C2H4+0.25CH2CHO+0.75C2H3CHO+C3H7OOH 9.1200e+04  
2.000 12600.00

IC3H7O2+C4H8O=>0.75CH3+0.25C2H4+0.25CH2CHO+0.75C2H3CHO+C3H7OOH 9.1200e+04  
2.000 12600.00

HCO3+C4H8O=>0.75CH3+0.25C2H4+0.25CH2CHO+0.75C2H3CHO+HCO3H 4.0800e+04  
2.000 6500.00

$\text{CH}_3\text{CO}_3 + \text{C}_4\text{H}_8\text{O} \Rightarrow 0.75\text{CH}_3 + 0.25\text{C}_2\text{H}_4 + 0.25\text{CH}_2\text{CHO} + \text{CH}_3\text{CO}_3\text{H} + 0.75\text{C}_2\text{H}_3\text{CHO}$  4.0800e+04  
 2.000 6500.00

$\text{CH}_3\text{COCH}_2 + \text{C}_4\text{H}_8\text{O} \Rightarrow 0.75\text{CH}_3 + 0.25\text{C}_2\text{H}_4 + 0.25\text{CH}_2\text{CHO} + 0.75\text{C}_2\text{H}_3\text{CHO} + \text{CH}_3\text{COCH}_3$   
 2.7600e+04 2.000 8000.00

$\text{C}_4\text{H}_8\text{O} + \text{C}_6\text{H}_5\text{O} \Rightarrow 0.75\text{CH}_3 + 0.25\text{C}_2\text{H}_4 + 0.25\text{CH}_2\text{CHO} + 0.75\text{C}_2\text{H}_3\text{CHO} + \text{C}_6\text{H}_5\text{OH}$  3.2400e+04  
 2.000 12500.00

$\text{C}_4\text{H}_8\text{O} + \text{C}_5\text{H}_7 \Rightarrow 0.75\text{CH}_3 + 0.25\text{C}_2\text{H}_4 + 0.25\text{CH}_2\text{CHO} + 0.75\text{C}_2\text{H}_3\text{CHO} + \text{LC}_5\text{H}_8$  3.2400e+04  
 2.000 15000.00

$\text{C}_4\text{H}_8\text{O} + \text{C}_7\text{H}_7 \Rightarrow 0.75\text{CH}_3 + 0.25\text{C}_2\text{H}_4 + 0.25\text{CH}_2\text{CHO} + 0.75\text{C}_2\text{H}_3\text{CHO} + \text{C}_7\text{H}_8$  1.6200e+04  
 2.000 16000.00

$\text{C}_4\text{H}_8\text{O} + \text{CH}_3\text{C}_6\text{H}_4 \Rightarrow 0.75\text{CH}_3 + 0.25\text{C}_2\text{H}_4 + 0.25\text{CH}_2\text{CHO} + 0.75\text{C}_2\text{H}_3\text{CHO} + \text{C}_7\text{H}_8$  4.4400e+07  
 1.000 2000.00

$\text{C}_4\text{H}_8\text{O} + \text{RCRESOLO} \Rightarrow 0.75\text{CH}_3 + 0.25\text{C}_2\text{H}_4 + 0.25\text{CH}_2\text{CHO} + 0.75\text{C}_2\text{H}_3\text{CHO} + \text{CRESOL}$  3.2400e+04  
 2.000 12800.00

$\text{C}_4\text{H}_8\text{O} + \text{C}_{10}\text{H}_7 \Rightarrow 0.75\text{CH}_3 + 0.25\text{C}_2\text{H}_4 + 0.25\text{CH}_2\text{CHO} + 0.75\text{C}_2\text{H}_3\text{CHO} + \text{C}_{10}\text{H}_8$  4.4400e+07  
 1.000 2000.00

$\text{C}_4\text{H}_8\text{O} + \text{INDENYL} \Rightarrow 0.75\text{CH}_3 + 0.25\text{C}_2\text{H}_4 + 0.25\text{CH}_2\text{CHO} + 0.75\text{C}_2\text{H}_3\text{CHO} + \text{INDENE}$  1.5600e+04  
 2.000 16000.00

$\text{C}_4\text{H}_8\text{O} + \text{C}_{10}\text{H}_6\text{CH}_3 \Rightarrow 0.75\text{CH}_3 + 0.25\text{C}_2\text{H}_4 + 0.25\text{CH}_2\text{CHO} + 0.75\text{C}_2\text{H}_3\text{CHO} + \text{C}_{10}\text{H}_7\text{CH}_3$   
 4.4400e+07 1.000 2000.00

$\text{H} + \text{C}_4\text{H}_8\text{O} \Rightarrow \text{H}_2 + \text{C}_2\text{H}_4 + \text{CH}_3\text{CO}$  3.6000e+06  
 2.000 4000.00

$\text{CH}_3 + \text{C}_4\text{H}_8\text{O} \Rightarrow \text{CH}_4 + \text{C}_2\text{H}_4 + \text{CH}_3\text{CO}$  3.6000e+04  
 2.000 5000.00

$\text{C}_2\text{H}_3 + \text{C}_4\text{H}_8\text{O} \Rightarrow 2\text{C}_2\text{H}_4 + \text{CH}_3\text{CO}$  8.1360e+04  
 2.000 3900.00

$\text{C}_2\text{H}_5 + \text{C}_4\text{H}_8\text{O} \Rightarrow \text{C}_2\text{H}_6 + \text{C}_2\text{H}_4 + \text{CH}_3\text{CO}$  2.4000e+04  
 2.000 6700.00

$\text{NC}_3\text{H}_7 + \text{C}_4\text{H}_8\text{O} \Rightarrow \text{C}_2\text{H}_4 + \text{CH}_3\text{CO} + \text{C}_3\text{H}_8$  1.6200e+04  
 2.000 6700.00

$\text{IC}_3\text{H}_7 + \text{C}_4\text{H}_8\text{O} \Rightarrow \text{C}_2\text{H}_4 + \text{CH}_3\text{CO} + \text{C}_3\text{H}_8$  1.6200e+04  
 2.000 9900.00

$\text{C}_3\text{H}_5\text{-S} + \text{C}_4\text{H}_8\text{O} \Rightarrow \text{C}_2\text{H}_4 + \text{CH}_3\text{CO} + \text{C}_3\text{H}_6$  3.2400e+04  
 2.000 4500.00

$\text{C}_3\text{H}_5\text{-T} + \text{C}_4\text{H}_8\text{O} \Rightarrow \text{C}_2\text{H}_4 + \text{CH}_3\text{CO} + \text{C}_3\text{H}_6$  3.2400e+04  
 2.000 4500.00

$\text{C}_3\text{H}_5\text{-A} + \text{C}_4\text{H}_8\text{O} \Rightarrow \text{C}_2\text{H}_4 + \text{CH}_3\text{CO} + \text{C}_3\text{H}_6$  6.4680e+04  
 2.000 12800.00

C4H5+C4H8O=>C2H4+CH3CO+C4H6	3.2400e+04
2.000 4500.00	
C4H71-4+C4H8O=>C2H4+CH3CO+C4H8-1	1.6200e+04
2.000 6600.00	
C4H71-3+C4H8O=>C2H4+CH3CO+C4H8-2	4.0800e+04
2.000 13700.00	
IC4H7+C4H8O=>C2H4+CH3CO+IC4H8	3.2400e+04
2.000 13700.00	
C4H3+C4H8O=>C2H4+CH3CO+C4H4	4.9080e+04
2.000 5200.00	
C6H5+C4H8O=>C2H4+CH3CO+C6H6	4.4400e+07
1.000 2000.00	
O+C4H8O=>OH+C2H4+CH3CO	2.8200e+06
2.000 2500.00	
O2+C4H8O=>HO2+C2H4+CH3CO	2.0400e+06
2.000 44000.00	
OH+C4H8O=>H2O+C2H4+CH3CO	1.8000e+09
1.000 50.00	
HO2+C4H8O=>H2O2+C2H4+CH3CO	9.6000e+05
2.000 16000.00	
CH3O+C4H8O=>CH3OH+C2H4+CH3CO	5.1360e+04
2.000 1500.00	
CH2OH+C4H8O=>CH3OH+C2H4+CH3CO	3.3960e+04
2.000 10200.00	
HCO+C4H8O=>CH2O+C2H4+CH3CO	1.5120e+05
2.000 12300.00	
CH3CO+C4H8O=>C2H4+CH3CHO+CH3CO	1.6200e+05
2.000 14000.00	
CH2CHO+C4H8O=>C2H4+CH3CHO+CH3CO	2.7600e+04
2.000 11500.00	
C3H3+C4H8O=>C2H4+CH3CO+C3H4-A	3.2400e+04
2.000 14000.00	
HCCO+C4H8O=>C2H4+CH3CO+CH2CO	5.1360e+04
2.000 5200.00	
CH3O2+C4H8O=>CH3O2H+C2H4+CH3CO	9.1200e+04
2.000 12600.00	
C2H5O2+C4H8O=>C2H5O2H+C2H4+CH3CO	9.1200e+04
2.000 12600.00	

NC3H7O2+C4H8O=>C2H4+CH3CO+C3H7OOH 2.000 12600.00	9.1200e+04
IC3H7O2+C4H8O=>C2H4+CH3CO+C3H7OOH 2.000 12600.00	9.1200e+04
HCO3+C4H8O=>C2H4+CH3CO+HCO3H 2.000 6500.00	4.0800e+04
CH3CO3+C4H8O=>C2H4+CH3CO+CH3CO3H 2.000 6500.00	4.0800e+04
CH3COCH2+C4H8O=>C2H4+CH3CO+CH3COCH3 2.000 8000.00	2.7600e+04
C4H8O+C6H5O=>C2H4+CH3CO+C6H5OH 2.000 12500.00	3.2400e+04
C4H8O+C5H7=>C2H4+CH3CO+LC5H8 2.000 15000.00	3.2400e+04
C4H8O+C7H7=>C2H4+CH3CO+C7H8 2.000 16000.00	1.6200e+04
C4H8O+CH3C6H4=>C2H4+CH3CO+C7H8 1.000 2000.00	4.4400e+07
C4H8O+RCRESOLO=>C2H4+CH3CO+CRESOL 2.000 12800.00	3.2400e+04
C4H8O+C10H7=>C2H4+CH3CO+C10H8 1.000 2000.00	4.4400e+07
C4H8O+INDENYL=>C2H4+CH3CO+INDENE 2.000 16000.00	1.5600e+04
C4H8O+C10H6CH3=>C2H4+CH3CO+C10H7CH3 1.000 2000.00	4.4400e+07
H+C5H8O=>H2+0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5 2.000 4000.00	3.0000e+07
CH3+C5H8O=>CH4+0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5 2.000 5000.00	3.0000e+05
C2H3+C5H8O=>0.7CH2O+C2H4+0.3C2H3+0.3C2H3CHO+0.7C4H5 2.000 3900.00	6.7800e+05
C2H5+C5H8O=>0.7CH2O+C2H6+0.3C2H3+0.3C2H3CHO+0.7C4H5 2.000 6700.00	2.0000e+05
NC3H7+C5H8O=>0.7CH2O+0.3C2H3+C3H8+0.3C2H3CHO+0.7C4H5 2.000 6700.00	1.3500e+05
IC3H7+C5H8O=>0.7CH2O+0.3C2H3+C3H8+0.3C2H3CHO+0.7C4H5 2.000 9900.00	1.3500e+05

C3H5-S+C5H8O=>0.7CH2O+0.3C2H3+C3H6+0.3C2H3CHO+0.7C4H5 2.000            4500.00	2.7000e+05
C3H5-T+C5H8O=>0.7CH2O+0.3C2H3+C3H6+0.3C2H3CHO+0.7C4H5 2.000            4500.00	2.7000e+05
C3H5-A+C5H8O=>0.7CH2O+0.3C2H3+C3H6+0.3C2H3CHO+0.7C4H5 2.000            12800.00	5.3900e+05
C4H5+C5H8O=>0.7CH2O+0.3C2H3+0.3C2H3CHO+C4H6+0.7C4H5 2.000            4500.00	2.7000e+05
C4H71-4+C5H8O=>0.7CH2O+0.3C2H3+0.3C2H3CHO+C4H8-1+0.7C4H5 2.000            6600.00	1.3500e+05
C4H71-3+C5H8O=>0.7CH2O+0.3C2H3+0.3C2H3CHO+C4H8-2+0.7C4H5 2.000            13700.00	3.4000e+05
IC4H7+C5H8O=>0.7CH2O+0.3C2H3+0.3C2H3CHO+IC4H8+0.7C4H5 2.000            13700.00	2.7000e+05
C4H3+C5H8O=>0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5+C4H4 2.000            5200.00	4.0900e+05
C6H5+C5H8O=>0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5+C6H6 1.000            2000.00	3.7000e+08
O+C5H8O=>OH+0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5 2.000            2500.00	2.3500e+07
O2+C5H8O=>HO2+0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5 2.000            44000.00	1.7000e+07
OH+C5H8O=>H2O+0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5 1.000            50.00	1.5000e+10
HO2+C5H8O=>H2O2+0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5 2.000            16000.00	8.0000e+06
CH3O+C5H8O=>CH3OH+0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5 2.000            1500.00	4.2800e+05
CH2OH+C5H8O=>CH3OH+0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5 2.000            10200.00	2.8300e+05
HCO+C5H8O=>1.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5 2.000            12300.00	1.2600e+06
CH3CO+C5H8O=>0.7CH2O+0.3C2H3+CH3CHO+0.3C2H3CHO+0.7C4H5 2.000            14000.00	1.3500e+06
CH2CHO+C5H8O=>0.7CH2O+0.3C2H3+CH3CHO+0.3C2H3CHO+0.7C4H5 2.000            11500.00	2.3000e+05
C3H3+C5H8O=>0.7CH2O+0.3C2H3+C3H4-A+0.3C2H3CHO+0.7C4H5 2.000            14000.00	2.7000e+05

HCCO+C5H8O=>0.7CH2O+0.3C2H3+CH2CO+0.3C2H3CHO+0.7C4H5	4.2800e+05
2.000 5200.00	
CH3O2+C5H8O=>CH3O2H+0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5	7.6000e+05
2.000 12600.00	
C2H5O2+C5H8O=>0.7CH2O+C2H5O2H+0.3C2H3+0.3C2H3CHO+0.7C4H5	7.6000e+05
2.000 12600.00	
NC3H7O2+C5H8O=>0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5+C3H7OOH	7.6000e+05
2.000 12600.00	
IC3H7O2+C5H8O=>0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5+C3H7OOH	7.6000e+05
2.000 12600.00	
HCO3+C5H8O=>0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5+HCO3H	3.4000e+05
2.000 6500.00	
CH3CO3+C5H8O=>0.7CH2O+0.3C2H3+CH3CO3H+0.3C2H3CHO+0.7C4H5	3.4000e+05
2.000 6500.00	
CH3COCH2+C5H8O=>0.7CH2O+0.3C2H3+0.3C2H3CHO+CH3COCH3+0.7C4H5	2.3000e+05
2.000 8000.00	
C5H8O+C6H5O=>0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5+C6H5OH	2.7000e+05
2.000 12500.00	
C5H8O+C5H7=>0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5+LC5H8	2.7000e+05
2.000 15000.00	
C5H8O+C7H7=>0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5+C7H8	1.3500e+05
2.000 16000.00	
C5H8O+CH3C6H4=>0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5+C7H8	3.7000e+08
1.000 2000.00	
C5H8O+RCRESOLO=>0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5+CRESOL	2.7000e+05
2.000 12800.00	
C5H8O+C10H7=>0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5+C10H8	3.7000e+08
1.000 2000.00	
C5H8O+INDENYL=>0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5+INDENE	1.3000e+05
2.000 16000.00	
C5H8O+C10H6CH3=>0.7CH2O+0.3C2H3+0.3C2H3CHO+0.7C4H5+C10H7CH3	3.7000e+08
1.000 2000.00	
NC3H7OH=CH3+PC2H4OH	5.1300e+26 -
2.918 90470.00	
PLOG / 1.000000e-02 1.330000e+86 -2.078700e+01 1.234800e+05	
/	
PLOG / 3.900000e-02 1.140000e+81 -1.912000e+01 1.227200e+05	
/	
PLOG / 1.000000e+00 1.930000e+59 -1.250900e+01 1.134700e+05	
/	

PLOG /	1.000000e+01	7.040000e+39	-6.808000e+00	1.027700e+05	
/					
PLOG /	1.000000e+02	1.460000e+25	-2.550000e+00	9.430000e+04	
/					
PLOG /	1.000000e+03	5.130000e+26	-2.918000e+00	9.047000e+04	
/					
NC3H7OH=CH2OH+C2H5				4.1300e+17	-
0.295	89720.00				
PLOG /	1.000000e-02	1.830000e+98	-2.410300e+01	1.284000e+05	
/					
PLOG /	3.900000e-02	4.390000e+91	-2.202000e+01	1.263300e+05	
/					
PLOG /	1.000000e+00	1.790000e+68	-1.502500e+01	1.152300e+05	
/					
PLOG /	1.000000e+01	1.080000e+48	-9.142000e+00	1.035100e+05	
/					
PLOG /	1.000000e+02	2.070000e+34	-5.170000e+00	9.539000e+04	
/					
PLOG /	1.000000e+03	4.130000e+17	-2.950000e-01	8.972000e+04	
/					
NC3H7OH=OH+NC3H7				2.8200e+29	-
3.679	101930.00				
PLOG /	1.000000e-02	1.770000e+107	-2.688300e+01	1.411000e+05	
/					
PLOG /	3.900000e-02	3.340000e+101	-2.502000e+01	1.399500e+05	
/					
PLOG /	1.000000e+00	4.440000e+77	-1.778000e+01	1.294700e+05	
/					
PLOG /	1.000000e+01	5.090000e+56	-1.162900e+01	1.180600e+05	
/					
PLOG /	1.000000e+02	1.160000e+40	-6.800000e+00	1.084600e+05	
/					
PLOG /	1.000000e+03	2.820000e+29	-3.679000e+00	1.019300e+05	
/					
NC3H7OH=H2O+C3H6				1.5000e+14	
0.000	67600.00				
PLOG /	1.000000e-02	1.800000e+13	0.000000e+00	6.760000e+04	
/					
PLOG /	1.000000e-01	6.000000e+13	0.000000e+00	6.760000e+04	
/					
PLOG /	1.000000e+00	1.200000e+14	0.000000e+00	6.760000e+04	
/					
PLOG /	1.000000e+02	1.500000e+14	0.000000e+00	6.760000e+04	
/					
NC3H7OH=H2+C2H5CHO				5.1000e+08	
1.356	69680.00				
PLOG /	1.000000e-02	1.120000e+80	-1.949100e+01	1.096200e+05	
/					
PLOG /	3.900000e-02	1.310000e+70	-1.653000e+01	1.047700e+05	
/					
PLOG /	1.000000e+00	2.650000e+43	-8.694000e+00	9.024000e+04	
/					
PLOG /	1.000000e+01	1.710000e+26	-3.704000e+00	8.023000e+04	
/					



PLOG /	1.000000e+02	3.990000e+19	-1.740000e+00	7.717000e+04
/				
PLOG /	1.000000e+03	5.100000e+08	1.356000e+00	6.968000e+04
/				
H+CH3CH2CHOH=NC3H7OH	0.000	0.00		5.0000e+13
H+CH3CHCH2OH=NC3H7OH	0.000	0.00		5.0000e+13
H+CH2CH2CH2OH=NC3H7OH	0.000	0.00		5.0000e+13
HO2+NC3H7OH=>H2O2+CH3CH2CHOH	2.000	16000.00		2.4000e+06
CH3CH2CH2O=CH2O+C2H5	0.000	15000.00		3.0000e+13
CH3CH2CH2O=H+C2H5CHO	0.000	26000.00		3.0000e+13
CH2CH2CH2OH=CH2OH+C2H4	0.000	30000.00		3.0000e+13
CH3CHCH2OH=OH+C3H6	0.000	33000.00		3.0000e+13
CH3CHCH2OH=>H+0.5C3H5OH+0.5C2H5CHO	0.000	36000.00		6.0000e+13
CH3CH2CHOH=CH3+CH3CHO	0.000	31000.00		3.0000e+13
CH3CH2CHOH=H+C2H5CHO	0.000	37000.00		3.0000e+13
CH2CH2CH2OH=CH3CH2CH2O	0.000	22000.00		1.0000e+11
C3H5OH=OH+C3H5-A	0.000	82000.00		5.0000e+15
C3H5OH=C2H5CHO	0.318	55900.00		8.6000e+11
HO2+C3H5OH=HO2+C2H5CHO	1.670	6810.00		1.5000e+05
HCOOH+C3H5OH=HCOOH+C2H5CHO	3.286	-4509.00		2.8000e-02
O2+CH3CH2CH2O=HO2+C2H5CHO	0.000	3500.00		3.0000e+12
O2+CH3CH2CHOH=HO2+C2H5CHO	0.302	-1068.66		5.1030e+11

O2+CH3CHCH2OH=>HO2+0.5C3H5OH+0.5C2H5CHO	4.5000e+12
0.000 3500.00	
O2+CH2CH2CH2OH=>HO2+C3H5OH	3.0000e+12
0.000 3500.00	
H+NC3H7OH=>H2+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	1.2000e+07
2.000 6349.34	
CH3+NC3H7OH=>CH4+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	1.2000e+05
2.000 7443.70	
C2H3+NC3H7OH=>C2H4+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	2.7120e+05
2.000 6239.48	
C2H5+NC3H7OH=>C2H6+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	8.0000e+04
2.000 9289.16	
NC3H7+NC3H7OH=>C3H8+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	5.4000e+04
2.000 9289.16	
IC3H7+NC3H7OH=>C3H8+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	5.4000e+04
2.000 12725.62	
C3H5-S+NC3H7OH=>C3H6+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	1.0800e+05
2.000 6897.45	
C3H5-T+NC3H7OH=>C3H6+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	1.0800e+05
2.000 6897.45	
C3H5-A+NC3H7OH=>C3H6+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	2.1560e+05
2.000 15810.16	
C4H5+NC3H7OH=>C4H6+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	1.0800e+05
2.000 6897.45	
C4H71-4+NC3H7OH=>C4H8-1+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	5.4000e+04
2.000 9181.05	
C4H71-3+NC3H7OH=>C4H8-2+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	1.3600e+05
2.000 16763.05	
IC4H7+NC3H7OH=>IC4H8+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	1.0800e+05
2.000 16763.05	
C4H3+NC3H7OH=>C4H4+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	1.6360e+05
2.000 7661.72	
C6H5+NC3H7OH=>C6H6+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	1.4800e+08
1.000 3864.72	
O+NC3H7OH=>OH+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	9.4000e+06
2.000 4691.70	
O2+NC3H7OH=>HO2+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	6.8000e+06
2.000 48272.65	

OH+NC3H7OH=>H2O+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	6.0000e+09
1.000 1540.75	
HO2+NC3H7OH=>H2O2+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	3.2000e+06
2.000 19190.53	
CH3O+NC3H7OH=>CH3OH+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	1.7120e+05
2.000 3572.50	
CH2OH+NC3H7OH=>CH3OH+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	1.1320e+05
2.000 13045.84	
HCO+NC3H7OH=>CH2O+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	5.0400e+05
2.000 15279.95	
CH3CO+NC3H7OH=>CH3CHO+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	5.4000e+05
2.000 17080.28	
CH2CHO+NC3H7OH=>CH3CHO+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	9.2000e+04
2.000 14430.30	
C3H3+NC3H7OH=>C3H4-A+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	1.0800e+05
2.000 17080.28	
HCCO+NC3H7OH=>CH2CO+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	1.7120e+05
2.000 7661.72	
CH3O2+NC3H7OH=>CH3O2H+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	3.0400e+05
2.000 15598.15	
C2H5O2+NC3H7OH=>C2H5O2H+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	3.0400e+05
2.000 15598.15	
NC3H7O2+NC3H7OH=>C3H7OOH+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	3.0400e+05
2.000 15598.15	
IC3H7O2+NC3H7OH=>C3H7OOH+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	3.0400e+05
2.000 15598.15	
HCO3+NC3H7OH=>HCO3H+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	1.3600e+05
2.000 9072.89	
CH3CO3+NC3H7OH=>CH3CO3H+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	1.3600e+05
2.000 9072.89	
CH3COCH2+NC3H7OH=>CH3COCH3+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	9.2000e+04
2.000 10690.26	
NC3H7OH+C6H5O=>0.75CH2CH2CH2OH+0.25CH3CH2CH2O+C6H5OH	1.0800e+05
2.000 15492.11	
NC3H7OH+C5H7=>0.75CH2CH2CH2OH+0.25CH3CH2CH2O+LC5H8	1.0800e+05
2.000 18136.38	
NC3H7OH+C7H7=>0.75CH2CH2CH2OH+0.25CH3CH2CH2O+C7H8	5.4000e+04
2.000 19190.53	

NC3H7OH+CH3C6H4=>0.75CH2CH2CH2OH+0.25CH3CH2CH2O+C7H8	1.4800e+08
1.000 3864.72	
NC3H7OH+RCRESOLO=>0.75CH2CH2CH2OH+0.25CH3CH2CH2O+CRESOL	1.0800e+05
2.000 15810.16	
NC3H7OH+C10H7=>C10H8+0.75CH2CH2CH2OH+0.25CH3CH2CH2O	1.4800e+08
1.000 3864.72	
NC3H7OH+INDENYL=>0.75CH2CH2CH2OH+0.25CH3CH2CH2O+INDENE	5.2000e+04
2.000 19190.53	
NC3H7OH+C10H6CH3=>0.75CH2CH2CH2OH+0.25CH3CH2CH2O+C10H7CH3	1.4800e+08
1.000 3864.72	
H+NC3H7OH=>H2+CH3CHCH2OH	6.0000e+06
2.000 4000.00	
CH3+NC3H7OH=>CH4+CH3CHCH2OH	6.0000e+04
2.000 5000.00	
C2H3+NC3H7OH=>C2H4+CH3CHCH2OH	1.3560e+05
2.000 3900.00	
C2H5+NC3H7OH=>C2H6+CH3CHCH2OH	4.0000e+04
2.000 6700.00	
NC3H7+NC3H7OH=>C3H8+CH3CHCH2OH	2.7000e+04
2.000 6700.00	
IC3H7+NC3H7OH=>C3H8+CH3CHCH2OH	2.7000e+04
2.000 9900.00	
C3H5-S+NC3H7OH=>C3H6+CH3CHCH2OH	5.4000e+04
2.000 4500.00	
C3H5-T+NC3H7OH=>C3H6+CH3CHCH2OH	5.4000e+04
2.000 4500.00	
C3H5-A+NC3H7OH=>C3H6+CH3CHCH2OH	1.0780e+05
2.000 12800.00	
C4H5+NC3H7OH=>C4H6+CH3CHCH2OH	5.4000e+04
2.000 4500.00	
C4H71-4+NC3H7OH=>C4H8-1+CH3CHCH2OH	2.7000e+04
2.000 6600.00	
C4H71-3+NC3H7OH=>C4H8-2+CH3CHCH2OH	6.8000e+04
2.000 13700.00	
IC4H7+NC3H7OH=>IC4H8+CH3CHCH2OH	5.4000e+04
2.000 13700.00	
C4H3+NC3H7OH=>C4H4+CH3CHCH2OH	8.1800e+04
2.000 5200.00	

C6H5+NC3H7OH=>C6H6+CH3CHCH2OH	7.4000e+07
1.000 2000.00	
O+NC3H7OH=>OH+CH3CHCH2OH	4.7000e+06
2.000 2500.00	
O2+NC3H7OH=>HO2+CH3CHCH2OH	3.4000e+06
2.000 44000.00	
OH+NC3H7OH=>H2O+CH3CHCH2OH	3.0000e+09
1.000 50.00	
HO2+NC3H7OH=>H2O2+CH3CHCH2OH	1.6000e+06
2.000 16000.00	
CH3O+NC3H7OH=>CH3OH+CH3CHCH2OH	8.5600e+04
2.000 1500.00	
CH2OH+NC3H7OH=>CH3OH+CH3CHCH2OH	5.6600e+04
2.000 10200.00	
HCO+NC3H7OH=>CH2O+CH3CHCH2OH	2.5200e+05
2.000 12300.00	
CH3CO+NC3H7OH=>CH3CHO+CH3CHCH2OH	2.7000e+05
2.000 14000.00	
CH2CHO+NC3H7OH=>CH3CHO+CH3CHCH2OH	4.6000e+04
2.000 11500.00	
C3H3+NC3H7OH=>C3H4-A+CH3CHCH2OH	5.4000e+04
2.000 14000.00	
HCCO+NC3H7OH=>CH2CO+CH3CHCH2OH	8.5600e+04
2.000 5200.00	
CH3O2+NC3H7OH=>CH3O2H+CH3CHCH2OH	1.5200e+05
2.000 12600.00	
C2H5O2+NC3H7OH=>C2H5O2H+CH3CHCH2OH	1.5200e+05
2.000 12600.00	
NC3H7O2+NC3H7OH=>C3H7OOH+CH3CHCH2OH	1.5200e+05
2.000 12600.00	
IC3H7O2+NC3H7OH=>C3H7OOH+CH3CHCH2OH	1.5200e+05
2.000 12600.00	
HCO3+NC3H7OH=>HCO3H+CH3CHCH2OH	6.8000e+04
2.000 6500.00	
CH3CO3+NC3H7OH=>CH3CO3H+CH3CHCH2OH	6.8000e+04
2.000 6500.00	
CH3COCH2+NC3H7OH=>CH3COCH3+CH3CHCH2OH	4.6000e+04
2.000 8000.00	

NC3H7OH+C6H5O=>CH3CHCH2OH+C6H5OH	5.4000e+04
2.000 12500.00	
NC3H7OH+C5H7=>CH3CHCH2OH+LC5H8	5.4000e+04
2.000 15000.00	
NC3H7OH+C7H7=>CH3CHCH2OH+C7H8	2.7000e+04
2.000 16000.00	
NC3H7OH+CH3C6H4=>CH3CHCH2OH+C7H8	7.4000e+07
1.000 2000.00	
NC3H7OH+RCRESOLO=>CH3CHCH2OH+CRESOL	5.4000e+04
2.000 12800.00	
NC3H7OH+C10H7=>C10H8+CH3CHCH2OH	7.4000e+07
1.000 2000.00	
NC3H7OH+INDENYL=>CH3CHCH2OH+INDENE	2.6000e+04
2.000 16000.00	
NC3H7OH+C10H6CH3=>CH3CHCH2OH+C10H7CH3	7.4000e+07
1.000 2000.00	
H+NC3H7OH=>H2+CH3CH2CHOH	9.0000e+06
2.000 4000.00	
CH3+NC3H7OH=>CH4+CH3CH2CHOH	9.0000e+04
2.000 5000.00	
C2H3+NC3H7OH=>C2H4+CH3CH2CHOH	2.0340e+05
2.000 3900.00	
C2H5+NC3H7OH=>C2H6+CH3CH2CHOH	6.0000e+04
2.000 6700.00	
NC3H7+NC3H7OH=>C3H8+CH3CH2CHOH	4.0500e+04
2.000 6700.00	
IC3H7+NC3H7OH=>C3H8+CH3CH2CHOH	4.0500e+04
2.000 9900.00	
C3H5-S+NC3H7OH=>C3H6+CH3CH2CHOH	8.1000e+04
2.000 4500.00	
C3H5-T+NC3H7OH=>C3H6+CH3CH2CHOH	8.1000e+04
2.000 4500.00	
C3H5-A+NC3H7OH=>C3H6+CH3CH2CHOH	1.6170e+05
2.000 12800.00	
C4H5+NC3H7OH=>C4H6+CH3CH2CHOH	8.1000e+04
2.000 4500.00	
C4H71-4+NC3H7OH=>C4H8-1+CH3CH2CHOH	4.0500e+04
2.000 6600.00	

C4H71-3+NC3H7OH=>C4H8-2+CH3CH2CHOH	1.0200e+05
2.000 13700.00	
IC4H7+NC3H7OH=>IC4H8+CH3CH2CHOH	8.1000e+04
2.000 13700.00	
C4H3+NC3H7OH=>C4H4+CH3CH2CHOH	1.2270e+05
2.000 5200.00	
C6H5+NC3H7OH=>C6H6+CH3CH2CHOH	1.1100e+08
1.000 2000.00	
O+NC3H7OH=>OH+CH3CH2CHOH	7.0500e+06
2.000 2500.00	
O2+NC3H7OH=>HO2+CH3CH2CHOH	5.1000e+06
2.000 44000.00	
OH+NC3H7OH=>H2O+CH3CH2CHOH	4.5000e+09
1.000 50.00	
CH3O+NC3H7OH=>CH3OH+CH3CH2CHOH	1.2840e+05
2.000 1500.00	
CH2OH+NC3H7OH=>CH3OH+CH3CH2CHOH	8.4900e+04
2.000 10200.00	
HCO+NC3H7OH=>CH2O+CH3CH2CHOH	3.7800e+05
2.000 12300.00	
CH3CO+NC3H7OH=>CH3CHO+CH3CH2CHOH	4.0500e+05
2.000 14000.00	
CH2CHO+NC3H7OH=>CH3CHO+CH3CH2CHOH	6.9000e+04
2.000 11500.00	
C3H3+NC3H7OH=>C3H4-A+CH3CH2CHOH	8.1000e+04
2.000 14000.00	
HCCO+NC3H7OH=>CH2CO+CH3CH2CHOH	1.2840e+05
2.000 5200.00	
CH3O2+NC3H7OH=>CH3O2H+CH3CH2CHOH	2.2800e+05
2.000 12600.00	
C2H5O2+NC3H7OH=>C2H5O2H+CH3CH2CHOH	2.2800e+05
2.000 12600.00	
NC3H7O2+NC3H7OH=>C3H7OOH+CH3CH2CHOH	2.2800e+05
2.000 12600.00	
IC3H7O2+NC3H7OH=>C3H7OOH+CH3CH2CHOH	2.2800e+05
2.000 12600.00	
HCO3+NC3H7OH=>HCO3H+CH3CH2CHOH	1.0200e+05
2.000 6500.00	

CH3CO3+NC3H7OH=>CH3CO3H+CH3CH2CHOH	1.0200e+05
2.000        6500.00	
CH3COCH2+NC3H7OH=>CH3COCH3+CH3CH2CHOH	6.9000e+04
2.000        8000.00	
NC3H7OH+C6H5O=>CH3CH2CHOH+C6H5OH	8.1000e+04
2.000        12500.00	
NC3H7OH+C5H7=>CH3CH2CHOH+LC5H8	8.1000e+04
2.000        15000.00	
NC3H7OH+C7H7=>CH3CH2CHOH+C7H8	4.0500e+04
2.000        16000.00	
NC3H7OH+CH3C6H4=>CH3CH2CHOH+C7H8	1.1100e+08
1.000        2000.00	
NC3H7OH+RCRESOLO=>CH3CH2CHOH+CRESOL	8.1000e+04
2.000        12800.00	
NC3H7OH+C10H7=>C10H8+CH3CH2CHOH	1.1100e+08
1.000        2000.00	
NC3H7OH+INDENYL=>CH3CH2CHOH+INDENE	3.9000e+04
2.000        16000.00	
NC3H7OH+C10H6CH3=>CH3CH2CHOH+C10H7CH3	1.1100e+08
1.000        2000.00	
H+C3H5OH=>H2+0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO	6.0000e+06
2.000        2573.61	
CH3+C3H5OH=>0.7H+CH4+0.3CH2OH+0.3C2H2+0.7C2H3CHO	6.0000e+04
2.000        3516.32	
C2H3+C3H5OH=>0.7H+0.3CH2OH+C2H4+0.3C2H2+0.7C2H3CHO	1.3560e+05
2.000        2479.60	
C2H5+C3H5OH=>0.7H+0.3CH2OH+C2H6+0.3C2H2+0.7C2H3CHO	4.0000e+04
2.000        5128.01	
NC3H7+C3H5OH=>0.7H+0.3CH2OH+0.3C2H2+C3H8+0.7C2H3CHO	2.7000e+04
2.000        5128.01	
IC3H7+C3H5OH=>0.7H+0.3CH2OH+0.3C2H2+C3H8+0.7C2H3CHO	2.7000e+04
2.000        8184.45	
C3H5-S+C3H5OH=>0.7H+0.3CH2OH+0.3C2H2+C3H6+0.7C2H3CHO	5.4000e+04
2.000        3044.41	
C3H5-T+C3H5OH=>0.7H+0.3CH2OH+0.3C2H2+C3H6+0.7C2H3CHO	5.4000e+04
2.000        3044.41	
C3H5-A+C3H5OH=>0.7H+0.3CH2OH+0.3C2H2+C3H6+0.7C2H3CHO	1.0780e+05
2.000        10972.41	



C3H5OH+C4H5=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+C4H6	5.4000e+04
2.000 3044.41	
C3H5OH+C4H71-4=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+C4H8-1	2.7000e+04
2.000 5032.93	
C3H5OH+C4H71-3=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+C4H8-2	6.8000e+04
2.000 11840.29	
C3H5OH+IC4H7=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+IC4H8	5.4000e+04
2.000 11840.29	
C3H5OH+C4H3=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+C4H4	8.1800e+04
2.000 3705.38	
C3H5OH+C6H5=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+C6H6	7.4000e+07
1.000 867.85	
O+C3H5OH=>0.7H+OH+0.3CH2OH+0.3C2H2+0.7C2H3CHO	4.7000e+06
2.000 1169.32	
O2+C3H5OH=>0.7H+HO2+0.3CH2OH+0.3C2H2+0.7C2H3CHO	3.4000e+06
2.000 41405.89	
OH+C3H5OH=>0.7H+H2O+0.3CH2OH+0.3C2H2+0.7C2H3CHO	3.0000e+09
1.000 -855.10	
HO2+C3H5OH=>0.7H+H2O2+0.3CH2OH+0.3C2H2+0.7C2H3CHO	1.6000e+06
2.000 14062.89	
CH3O+C3H5OH=>0.7H+CH3OH+0.3CH2OH+0.3C2H2+0.7C2H3CHO	8.5600e+04
2.000 241.70	
CH2OH+C3H5OH=>0.7H+CH3OH+0.3CH2OH+0.3C2H2+0.7C2H3CHO	5.6600e+04
2.000 8472.17	
HCO+C3H5OH=>0.7H+0.3CH2OH+CH2O+0.3C2H2+0.7C2H3CHO	2.5200e+05
2.000 10490.75	
CH3CO+C3H5OH=>0.7H+0.3CH2OH+0.3C2H2+CH3CHO+0.7C2H3CHO	2.7000e+05
2.000 12129.83	
CH2CHO+C3H5OH=>0.7H+0.3CH2OH+0.3C2H2+CH3CHO+0.7C2H3CHO	4.6000e+04
2.000 9720.89	
C3H5OH+C3H3=>0.7H+0.3CH2OH+0.3C2H2+C3H4-A+0.7C2H3CHO	5.4000e+04
2.000 12129.83	
HCCO+C3H5OH=>0.7H+0.3CH2OH+0.3C2H2+CH2CO+0.7C2H3CHO	8.5600e+04
2.000 3705.38	
CH3O2+C3H5OH=>0.7H+CH3O2H+0.3CH2OH+0.3C2H2+0.7C2H3CHO	1.5200e+05
2.000 10779.70	
C2H5O2+C3H5OH=>0.7H+0.3CH2OH+C2H5O2H+0.3C2H2+0.7C2H3CHO	1.5200e+05
2.000 10779.70	

C3H5OH+NC3H7O2=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+C3H7OOH	1.5200e+05
2.000 10779.70	
C3H5OH+IC3H7O2=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+C3H7OOH	1.5200e+05
2.000 10779.70	
C3H5OH+HCO3=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+HCO3H	6.8000e+04
2.000 4937.89	
CH3CO3+C3H5OH=>0.7H+0.3CH2OH+0.3C2H2+CH3CO3H+0.7C2H3CHO	6.8000e+04
2.000 4937.89	
C3H5OH+CH3COCH2=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+CH3COCH3	4.6000e+04
2.000 6366.63	
C3H5OH+C6H5O=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+C6H5OH	5.4000e+04
2.000 10683.36	
C3H5OH+C5H7=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+LC5H8	5.4000e+04
2.000 13095.77	
C3H5OH+C7H7=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+C7H8	2.7000e+04
2.000 14062.89	
C3H5OH+CH3C6H4=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+C7H8	7.4000e+07
1.000 867.85	
C3H5OH+RCRESOLO=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+CRE SOL	5.4000e+04
2.000 10972.41	
C3H5OH+C10H7=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+C10H8	7.4000e+07
1.000 867.85	
C3H5OH+INDENYL=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+INDENE	2.6000e+04
2.000 14062.89	
C3H5OH+C10H6CH3=>0.7H+0.3CH2OH+0.3C2H2+0.7C2H3CHO+C10H7CH3	7.4000e+07
1.000 867.85	
IC3H7OH=CH3+SC2H4OH	6.0000e+16
0.000 88000.00	
IC3H7OH=OH+IC3H7	1.5000e+16
0.000 93200.00	
IC3H7OH=H2O+C3H6	2.0000e+14
0.000 67100.00	
IC3H7OH=H2+CH3COCH3	5.0000e+13
0.000 69500.00	
H+CH3COHCH3=IC3H7OH	5.0000e+13
0.000 0.00	
H+CH2CHOHCH3=IC3H7OH	5.0000e+13
0.000 0.00	

CH3COHCH3=H+CH3COCH3	6.0000e+13
0.000 36000.00	
CH2CHOHCH3=CH3+CH3CHO	3.0000e+13
0.000 36000.00	
CH2CHOHCH3=H+CH3COCH3	6.0000e+13
0.000 35000.00	
CH2CHOHCH3=OH+C3H6	3.0000e+13
0.000 37000.00	
O2+CH3COHCH3=HO2+CH3COCH3	1.5000e+12
0.000 5000.00	
O2+CH2CHOHCH3=HO2+CH3COCH3	1.5000e+12
0.000 5000.00	
H+IC3H7OH=>H2+CH3+CH3CHO	3.0000e+06
2.000 6349.34	
CH3+IC3H7OH=>CH4+CH3+CH3CHO	3.0000e+04
2.000 7443.70	
C2H3+IC3H7OH=>CH3+C2H4+CH3CHO	6.7800e+04
2.000 6239.48	
C2H5+IC3H7OH=>CH3+C2H6+CH3CHO	2.0000e+04
2.000 9289.16	
NC3H7+IC3H7OH=>CH3+CH3CHO+C3H8	1.3500e+04
2.000 9289.16	
IC3H7+IC3H7OH=>CH3+CH3CHO+C3H8	1.3500e+04
2.000 12725.62	
C3H5-S+IC3H7OH=>CH3+CH3CHO+C3H6	2.7000e+04
2.000 6897.45	
C3H5-T+IC3H7OH=>CH3+CH3CHO+C3H6	2.7000e+04
2.000 6897.45	
C3H5-A+IC3H7OH=>CH3+CH3CHO+C3H6	5.3900e+04
2.000 15810.16	
C4H5+IC3H7OH=>CH3+CH3CHO+C4H6	2.7000e+04
2.000 6897.45	
C4H71-4+IC3H7OH=>CH3+CH3CHO+C4H8-1	1.3500e+04
2.000 9181.05	
C4H71-3+IC3H7OH=>CH3+CH3CHO+C4H8-2	3.4000e+04
2.000 16763.05	
IC4H7+IC3H7OH=>CH3+CH3CHO+IC4H8	2.7000e+04
2.000 16763.05	

C4H3+IC3H7OH=>CH3+CH3CHO+C4H4	4.0900e+04
2.000 7661.72	
C6H5+IC3H7OH=>CH3+CH3CHO+C6H6	3.7000e+07
1.000 3864.72	
O+IC3H7OH=>OH+CH3+CH3CHO	2.3500e+06
2.000 4691.70	
O2+IC3H7OH=>HO2+CH3+CH3CHO	1.7000e+06
2.000 48272.65	
OH+IC3H7OH=>H2O+CH3+CH3CHO	1.5000e+09
1.000 1540.75	
HO2+IC3H7OH=>H2O2+CH3+CH3CHO	8.0000e+05
2.000 19190.53	
CH3O+IC3H7OH=>CH3+CH3OH+CH3CHO	4.2800e+04
2.000 3572.50	
CH2OH+IC3H7OH=>CH3+CH3OH+CH3CHO	2.8300e+04
2.000 13045.84	
HCO+IC3H7OH=>CH3+CH2O+CH3CHO	1.2600e+05
2.000 15279.95	
CH3CO+IC3H7OH=>CH3+2CH3CHO	1.3500e+05
2.000 17080.28	
CH2CHO+IC3H7OH=>CH3+2CH3CHO	2.3000e+04
2.000 14430.30	
C3H3+IC3H7OH=>CH3+CH3CHO+C3H4-A	2.7000e+04
2.000 17080.28	
HCCO+IC3H7OH=>CH3+CH3CHO+CH2CO	4.2800e+04
2.000 7661.72	
CH3O2+IC3H7OH=>CH3+CH3O2H+CH3CHO	7.6000e+04
2.000 15598.15	
C2H5O2+IC3H7OH=>CH3+C2H5O2H+CH3CHO	7.6000e+04
2.000 15598.15	
NC3H7O2+IC3H7OH=>CH3+CH3CHO+C3H7OOH	7.6000e+04
2.000 15598.15	
IC3H7O2+IC3H7OH=>CH3+CH3CHO+C3H7OOH	7.6000e+04
2.000 15598.15	
HCO3+IC3H7OH=>CH3+CH3CHO+HCO3H	3.4000e+04
2.000 9072.89	
CH3CO3+IC3H7OH=>CH3+CH3CHO+CH3CO3H	3.4000e+04
2.000 9072.89	

CH3COCH2+IC3H7OH=>CH3+CH3CHO+CH3COCH3 2.000 10690.26	2.3000e+04
IC3H7OH+C6H5O=>CH3+CH3CHO+C6H5OH 2.000 15492.11	2.7000e+04
IC3H7OH+C5H7=>CH3+CH3CHO+LC5H8 2.000 18136.38	2.7000e+04
IC3H7OH+C7H7=>CH3+CH3CHO+C7H8 2.000 19190.53	1.3500e+04
IC3H7OH+CH3C6H4=>CH3+CH3CHO+C7H8 1.000 3864.72	3.7000e+07
IC3H7OH+RCRESOLO=>CH3+CH3CHO+CRESOL 2.000 15810.16	2.7000e+04
IC3H7OH+C10H7=>CH3+CH3CHO+C10H8 1.000 3864.72	3.7000e+07
IC3H7OH+INDENYL=>CH3+CH3CHO+INDENE 2.000 19190.53	1.3000e+04
IC3H7OH+C10H6CH3=>CH3+CH3CHO+C10H7CH3 1.000 3864.72	3.7000e+07
H+IC3H7OH=>H2+CH2CHOHCH3 2.000 6349.34	1.8000e+07
CH3+IC3H7OH=>CH4+CH2CHOHCH3 2.000 7443.70	1.8000e+05
C2H3+IC3H7OH=>C2H4+CH2CHOHCH3 2.000 6239.48	4.0680e+05
C2H5+IC3H7OH=>C2H6+CH2CHOHCH3 2.000 9289.16	1.2000e+05
NC3H7+IC3H7OH=>C3H8+CH2CHOHCH3 2.000 9289.16	8.1000e+04
IC3H7+IC3H7OH=>C3H8+CH2CHOHCH3 2.000 12725.62	8.1000e+04
C3H5-S+IC3H7OH=>C3H6+CH2CHOHCH3 2.000 6897.45	1.6200e+05
C3H5-T+IC3H7OH=>C3H6+CH2CHOHCH3 2.000 6897.45	1.6200e+05
C3H5-A+IC3H7OH=>C3H6+CH2CHOHCH3 2.000 15810.16	3.2340e+05
C4H5+IC3H7OH=>C4H6+CH2CHOHCH3 2.000 6897.45	1.6200e+05

C4H71-4+IC3H7OH=>C4H8-1+CH2CHOHCH3 2.000 9181.05	8.1000e+04
C4H71-3+IC3H7OH=>C4H8-2+CH2CHOHCH3 2.000 16763.05	2.0400e+05
IC4H7+IC3H7OH=>IC4H8+CH2CHOHCH3 2.000 16763.05	1.6200e+05
C4H3+IC3H7OH=>C4H4+CH2CHOHCH3 2.000 7661.72	2.4540e+05
C6H5+IC3H7OH=>C6H6+CH2CHOHCH3 1.000 3864.72	2.2200e+08
O+IC3H7OH=>OH+CH2CHOHCH3 2.000 4691.70	1.4100e+07
O2+IC3H7OH=>HO2+CH2CHOHCH3 2.000 48272.65	1.0200e+07
OH+IC3H7OH=>H2O+CH2CHOHCH3 1.000 1540.75	9.0000e+09
HO2+IC3H7OH=>H2O2+CH2CHOHCH3 2.000 19190.53	4.8000e+06
CH3O+IC3H7OH=>CH3OH+CH2CHOHCH3 2.000 3572.50	2.5680e+05
CH2OH+IC3H7OH=>CH3OH+CH2CHOHCH3 2.000 13045.84	1.6980e+05
HCO+IC3H7OH=>CH2O+CH2CHOHCH3 2.000 15279.95	7.5600e+05
CH3CO+IC3H7OH=>CH3CHO+CH2CHOHCH3 2.000 17080.28	8.1000e+05
CH2CHO+IC3H7OH=>CH3CHO+CH2CHOHCH3 2.000 14430.30	1.3800e+05
C3H3+IC3H7OH=>C3H4-A+CH2CHOHCH3 2.000 17080.28	1.6200e+05
HCCO+IC3H7OH=>CH2CO+CH2CHOHCH3 2.000 7661.72	2.5680e+05
CH3O2+IC3H7OH=>CH3O2H+CH2CHOHCH3 2.000 15598.15	4.5600e+05
C2H5O2+IC3H7OH=>C2H5O2H+CH2CHOHCH3 2.000 15598.15	4.5600e+05
NC3H7O2+IC3H7OH=>C3H7OOH+CH2CHOHCH3 2.000 15598.15	4.5600e+05

IC3H7O2+IC3H7OH=>C3H7OOH+CH2CHOHCH3	4.5600e+05
2.000 15598.15	
HCO3+IC3H7OH=>HCO3H+CH2CHOHCH3	2.0400e+05
2.000 9072.89	
CH3CO3+IC3H7OH=>CH3CO3H+CH2CHOHCH3	2.0400e+05
2.000 9072.89	
CH3COCH2+IC3H7OH=>CH3COCH3+CH2CHOHCH3	1.3800e+05
2.000 10690.26	
IC3H7OH+C6H5O=>CH2CHOHCH3+C6H5OH	1.6200e+05
2.000 15492.11	
IC3H7OH+C5H7=>CH2CHOHCH3+LC5H8	1.6200e+05
2.000 18136.38	
IC3H7OH+C7H7=>CH2CHOHCH3+C7H8	8.1000e+04
2.000 19190.53	
IC3H7OH+CH3C6H4=>CH2CHOHCH3+C7H8	2.2200e+08
1.000 3864.72	
IC3H7OH+RCRESOLO=>CH2CHOHCH3+CRESOL	1.6200e+05
2.000 15810.16	
IC3H7OH+C10H7=>C10H8+CH2CHOHCH3	2.2200e+08
1.000 3864.72	
IC3H7OH+INDENYL=>CH2CHOHCH3+INDENE	7.8000e+04
2.000 19190.53	
IC3H7OH+C10H6CH3=>CH2CHOHCH3+C10H7CH3	2.2200e+08
1.000 3864.72	
H+IC3H7OH=>H2+CH3COHCH3	4.5000e+06
2.000 2825.33	
CH3+IC3H7OH=>CH4+CH3COHCH3	4.5000e+04
2.000 3778.15	
C2H3+IC3H7OH=>C2H4+CH3COHCH3	1.0170e+05
2.000 2730.26	
C2H5+IC3H7OH=>C2H6+CH3COHCH3	3.0000e+04
2.000 5405.42	
NC3H7+IC3H7OH=>C3H8+CH3COHCH3	2.0250e+04
2.000 5405.42	
IC3H7+IC3H7OH=>C3H8+CH3COHCH3	2.0250e+04
2.000 8487.19	
C3H5-S+IC3H7OH=>C3H6+CH3COHCH3	4.0500e+04
2.000 3301.28	

C3H5-T+IC3H7OH=>C3H6+CH3COHCH3	4.0500e+04
2.000 3301.28	
C3H5-A+IC3H7OH=>C3H6+CH3COHCH3	8.0850e+04
2.000 11294.92	
C4H5+IC3H7OH=>C4H6+CH3COHCH3	4.0500e+04
2.000 3301.28	
C4H71-4+IC3H7OH=>C4H8-1+CH3COHCH3	2.0250e+04
2.000 5309.47	
C4H71-3+IC3H7OH=>C4H8-2+CH3COHCH3	5.1000e+04
2.000 12168.47	
IC4H7+IC3H7OH=>IC4H8+CH3COHCH3	4.0500e+04
2.000 12168.47	
C4H3+IC3H7OH=>C4H4+CH3COHCH3	6.1350e+04
2.000 3969.14	
C6H5+IC3H7OH=>C6H6+CH3COHCH3	5.5500e+07
1.000 1067.64	
O+IC3H7OH=>OH+CH3COHCH3	3.5250e+06
2.000 1404.15	
O2+IC3H7OH=>HO2+CH3COHCH3	2.5500e+06
2.000 41863.68	
OH+IC3H7OH=>H2O+CH3COHCH3	2.2500e+09
1.000 -695.37	
HO2+IC3H7OH=>H2O2+CH3COHCH3	1.2000e+06
2.000 14404.74	
CH3O+IC3H7OH=>CH3OH+CH3COHCH3	6.4200e+04
2.000 463.75	
CH2OH+IC3H7OH=>CH3OH+CH3COHCH3	4.2450e+04
2.000 8777.08	
HCO+IC3H7OH=>CH2O+CH3COHCH3	1.8900e+05
2.000 10810.03	
CH3CO+IC3H7OH=>CH3CHO+CH3COHCH3	2.0250e+05
2.000 12459.86	
CH2CHO+IC3H7OH=>CH3CHO+CH3COHCH3	3.4500e+04
2.000 10034.85	
C3H3+IC3H7OH=>C3H4-A+CH3COHCH3	4.0500e+04
2.000 12459.86	
HCCO+IC3H7OH=>CH2CO+CH3COHCH3	6.4200e+04
2.000 3969.14	



CH3O2+IC3H7OH=>CH3O2H+CH3COHCH3	1.1400e+05	
2.000 11100.93		
C2H5O2+IC3H7OH=>C2H5O2H+CH3COHCH3	1.1400e+05	
2.000 11100.93		
NC3H7O2+IC3H7OH=>C3H7OOH+CH3COHCH3	1.1400e+05	
2.000 11100.93		
IC3H7O2+IC3H7OH=>C3H7OOH+CH3COHCH3	1.1400e+05	
2.000 11100.93		
HCO3+IC3H7OH=>HCO3H+CH3COHCH3	5.1000e+04	
2.000 5213.56		
CH3CO3+IC3H7OH=>CH3CO3H+CH3COHCH3	5.1000e+04	
2.000 5213.56		
CH3COCH2+IC3H7OH=>CH3COCH3+CH3COHCH3	3.4500e+04	
2.000 6654.87		
IC3H7OH+C6H5O=>CH3COHCH3+C6H5OH	4.0500e+04	
2.000 11003.95		
IC3H7OH+C5H7=>CH3COHCH3+LC5H8	4.0500e+04	
2.000 13431.81		
IC3H7OH+C7H7=>CH3COHCH3+C7H8	2.0250e+04	
2.000 14404.74		
IC3H7OH+CH3C6H4=>CH3COHCH3+C7H8	5.5500e+07	
1.000 1067.64		
IC3H7OH+RCRESOLO=>CH3COHCH3+CRESOL	4.0500e+04	
2.000 11294.92		
IC3H7OH+C10H7=>C10H8+CH3COHCH3	5.5500e+07	
1.000 1067.64		
IC3H7OH+INDENYL=>CH3COHCH3+INDENE	1.9500e+04	
2.000 14404.74		
IC3H7OH+C10H6CH3=>CH3COHCH3+C10H7CH3	5.5500e+07	
1.000 1067.64		
C3H7CHO=>CH3+HCO+C2H4	1.0900e+24	-
2.246 90369.30		
C3H7CHO=C2H5+CH2CHO	5.0400e+27	-
3.494 84479.10		
C3H7CHO=HCO+NC3H7	7.4850e+27	-
3.510 86757.50		
C3H7CHO=>H+CO+NC3H7	2.7150e+17	-
0.578 88995.00		

C3H7CHO=CO+C3H8 0.000 75000.00	1.0000e+14
C3H7CHO=C2H6+CH2CO 0.000 75000.00	1.0000e+14
OH+C3H7CHO=>H2O+CO+NC3H7 0.000 630.00	2.0000e+13
OH+C3H7CHO=>H2O+RALD4X 0.000 1700.00	2.0000e+13
H+C3H7CHO=>H2+CO+NC3H7 0.000 6360.00	1.6000e+14
HO2+C3H7CHO=>H2O2+CO+NC3H7 0.000 12460.00	5.0000e+12
HO2+C3H7CHO=>H2O2+RALD4X 0.000 15860.00	7.6000e+12
CH3+C3H7CHO=>CO+CH4+NC3H7 0.000 7234.20	1.0000e+12
RALD4X=>CH3+C2H3CHO 0.000 30000.00	1.0000e+14
RALD4X=>HCO+C3H6 0.000 30000.00	3.0000e+13
RALD4X=>C2H4+CH2CHO 0.000 30000.00	2.0000e+13
RALD4X=>CO+NC3H7 0.000 17500.00	6.0000e+10
C2H3+C3H7CHO=>CO+C2H4+NC3H7 2.000 2479.60	4.8816e+05
C2H5+C3H7CHO=>CO+C2H6+NC3H7 2.000 5128.01	1.4400e+05
NC3H7+C3H7CHO=>CO+C3H8+NC3H7 2.000 5128.01	9.7200e+04
IC3H7+C3H7CHO=>CO+C3H8+NC3H7 2.000 8184.45	9.7200e+04
C3H5-S+C3H7CHO=>CO+NC3H7+C3H6 2.000 3044.41	1.9440e+05
C3H5-T+C3H7CHO=>CO+NC3H7+C3H6 2.000 3044.41	1.9440e+05
C3H5-A+C3H7CHO=>CO+NC3H7+C3H6 2.000 10972.41	3.8808e+05

C4H5+C3H7CHO=>CO+NC3H7+C4H6	1.9440e+05
2.000 3044.41	
C4H71-4+C3H7CHO=>CO+NC3H7+C4H8-1	9.7200e+04
2.000 5032.93	
C4H71-3+C3H7CHO=>CO+NC3H7+C4H8-2	2.4480e+05
2.000 11840.29	
IC4H7+C3H7CHO=>CO+NC3H7+IC4H8	1.9440e+05
2.000 11840.29	
C4H3+C3H7CHO=>CO+NC3H7+C4H4	2.9448e+05
2.000 3705.38	
C6H5+C3H7CHO=>CO+NC3H7+C6H6	2.6640e+08
1.000 867.85	
O+C3H7CHO=>OH+CO+NC3H7	1.6920e+07
2.000 1169.32	
O2+C3H7CHO=>HO2+CO+NC3H7	1.2240e+07
2.000 41405.89	
CH3O+C3H7CHO=>CO+CH3OH+NC3H7	3.0816e+05
2.000 241.70	
CH2OH+C3H7CHO=>CO+CH3OH+NC3H7	2.0376e+05
2.000 8472.17	
HCO+C3H7CHO=>CO+CH2O+NC3H7	9.0720e+05
2.000 10490.75	
CH3CO+C3H7CHO=>CO+CH3CHO+NC3H7	9.7200e+05
2.000 12129.83	
CH2CHO+C3H7CHO=>CO+CH3CHO+NC3H7	1.6560e+05
2.000 9720.89	
C3H3+C3H7CHO=>CO+NC3H7+C3H4-A	1.9440e+05
2.000 12129.83	
HCCO+C3H7CHO=>CO+CH2CO+NC3H7	3.0816e+05
2.000 3705.38	
CH3O2+C3H7CHO=>CO+CH3O2H+NC3H7	5.4720e+05
2.000 10779.70	
C2H5O2+C3H7CHO=>CO+C2H5O2H+NC3H7	5.4720e+05
2.000 10779.70	
NC3H7O2+C3H7CHO=>CO+NC3H7+C3H7OOH	5.4720e+05
2.000 10779.70	
IC3H7O2+C3H7CHO=>CO+NC3H7+C3H7OOH	5.4720e+05
2.000 10779.70	

HCO3+C3H7CHO=>CO+NC3H7+HCO3H	2.4480e+05
2.000 4937.89	
CH3CO3+C3H7CHO=>CO+CH3CO3H+NC3H7	2.4480e+05
2.000 4937.89	
CH3COCH2+C3H7CHO=>CO+NC3H7+CH3COCH3	1.6560e+05
2.000 6366.63	
C3H7CHO+C6H5O=>CO+NC3H7+C6H5OH	1.9440e+05
2.000 10683.36	
C3H7CHO+C5H7=>CO+NC3H7+LC5H8	1.9440e+05
2.000 13095.77	
C3H7CHO+C7H7=>CO+NC3H7+C7H8	9.7200e+04
2.000 14062.89	
C3H7CHO+CH3C6H4=>CO+NC3H7+C7H8	2.6640e+08
1.000 867.85	
C3H7CHO+RCRESOLO=>CO+NC3H7+CRESOL	1.9440e+05
2.000 10972.41	
C3H7CHO+C10H7=>CO+NC3H7+C10H8	2.6640e+08
1.000 867.85	
C3H7CHO+INDENYL=>CO+NC3H7+INDENE	9.3600e+04
2.000 14062.89	
C3H7CHO+C10H6CH3=>CO+NC3H7+C10H7CH3	2.6640e+08
1.000 867.85	
H+C3H7CHO=>H2+RALD4X	1.6500e+07
2.000 4000.00	
CH3+C3H7CHO=>CH4+RALD4X	1.6500e+05
2.000 5000.00	
C2H3+C3H7CHO=>C2H4+RALD4X	3.7290e+05
2.000 3900.00	
C2H5+C3H7CHO=>C2H6+RALD4X	1.1000e+05
2.000 6700.00	
NC3H7+C3H7CHO=>C3H8+RALD4X	7.4250e+04
2.000 6700.00	
IC3H7+C3H7CHO=>C3H8+RALD4X	7.4250e+04
2.000 9900.00	
C3H5-S+C3H7CHO=>C3H6+RALD4X	1.4850e+05
2.000 4500.00	
C3H5-T+C3H7CHO=>C3H6+RALD4X	1.4850e+05
2.000 4500.00	

C3H5-A+C3H7CHO=>C3H6+RALD4X 2.000 12800.00	2.9645e+05
C4H5+C3H7CHO=>C4H6+RALD4X 2.000 4500.00	1.4850e+05
C4H71-4+C3H7CHO=>C4H8-1+RALD4X 2.000 6600.00	7.4250e+04
C4H71-3+C3H7CHO=>C4H8-2+RALD4X 2.000 13700.00	1.8700e+05
IC4H7+C3H7CHO=>IC4H8+RALD4X 2.000 13700.00	1.4850e+05
C4H3+C3H7CHO=>C4H4+RALD4X 2.000 5200.00	2.2495e+05
C6H5+C3H7CHO=>C6H6+RALD4X 1.000 2000.00	2.0350e+08
O+C3H7CHO=>OH+RALD4X 2.000 2500.00	1.2925e+07
O2+C3H7CHO=>HO2+RALD4X 2.000 44000.00	9.3500e+06
CH3O+C3H7CHO=>CH3OH+RALD4X 2.000 1500.00	2.3540e+05
CH2OH+C3H7CHO=>CH3OH+RALD4X 2.000 10200.00	1.5565e+05
HCO+C3H7CHO=>CH2O+RALD4X 2.000 12300.00	6.9300e+05
CH3CO+C3H7CHO=>CH3CHO+RALD4X 2.000 14000.00	7.4250e+05
CH2CHO+C3H7CHO=>CH3CHO+RALD4X 2.000 11500.00	1.2650e+05
C3H3+C3H7CHO=>C3H4-A+RALD4X 2.000 14000.00	1.4850e+05
HCCO+C3H7CHO=>CH2CO+RALD4X 2.000 5200.00	2.3540e+05
CH3O2+C3H7CHO=>CH3O2H+RALD4X 2.000 12600.00	4.1800e+05
C2H5O2+C3H7CHO=>C2H5O2H+RALD4X 2.000 12600.00	4.1800e+05
NC3H7O2+C3H7CHO=>C3H7OOH+RALD4X 2.000 12600.00	4.1800e+05

IC3H7O2+C3H7CHO=>C3H7OOH+RALD4X 2.000        12600.00	4.1800e+05
HCO3+C3H7CHO=>HCO3H+RALD4X 2.000        6500.00	1.8700e+05
CH3CO3+C3H7CHO=>CH3CO3H+RALD4X 2.000        6500.00	1.8700e+05
CH3COCH2+C3H7CHO=>CH3COCH3+RALD4X 2.000        8000.00	1.2650e+05
C3H7CHO+C6H5O=>RALD4X+C6H5OH 2.000        12500.00	1.4850e+05
C3H7CHO+C5H7=>RALD4X+LC5H8 2.000        15000.00	1.4850e+05
C3H7CHO+C7H7=>RALD4X+C7H8 2.000        16000.00	7.4250e+04
C3H7CHO+CH3C6H4=>RALD4X+C7H8 1.000        2000.00	2.0350e+08
C3H7CHO+RCRESOLO=>RALD4X+CRESOL 2.000        12800.00	1.4850e+05
C3H7CHO+C10H7=>C10H8+RALD4X 1.000        2000.00	2.0350e+08
C3H7CHO+INDENYL=>RALD4X+INDENE 2.000        16000.00	7.1500e+04
C3H7CHO+C10H6CH3=>RALD4X+C10H7CH3 1.000        2000.00	2.0350e+08
H+C3H5CHO=>H2+CO+C3H5-A 2.000        2573.61	1.2000e+07
CH3+C3H5CHO=>CO+CH4+C3H5-A 2.000        3516.32	1.2000e+05
C2H3+C3H5CHO=>CO+C2H4+C3H5-A 2.000        2479.60	2.7120e+05
C2H5+C3H5CHO=>CO+C2H6+C3H5-A 2.000        5128.01	8.0000e+04
NC3H7+C3H5CHO=>CO+C3H8+C3H5-A 2.000        5128.01	5.4000e+04
IC3H7+C3H5CHO=>CO+C3H8+C3H5-A 2.000        8184.45	5.4000e+04
C3H5-S+C3H5CHO=>CO+C3H6+C3H5-A 2.000        3044.41	1.0800e+05

C3H5-T+C3H5CHO=>CO+C3H6+C3H5-A	1.0800e+05
2.000 3044.41	
C3H5-A+C3H5CHO=>CO+C3H6+C3H5-A	2.1560e+05
2.000 10972.41	
C4H5+C3H5CHO=>CO+C3H5-A+C4H6	1.0800e+05
2.000 3044.41	
C4H71-4+C3H5CHO=>CO+C3H5-A+C4H8-1	5.4000e+04
2.000 5032.93	
C4H71-3+C3H5CHO=>CO+C3H5-A+C4H8-2	1.3600e+05
2.000 11840.29	
IC4H7+C3H5CHO=>CO+C3H5-A+IC4H8	1.0800e+05
2.000 11840.29	
C4H3+C3H5CHO=>CO+C3H5-A+C4H4	1.6360e+05
2.000 3705.38	
C6H5+C3H5CHO=>CO+C3H5-A+C6H6	1.4800e+08
1.000 867.85	
O+C3H5CHO=>OH+CO+C3H5-A	9.4000e+06
2.000 1169.32	
O2+C3H5CHO=>HO2+CO+C3H5-A	6.8000e+06
2.000 41405.89	
OH+C3H5CHO=>H2O+CO+C3H5-A	6.0000e+09
1.000 -855.10	
HO2+C3H5CHO=>H2O2+CO+C3H5-A	3.2000e+06
2.000 14062.89	
CH3O+C3H5CHO=>CO+CH3OH+C3H5-A	1.7120e+05
2.000 241.70	
CH2OH+C3H5CHO=>CO+CH3OH+C3H5-A	1.1320e+05
2.000 8472.17	
HCO+C3H5CHO=>CO+CH2O+C3H5-A	5.0400e+05
2.000 10490.75	
CH3CO+C3H5CHO=>CO+CH3CHO+C3H5-A	5.4000e+05
2.000 12129.83	
CH2CHO+C3H5CHO=>CO+CH3CHO+C3H5-A	9.2000e+04
2.000 9720.89	
C3H3+C3H5CHO=>CO+C3H5-A+C3H4-A	1.0800e+05
2.000 12129.83	
HCCO+C3H5CHO=>CO+CH2CO+C3H5-A	1.7120e+05
2.000 3705.38	

CH3O2+C3H5CHO=>CO+CH3O2H+C3H5-A	3.0400e+05
2.000 10779.70	
C2H5O2+C3H5CHO=>CO+C2H5O2H+C3H5-A	3.0400e+05
2.000 10779.70	
NC3H7O2+C3H5CHO=>CO+C3H5-A+C3H7OOH	3.0400e+05
2.000 10779.70	
IC3H7O2+C3H5CHO=>CO+C3H5-A+C3H7OOH	3.0400e+05
2.000 10779.70	
HCO3+C3H5CHO=>CO+C3H5-A+HCO3H	1.3600e+05
2.000 4937.89	
CH3CO3+C3H5CHO=>CO+CH3CO3H+C3H5-A	1.3600e+05
2.000 4937.89	
CH3COCH2+C3H5CHO=>CO+C3H5-A+CH3COCH3	9.2000e+04
2.000 6366.63	
C3H5CHO+C6H5O=>CO+C3H5-A+C6H5OH	1.0800e+05
2.000 10683.36	
C3H5CHO+C5H7=>CO+C3H5-A+LC5H8	1.0800e+05
2.000 13095.77	
C3H5CHO+C7H7=>CO+C3H5-A+C7H8	5.4000e+04
2.000 14062.89	
C3H5CHO+CH3C6H4=>CO+C3H5-A+C7H8	1.4800e+08
1.000 867.85	
C3H5CHO+RCRESOLO=>CO+C3H5-A+CRESOL	1.0800e+05
2.000 10972.41	
C3H5CHO+C10H7=>CO+C3H5-A+C10H8	1.4800e+08
1.000 867.85	
C3H5CHO+INDENYL=>CO+C3H5-A+INDENE	5.2000e+04
2.000 14062.89	
C3H5CHO+C10H6CH3=>CO+C3H5-A+C10H7CH3	1.4800e+08
1.000 867.85	
H+C3H5CHO=>H2+0.5CO+0.5C2H2+0.5CH2CHO+0.5C3H5-S	1.2000e+07
2.000 4000.00	
CH3+C3H5CHO=>0.5CO+CH4+0.5C2H2+0.5CH2CHO+0.5C3H5-S	1.2000e+05
2.000 5000.00	
C2H3+C3H5CHO=>0.5CO+C2H4+0.5C2H2+0.5CH2CHO+0.5C3H5-S	2.7120e+05
2.000 3900.00	
C2H5+C3H5CHO=>0.5CO+C2H6+0.5C2H2+0.5CH2CHO+0.5C3H5-S	8.0000e+04
2.000 6700.00	



NC3H7+C3H5CHO=>0.5CO+0.5C2H2+0.5CH2CHO+C3H8+0.5C3H5-S	5.4000e+04
2.000 6700.00	
IC3H7+C3H5CHO=>0.5CO+0.5C2H2+0.5CH2CHO+C3H8+0.5C3H5-S	5.4000e+04
2.000 9900.00	
C3H5-S+C3H5CHO=>0.5CO+0.5C2H2+0.5CH2CHO+C3H6+0.5C3H5-S	1.0800e+05
2.000 4500.00	
C3H5-T+C3H5CHO=>0.5CO+0.5C2H2+0.5CH2CHO+C3H6+0.5C3H5-S	1.0800e+05
2.000 4500.00	
C3H5-A+C3H5CHO=>0.5CO+0.5C2H2+0.5CH2CHO+C3H6+0.5C3H5-S	2.1560e+05
2.000 12800.00	
C4H5+C3H5CHO=>0.5CO+0.5C2H2+0.5CH2CHO+0.5C3H5-S+C4H6	1.0800e+05
2.000 4500.00	
C4H71-4+C3H5CHO=>0.5CO+0.5C2H2+0.5CH2CHO+0.5C3H5-S+C4H8-1	5.4000e+04
2.000 6600.00	
C4H71-3+C3H5CHO=>0.5CO+0.5C2H2+0.5CH2CHO+0.5C3H5-S+C4H8-2	1.3600e+05
2.000 13700.00	
IC4H7+C3H5CHO=>0.5CO+0.5C2H2+0.5CH2CHO+0.5C3H5-S+IC4H8	1.0800e+05
2.000 13700.00	
C4H3+C3H5CHO=>0.5CO+0.5C2H2+0.5CH2CHO+0.5C3H5-S+C4H4	1.6360e+05
2.000 5200.00	
C6H5+C3H5CHO=>0.5CO+0.5C2H2+0.5CH2CHO+0.5C3H5-S+C6H6	1.4800e+08
1.000 2000.00	
O+C3H5CHO=>OH+0.5CO+0.5C2H2+0.5CH2CHO+0.5C3H5-S	9.4000e+06
2.000 2500.00	
O2+C3H5CHO=>HO2+0.5CO+0.5C2H2+0.5CH2CHO+0.5C3H5-S	6.8000e+06
2.000 44000.00	
OH+C3H5CHO=>H2O+0.5CO+0.5C2H2+0.5CH2CHO+0.5C3H5-S	6.0000e+09
1.000 50.00	
HO2+C3H5CHO=>H2O2+0.5CO+0.5C2H2+0.5CH2CHO+0.5C3H5-S	3.2000e+06
2.000 16000.00	
CH3O+C3H5CHO=>0.5CO+CH3OH+0.5C2H2+0.5CH2CHO+0.5C3H5-S	1.7120e+05
2.000 1500.00	
CH2OH+C3H5CHO=>0.5CO+CH3OH+0.5C2H2+0.5CH2CHO+0.5C3H5-S	1.1320e+05
2.000 10200.00	
HCO+C3H5CHO=>0.5CO+CH2O+0.5C2H2+0.5CH2CHO+0.5C3H5-S	5.0400e+05
2.000 12300.00	
CH3CO+C3H5CHO=>0.5CO+0.5C2H2+CH3CHO+0.5CH2CHO+0.5C3H5-S	5.4000e+05
2.000 14000.00	

$\text{CH}_2\text{CHO} + \text{C}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_2 + \text{CH}_3\text{CHO} + 0.5\text{CH}_2\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S}$  9.2000e+04  
 2.000 11500.00

$\text{C}_3\text{H}_3 + \text{C}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_2 + 0.5\text{CH}_2\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S} + \text{C}_3\text{H}_4\text{-A}$  1.0800e+05  
 2.000 14000.00

$\text{HCCO} + \text{C}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_2 + 0.5\text{CH}_2\text{CHO} + \text{CH}_2\text{CO} + 0.5\text{C}_3\text{H}_5\text{-S}$  1.7120e+05  
 2.000 5200.00

$\text{CH}_3\text{O}_2 + \text{C}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + \text{CH}_3\text{O}_2\text{H} + 0.5\text{C}_2\text{H}_2 + 0.5\text{CH}_2\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S}$  3.0400e+05  
 2.000 12600.00

$\text{C}_2\text{H}_5\text{O}_2 + \text{C}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + \text{C}_2\text{H}_5\text{O}_2\text{H} + 0.5\text{C}_2\text{H}_2 + 0.5\text{CH}_2\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S}$  3.0400e+05  
 2.000 12600.00

$\text{NC}_3\text{H}_7\text{O}_2 + \text{C}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_2 + 0.5\text{CH}_2\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S} + \text{C}_3\text{H}_7\text{OOH}$  3.0400e+05  
 2.000 12600.00

$\text{IC}_3\text{H}_7\text{O}_2 + \text{C}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_2 + 0.5\text{CH}_2\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S} + \text{C}_3\text{H}_7\text{OOH}$  3.0400e+05  
 2.000 12600.00

$\text{HCO}_3 + \text{C}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_2 + 0.5\text{CH}_2\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S} + \text{HCO}_3\text{H}$  1.3600e+05  
 2.000 6500.00

$\text{CH}_3\text{CO}_3 + \text{C}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_2 + 0.5\text{CH}_2\text{CHO} + \text{CH}_3\text{CO}_3\text{H} + 0.5\text{C}_3\text{H}_5\text{-S}$  1.3600e+05  
 2.000 6500.00

$\text{CH}_3\text{COCH}_2 + \text{C}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_2 + 0.5\text{CH}_2\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S} + \text{CH}_3\text{COCH}_3$  9.2000e+04  
 2.000 8000.00

$\text{C}_3\text{H}_5\text{CHO} + \text{C}_6\text{H}_5\text{O} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_2 + 0.5\text{CH}_2\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S} + \text{C}_6\text{H}_5\text{OH}$  1.0800e+05  
 2.000 12500.00

$\text{C}_3\text{H}_5\text{CHO} + \text{C}_5\text{H}_7 \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_2 + 0.5\text{CH}_2\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S} + \text{LC}_5\text{H}_8$  1.0800e+05  
 2.000 15000.00

$\text{C}_3\text{H}_5\text{CHO} + \text{C}_7\text{H}_7 \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_2 + 0.5\text{CH}_2\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S} + \text{C}_7\text{H}_8$  5.4000e+04  
 2.000 16000.00

$\text{C}_3\text{H}_5\text{CHO} + \text{CH}_3\text{C}_6\text{H}_4 \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_2 + 0.5\text{CH}_2\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S} + \text{C}_7\text{H}_8$  1.4800e+08  
 1.000 2000.00

$\text{C}_3\text{H}_5\text{CHO} + \text{RCRESOLO} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_2 + 0.5\text{CH}_2\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S} + \text{CRESOL}$  1.0800e+05  
 2.000 12800.00

$\text{C}_3\text{H}_5\text{CHO} + \text{C}_{10}\text{H}_7 \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_2 + 0.5\text{CH}_2\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S} + \text{C}_{10}\text{H}_8$  1.4800e+08  
 1.000 2000.00

$\text{C}_3\text{H}_5\text{CHO} + \text{INDENYL} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_2 + 0.5\text{CH}_2\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S} + \text{INDENE}$  5.2000e+04  
 2.000 16000.00

$\text{C}_3\text{H}_5\text{CHO} + \text{C}_{10}\text{H}_6\text{CH}_3 \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_2 + 0.5\text{CH}_2\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S} + \text{C}_{10}\text{H}_7\text{CH}_3$  1.4800e+08  
 1.000 2000.00

$\text{O}_2 + \text{CH}_2\text{CH}_2\text{CH}_2\text{OH} \Rightarrow \text{RNC}_3\text{OHOOX}$  3.0000e+12  
 0.000 0.00

O2+CH3CHCH2OH=>RNC3OHOOX 0.000            0.00	1.0000e+12	
RNC3OHOOX=>O2+0.6CH3CHCH2OH+0.4CH2CH2CH2OH 0.000            30000.00	3.0000e+13	
RNC3OHOOX=>QNC3OHOOX 1.507            18449.00	1.2620e+06	
QNC3OHOOX=>RNC3OHOOX 0.293            12513.20	3.3620e+09	
O2+QNC3OHOOX=>ZNC3OHOOX 0.000            0.00	5.0000e+12	
ZNC3OHOOX=>O2+QNC3OHOOX 0.000            30000.00	3.0000e+13	
ZNC3OHOOX=>OH+KEHYNC3OH 1.507            18449.00	1.2620e+06	
RNC3OHOOX=>HO2+0.5C3H5OH+0.5C2H5CHO 7.500            39500.00	1.0000e+37	-
RNC3OHOOX=>OH+CH2O+CH3CHO 0.000            22000.00	1.0000e+10	
QNC3OHOOX=>0.5O2+OH+C3H6O 0.371            17120.70	1.6650e+10	
QNC3OHOOX=>HO2+C3H5OH 0.777            23198.00	5.6740e+10	
QNC3OHOOX=>HO2+CH2O+C2H4 0.000            22500.00	5.0000e+10	
QNC3OHOOX=>OH+CH2O+CH3CHO 0.864            23360.00	1.2230e+15	-
QNC3OHOOX=>H2O+HCO+CH3CHO 0.000            13000.00	4.0000e+10	
O2+QNC3OHOOX=>HO2+C3-OQOOH 0.000            3500.00	3.0000e+12	
KEHYNC3OH=>OH+0.6CO+CH2OH+0.6CH2O+0.4CHOCHO 0.000            42000.00	9.0000e+15	
O2+CH3CH2CHCH2OH=>RBU1OOX 0.000            0.00	1.0000e+12	
O2+CH3CHCH2CH2OH=>RBU1OOX 0.000            0.00	2.0000e+12	
O2+CH2CH2CH2CH2OH=>RBU1OOX 0.000            0.00	3.0000e+12	

RBU100X=>O2+0.3CH3CH2CHCH2OH+0.2CH2CH2CH2CH2OH+0.5CH3CHCH2CH2OH		
3.0000e+13	0.000	30000.00
RBU100X=>QBU100X		8.3640e+09
0.390	19621.30	
QBU100X=>RBU100X		3.5530e+05
1.596	11124.06	
O2+QBU100X=>ZBU100X		2.5000e+12
0.000	0.00	
ZBU100X=>O2+QBU100X		3.0000e+13
0.000	30000.00	
ZBU100X=>OH+KEHYBU1		8.3640e+09
0.390	19621.30	
RBU100X=>HO2+0.5C3H7CHO+0.5NC4H7OH		1.0000e+37 -
7.500	39500.00	
RBU100X=>OH+CH2O+C2H5CHO		1.0000e+10
0.000	22000.00	
QBU100X=>HO2+0.5C3H7CHO+0.5NC4H7OH		5.0500e+07
1.823	23182.10	
QBU100X=>OH+0.2CH2O+0.15C2H4+1.3CH3CHO+0.2C3H5OH+0.15CH3CO2H		1.0240e+16
-1.013	23327.45	
QBU100X=>0.5O2+OH+C4H8O		2.7750e+10
0.371	17120.70	
QBU100X=>H2O+HCO+C2H5CHO		4.0000e+10
0.000	13000.00	
O2+QBU100X=>HO2+NC4-OQOOH		3.0000e+12
0.000	3500.00	
KEHYBU1=>OH+0.6CH2OH+0.6CH2O+0.4CH3CHO+0.6CH2CO+0.4CH3OCO		1.7000e+15
0.000	41500.00	
KEHYBU1=>OH+0.5CO+0.5CH2O+0.5PC2H4OH+0.5CH3CO+0.5CH3CO2H		3.3000e+15
0.000	41500.00	
KEHYBU1=>OH+0.4PC2H4OH+0.6CH2CHO+0.4CHOCHO+0.6CH3CO2H		1.0000e+15
0.000	41500.00	
O2+RPENT1OHB=>RPENT1OOX		1.9000e+12
0.000	0.00	
RPENT1OOX=>O2+RPENT1OHB		3.0000e+13
0.000	30000.00	
RPENT1OOX=>QPENT1OOX		2.1640e+03
2.463	17204.05	

QPENT100X=>RPENT100X	5.9700e+03	
2.186      10839.18		
O2+QPENT100X=>ZPENT100X	1.9000e+12	
0.000      0.00		
ZPENT100X=>O2+QPENT100X	3.0000e+13	
0.000      30000.00		
ZPENT100X=>OH+KEHYP1OH	2.1640e+03	
2.463      17204.05		
RPENT100X=>HO2+0.5C5H9OH+0.5C4H9CHO	1.5000e+37	-
7.500      39500.00		
RPENT100X=>OH+CH2O+C3H7CHO	1.0000e+10	
0.000      22000.00		
QPENT100X=>0.5O2+OH+NC5H10-O	2.7750e+10	
0.371      17120.70		
QPENT100X=>HO2+0.5C5H9OH+0.5C4H9CHO	5.8800e+12	
0.480      27344.50		
QPENT100X=>OH+0.66CH3CHO+0.34HCOOH+0.66C3H5OH+0.34C4H8-1	4.4700e+16	-
1.335      23538.50		
QPENT100X=>OH+0.42CH2O+0.58C3H6+0.58CH3CO2H+0.42NC4H7OH	4.4700e+16	-
1.335      23538.50		
QPENT100X=>OH+0.5C2H4+0.5C2H4O1-2+0.5C2H5CHO+0.5CH2OHCOCH3	4.4700e+16	-
1.335      23538.50		
QPENT100X=>H2O+HCO+C3H7CHO	4.0000e+10	
0.000      13000.00		
O2+QPENT100X=>HO2+NC5-OQOOH	3.0000e+12	
0.000      3500.00		
KEHYP1OH=>OH+CH2OH+CH3CHO+CH2CO	2.0000e+15	
0.000      41500.00		
KEHYP1OH=>OH+0.5CO+0.5CH2O+0.5C2H5+0.5PC2H4OH+0.5CH2CO+0.5CH3CO2H		
2.0000e+15      0.000      41500.00		
KEHYP1OH=>OH+0.42PC2H4OH+0.58CH3COCH2+0.42CHOCH2CHO+0.58CH3CO2H		
2.0000e+15      0.000      41500.00		
O2+RESAN1OHB=>RC6OHOOX	1.3000e+12	
0.000      0.00		
RC6OHOOX=>O2+RESAN1OHB	3.0000e+13	
0.000      30000.00		
RC6OHOOX=>OH+CH2O+C4H9CHO	1.0000e+10	
0.000      22000.00		

RC6OHOOX=>HO2+ALDC6 7.500        39500.00	1.5000e+37    -
RC6OHOOX=>QC6OHOOX 2.463        17204.05	2.1640e+03
QC6OHOOX=>RC6OHOOX 2.186        10839.20	5.9700e+03
O2+QC6OHOOX=>ZC6OHOOX 0.000        0.00	1.3000e+12
ZC6OHOOX=>O2+QC6OHOOX 0.000        30000.00	3.0000e+13
ZC6OHOOX=>OH+KEHYC6OH 2.463        17204.05	2.1640e+03
QC6OHOOX=>HO2+ALDC6 0.480        27344.50	5.8800e+12
QC6OHOOX=>0.5O2+OH+0.5NC5H10-O+0.5NC7H14O 0.371        17120.70	2.7750e+10
QC6OHOOX=>OH+0.75CH3CHO+0.25C4H8-1+0.25CH3CO2H+0.5C3H7CHO+0.25NC4H7OH 1.3410e+17    -1.335        23538.50	
QC6OHOOX=>H2O+HCO+C4H9CHO 0.000        13000.00	4.0000e+10
O2+QC6OHOOX=>HO2+0.5NC5-OQOOH+0.5NC7-OQOOH 0.000        3500.00	3.0000e+12
KEHYC6OH=>OH+0.5CH2OH+0.5C2H5+CH2CO+0.5C2H5CHO+0.5CH3CO2H 0.000        41500.00	2.6000e+15
KEHYC6OH=>OH+PC2H4OH+0.4CH3CHO+0.4CH2CO+0.6C4H6O2 0.000        41500.00	2.6000e+15
KEHYC6OH=>OH+0.6CH2O+0.6CH2CO+0.4CHOCH2CHO+CH2CH2CH2OH 0.000        41500.00	8.0000e+14
O2+RALD3=>RALD3OO 0.000        0.00	4.0000e+12
RALD3OO=>O2+RALD3 0.000        31000.00	1.0000e+13
RALD3OO=QALD3OO 0.000        29100.00	1.8000e+12
QALD3OO=>0.75OH+CO+0.25C2H4O2H+0.75CH3CHO 0.000        24500.00	6.0000e+11
QALD3OO=>HO2+C2H3CHO 0.000        23000.00	1.0000e+14

QALD300=>OH+ETC3H4O2	1.0000e+12
0.000 18000.00	
O2+QALD300=>ZALD300	4.0000e+12
0.000 0.00	
ZALD300=>O2+QALD300	1.0000e+13
0.000 31000.00	
ZALD300=>OH+KEA3B3L	7.0000e+11
0.000 24600.00	
ZALD300=>OH+CO+HO2CH2CHO	1.0000e+11
0.000 18500.00	
KEA3B3L=>OH+HCO+CHOCHO	2.0000e+15
0.000 41000.00	
KEA3B3L=>OH+CO+CH2O+HCO	2.0000e+15
0.000 41000.00	
H+ETC3H4O2=>H2+0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO	7.5000e+06
2.000 4000.00	
CH3+ETC3H4O2=>0.8CO+CH4+0.2HCO+0.8CH2CHO+0.2CH2CO	7.5000e+04
2.000 5000.00	
C2H3+ETC3H4O2=>0.8CO+0.2HCO+C2H4+0.8CH2CHO+0.2CH2CO	1.6950e+05
2.000 3900.00	
C2H5+ETC3H4O2=>0.8CO+0.2HCO+C2H6+0.8CH2CHO+0.2CH2CO	5.0000e+04
2.000 6700.00	
NC3H7+ETC3H4O2=>0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO+C3H8	3.3750e+04
2.000 6700.00	
IC3H7+ETC3H4O2=>0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO+C3H8	3.3750e+04
2.000 9900.00	
C3H5-S+ETC3H4O2=>0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO+C3H6	6.7500e+04
2.000 4500.00	
C3H5-T+ETC3H4O2=>0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO+C3H6	6.7500e+04
2.000 4500.00	
C3H5-A+ETC3H4O2=>0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO+C3H6	1.3475e+05
2.000 12800.00	
C4H5+ETC3H4O2=>0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO+C4H6	6.7500e+04
2.000 4500.00	
C4H71-4+ETC3H4O2=>0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO+C4H8-1	3.3750e+04
2.000 6600.00	
C4H71-3+ETC3H4O2=>0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO+C4H8-2	8.5000e+04
2.000 13700.00	

IC4H7+ETC3H4O2=>0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO+IC4H8	6.7500e+04
2.000 13700.00	
C4H3+ETC3H4O2=>0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO+C4H4	1.0225e+05
2.000 5200.00	
C6H5+ETC3H4O2=>0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO+C6H6	9.2500e+07
1.000 2000.00	
O+ETC3H4O2=>OH+0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO	5.8750e+06
2.000 2500.00	
O2+ETC3H4O2=>HO2+0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO	4.2500e+06
2.000 44000.00	
OH+ETC3H4O2=>H2O+0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO	3.7500e+09
1.000 50.00	
HO2+ETC3H4O2=>H2O2+0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO	2.0000e+06
2.000 16000.00	
CH3O+ETC3H4O2=>0.8CO+CH3OH+0.2HCO+0.8CH2CHO+0.2CH2CO	1.0700e+05
2.000 1500.00	
CH2OH+ETC3H4O2=>0.8CO+CH3OH+0.2HCO+0.8CH2CHO+0.2CH2CO	7.0750e+04
2.000 10200.00	
HCO+ETC3H4O2=>0.8CO+CH2O+0.2HCO+0.8CH2CHO+0.2CH2CO	3.1500e+05
2.000 12300.00	
CH3CO+ETC3H4O2=>0.8CO+0.2HCO+CH3CHO+0.8CH2CHO+0.2CH2CO	3.3750e+05
2.000 14000.00	
CH2CHO+ETC3H4O2=>0.8CO+0.2HCO+CH3CHO+0.8CH2CHO+0.2CH2CO	5.7500e+04
2.000 11500.00	
C3H3+ETC3H4O2=>0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO+C3H4-A	6.7500e+04
2.000 14000.00	
HCCO+ETC3H4O2=>0.8CO+0.2HCO+0.8CH2CHO+1.2CH2CO	1.0700e+05
2.000 5200.00	
CH3O2+ETC3H4O2=>0.8CO+CH3O2H+0.2HCO+0.8CH2CHO+0.2CH2CO	1.9000e+05
2.000 12600.00	
C2H5O2+ETC3H4O2=>0.8CO+0.2HCO+C2H5O2H+0.8CH2CHO+0.2CH2CO	1.9000e+05
2.000 12600.00	
NC3H7O2+ETC3H4O2=>0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO+C3H7OOH	1.9000e+05
2.000 12600.00	
IC3H7O2+ETC3H4O2=>0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO+C3H7OOH	1.9000e+05
2.000 12600.00	
HCO3+ETC3H4O2=>0.8CO+0.2HCO+0.8CH2CHO+0.2CH2CO+HCO3H	8.5000e+04
2.000 6500.00	



$\text{CH}_3\text{CO}_3 + \text{ETC3H4O}_2 \Rightarrow 0.8\text{CO} + 0.2\text{HCO} + 0.8\text{CH}_2\text{CHO} + 0.2\text{CH}_2\text{CO} + \text{CH}_3\text{CO}_3\text{H}$  8.5000e+04  
 2.000 6500.00

$\text{CH}_3\text{COCH}_2 + \text{ETC3H4O}_2 \Rightarrow 0.8\text{CO} + 0.2\text{HCO} + 0.8\text{CH}_2\text{CHO} + 0.2\text{CH}_2\text{CO} + \text{CH}_3\text{COCH}_3$  5.7500e+04  
 2.000 8000.00

$\text{ETC3H4O}_2 + \text{C}_6\text{H}_5\text{O} \Rightarrow 0.8\text{CO} + 0.2\text{HCO} + 0.8\text{CH}_2\text{CHO} + 0.2\text{CH}_2\text{CO} + \text{C}_6\text{H}_5\text{OH}$  6.7500e+04  
 2.000 12500.00

$\text{ETC3H4O}_2 + \text{C}_5\text{H}_7 \Rightarrow 0.8\text{CO} + 0.2\text{HCO} + 0.8\text{CH}_2\text{CHO} + 0.2\text{CH}_2\text{CO} + \text{LC}_5\text{H}_8$  6.7500e+04  
 2.000 15000.00

$\text{ETC3H4O}_2 + \text{C}_7\text{H}_7 \Rightarrow 0.8\text{CO} + 0.2\text{HCO} + 0.8\text{CH}_2\text{CHO} + 0.2\text{CH}_2\text{CO} + \text{C}_7\text{H}_8$  3.3750e+04  
 2.000 16000.00

$\text{ETC3H4O}_2 + \text{CH}_3\text{C}_6\text{H}_4 \Rightarrow 0.8\text{CO} + 0.2\text{HCO} + 0.8\text{CH}_2\text{CHO} + 0.2\text{CH}_2\text{CO} + \text{C}_7\text{H}_8$  9.2500e+07  
 1.000 2000.00

$\text{ETC3H4O}_2 + \text{RCRESOLO} \Rightarrow 0.8\text{CO} + 0.2\text{HCO} + 0.8\text{CH}_2\text{CHO} + 0.2\text{CH}_2\text{CO} + \text{CRESOL}$  6.7500e+04  
 2.000 12800.00

$\text{ETC3H4O}_2 + \text{C}_{10}\text{H}_7 \Rightarrow 0.8\text{CO} + 0.2\text{HCO} + 0.8\text{CH}_2\text{CHO} + 0.2\text{CH}_2\text{CO} + \text{C}_{10}\text{H}_8$  9.2500e+07  
 1.000 2000.00

$\text{ETC3H4O}_2 + \text{INDENYL} \Rightarrow 0.8\text{CO} + 0.2\text{HCO} + 0.8\text{CH}_2\text{CHO} + 0.2\text{CH}_2\text{CO} + \text{INDENE}$  3.2500e+04  
 2.000 16000.00

$\text{ETC3H4O}_2 + \text{C}_{10}\text{H}_6\text{CH}_3 \Rightarrow 0.8\text{CO} + 0.2\text{HCO} + 0.8\text{CH}_2\text{CHO} + 0.2\text{CH}_2\text{CO} + \text{C}_{10}\text{H}_7\text{CH}_3$  9.2500e+07  
 1.000 2000.00

$\text{H} + \text{ETC3H4O}_2 \Rightarrow \text{H}_2 + 0.67\text{CO}_2 + 0.33\text{CH}_2\text{O} + 0.67\text{C}_2\text{H}_3 + 0.33\text{HCCO}$  4.5000e+06  
 2.000 4000.00

$\text{CH}_3 + \text{ETC3H4O}_2 \Rightarrow 0.67\text{CO}_2 + \text{CH}_4 + 0.33\text{CH}_2\text{O} + 0.67\text{C}_2\text{H}_3 + 0.33\text{HCCO}$  4.5000e+04  
 2.000 5000.00

$\text{C}_2\text{H}_3 + \text{ETC3H4O}_2 \Rightarrow 0.67\text{CO}_2 + 0.33\text{CH}_2\text{O} + \text{C}_2\text{H}_4 + 0.67\text{C}_2\text{H}_3 + 0.33\text{HCCO}$  1.0170e+05  
 2.000 3900.00

$\text{C}_2\text{H}_5 + \text{ETC3H4O}_2 \Rightarrow 0.67\text{CO}_2 + 0.33\text{CH}_2\text{O} + \text{C}_2\text{H}_6 + 0.67\text{C}_2\text{H}_3 + 0.33\text{HCCO}$  3.0000e+04  
 2.000 6700.00

$\text{NC}_3\text{H}_7 + \text{ETC3H4O}_2 \Rightarrow 0.67\text{CO}_2 + 0.33\text{CH}_2\text{O} + 0.67\text{C}_2\text{H}_3 + 0.33\text{HCCO} + \text{C}_3\text{H}_8$  2.0250e+04  
 2.000 6700.00

$\text{IC}_3\text{H}_7 + \text{ETC3H4O}_2 \Rightarrow 0.67\text{CO}_2 + 0.33\text{CH}_2\text{O} + 0.67\text{C}_2\text{H}_3 + 0.33\text{HCCO} + \text{C}_3\text{H}_8$  2.0250e+04  
 2.000 9900.00

$\text{C}_3\text{H}_5\text{-S} + \text{ETC3H4O}_2 \Rightarrow 0.67\text{CO}_2 + 0.33\text{CH}_2\text{O} + 0.67\text{C}_2\text{H}_3 + 0.33\text{HCCO} + \text{C}_3\text{H}_6$  4.0500e+04  
 2.000 4500.00

$\text{C}_3\text{H}_5\text{-T} + \text{ETC3H4O}_2 \Rightarrow 0.67\text{CO}_2 + 0.33\text{CH}_2\text{O} + 0.67\text{C}_2\text{H}_3 + 0.33\text{HCCO} + \text{C}_3\text{H}_6$  4.0500e+04  
 2.000 4500.00

$\text{C}_3\text{H}_5\text{-A} + \text{ETC3H4O}_2 \Rightarrow 0.67\text{CO}_2 + 0.33\text{CH}_2\text{O} + 0.67\text{C}_2\text{H}_3 + 0.33\text{HCCO} + \text{C}_3\text{H}_6$  8.0850e+04  
 2.000 12800.00

$C_4H_5 + ETC_3H_4O_2 \Rightarrow 0.67CO_2 + 0.33CH_2O + 0.67C_2H_3 + 0.33HCCO + C_4H_6$  4.0500e+04  
 2.000 4500.00

$C_4H_7-4 + ETC_3H_4O_2 \Rightarrow 0.67CO_2 + 0.33CH_2O + 0.67C_2H_3 + 0.33HCCO + C_4H_8-1$  2.0250e+04  
 2.000 6600.00

$C_4H_7-3 + ETC_3H_4O_2 \Rightarrow 0.67CO_2 + 0.33CH_2O + 0.67C_2H_3 + 0.33HCCO + C_4H_8-2$  5.1000e+04  
 2.000 13700.00

$IC_4H_7 + ETC_3H_4O_2 \Rightarrow 0.67CO_2 + 0.33CH_2O + 0.67C_2H_3 + 0.33HCCO + IC_4H_8$  4.0500e+04  
 2.000 13700.00

$C_4H_3 + ETC_3H_4O_2 \Rightarrow 0.67CO_2 + 0.33CH_2O + 0.67C_2H_3 + 0.33HCCO + C_4H_4$  6.1350e+04  
 2.000 5200.00

$C_6H_5 + ETC_3H_4O_2 \Rightarrow 0.67CO_2 + 0.33CH_2O + 0.67C_2H_3 + 0.33HCCO + C_6H_6$  5.5500e+07  
 1.000 2000.00

$O + ETC_3H_4O_2 \Rightarrow OH + 0.67CO_2 + 0.33CH_2O + 0.67C_2H_3 + 0.33HCCO$  3.5250e+06  
 2.000 2500.00

$O_2 + ETC_3H_4O_2 \Rightarrow HO_2 + 0.67CO_2 + 0.33CH_2O + 0.67C_2H_3 + 0.33HCCO$  2.5500e+06  
 2.000 44000.00

$OH + ETC_3H_4O_2 \Rightarrow H_2O + 0.67CO_2 + 0.33CH_2O + 0.67C_2H_3 + 0.33HCCO$  2.2500e+09  
 1.000 50.00

$HO_2 + ETC_3H_4O_2 \Rightarrow H_2O_2 + 0.67CO_2 + 0.33CH_2O + 0.67C_2H_3 + 0.33HCCO$  1.2000e+06  
 2.000 16000.00

$CH_3O + ETC_3H_4O_2 \Rightarrow 0.67CO_2 + CH_3OH + 0.33CH_2O + 0.67C_2H_3 + 0.33HCCO$  6.4200e+04  
 2.000 1500.00

$CH_2OH + ETC_3H_4O_2 \Rightarrow 0.67CO_2 + CH_3OH + 0.33CH_2O + 0.67C_2H_3 + 0.33HCCO$  4.2450e+04  
 2.000 10200.00

$HCO + ETC_3H_4O_2 \Rightarrow 0.67CO_2 + 1.33CH_2O + 0.67C_2H_3 + 0.33HCCO$  1.8900e+05  
 2.000 12300.00

$CH_3CO + ETC_3H_4O_2 \Rightarrow 0.67CO_2 + 0.33CH_2O + 0.67C_2H_3 + CH_3CHO + 0.33HCCO$  2.0250e+05  
 2.000 14000.00

$CH_2CHO + ETC_3H_4O_2 \Rightarrow 0.67CO_2 + 0.33CH_2O + 0.67C_2H_3 + CH_3CHO + 0.33HCCO$  3.4500e+04  
 2.000 11500.00

$C_3H_3 + ETC_3H_4O_2 \Rightarrow 0.67CO_2 + 0.33CH_2O + 0.67C_2H_3 + 0.33HCCO + C_3H_4-A$  4.0500e+04  
 2.000 14000.00

$HCCO + ETC_3H_4O_2 \Rightarrow 0.67CO_2 + 0.33CH_2O + 0.67C_2H_3 + CH_2CO + 0.33HCCO$  6.4200e+04  
 2.000 5200.00

$CH_3O_2 + ETC_3H_4O_2 \Rightarrow 0.67CO_2 + CH_3O_2H + 0.33CH_2O + 0.67C_2H_3 + 0.33HCCO$  1.1400e+05  
 2.000 12600.00

$C_2H_5O_2 + ETC_3H_4O_2 \Rightarrow 0.67CO_2 + 0.33CH_2O + C_2H_5O_2H + 0.67C_2H_3 + 0.33HCCO$  1.1400e+05  
 2.000 12600.00

NC3H7O2+ETC3H4O2=>0.67CO2+0.33CH2O+0.67C2H3+0.33HCCO+C3H7OOH 1.1400e+05  
 2.000 12600.00

IC3H7O2+ETC3H4O2=>0.67CO2+0.33CH2O+0.67C2H3+0.33HCCO+C3H7OOH 1.1400e+05  
 2.000 12600.00

HCO3+ETC3H4O2=>0.67CO2+0.33CH2O+0.67C2H3+0.33HCCO+HCO3H 5.1000e+04  
 2.000 6500.00

CH3CO3+ETC3H4O2=>0.67CO2+0.33CH2O+0.67C2H3+0.33HCCO+CH3CO3H 5.1000e+04  
 2.000 6500.00

CH3COCH2+ETC3H4O2=>0.67CO2+0.33CH2O+0.67C2H3+0.33HCCO+CH3COCH3 3.4500e+04  
 2.000 8000.00

ETC3H4O2+C6H5O=>0.67CO2+0.33CH2O+0.67C2H3+0.33HCCO+C6H5OH 4.0500e+04  
 2.000 12500.00

ETC3H4O2+C5H7=>0.67CO2+0.33CH2O+0.67C2H3+0.33HCCO+LC5H8 4.0500e+04  
 2.000 15000.00

ETC3H4O2+C7H7=>0.67CO2+0.33CH2O+0.67C2H3+0.33HCCO+C7H8 2.0250e+04  
 2.000 16000.00

ETC3H4O2+CH3C6H4=>0.67CO2+0.33CH2O+0.67C2H3+0.33HCCO+C7H8 5.5500e+07  
 1.000 2000.00

ETC3H4O2+RCRESOLO=>0.67CO2+0.33CH2O+0.67C2H3+0.33HCCO+CRE SOL 4.0500e+04  
 2.000 12800.00

ETC3H4O2+C10H7=>0.67CO2+0.33CH2O+0.67C2H3+0.33HCCO+C10H8 5.5500e+07  
 1.000 2000.00

ETC3H4O2+INDENYL=>0.67CO2+0.33CH2O+0.67C2H3+0.33HCCO+INDENE 1.9500e+04  
 2.000 16000.00

ETC3H4O2+C10H6CH3=>0.67CO2+0.33CH2O+0.67C2H3+0.33HCCO+C10H7CH3 5.5500e+07  
 1.000 2000.00

O2+RALD4X=>RALD4OOX 4.0000e+12  
 0.000 0.00

RALD4OOX=>O2+RALD4X 1.0000e+13  
 0.000 31500.00

HO2+RALD4OOX=>O2+OH+CH3CHO+CH2CHO 3.5000e+10  
 0.000 -1200.00

CH3O2+RALD4OOX=>O2+CH3O+CH3CHO+CH2CHO 3.5000e+10  
 0.000 -1200.00

HO2+RALD4OOX=>O2+OH+HCO+C2H5CHO 5.0000e+10  
 0.000 -1200.00

CH3O2+RALD4OOX=>O2+CH3O+HCO+C2H5CHO 5.0000e+10  
 0.000 -1200.00

HO2+RALD4OOX=>O2+OH+CH2O+RALD3 0.000        -1200.00	1.5000e+10
CH3O2+RALD4OOX=>O2+CH3O+CH2O+RALD3 0.000        -1200.00	1.5000e+10
NC3H7O2+RALD4OOX=>O2+CH3CHO+CH2CHO+CH3CH2CH2O 0.000        -1200.00	3.5000e+10
NC3H7O2+RALD4OOX=>O2+HCO+C2H5CHO+CH3CH2CH2O 0.000        -1200.00	5.0000e+10
NC3H7O2+RALD4OOX=>O2+CH2O+RALD3+CH3CH2CH2O 0.000        -1200.00	1.5000e+10
CH3O2+RALD4OOX=>O2+CH3OH+C4H6O2 0.000        -1200.00	1.0000e+12
RALD4OOX=>QA4X 0.000        25000.00	1.5000e+12
QA4X=>RALD4OOX 0.000        15000.00	3.0000e+10
RALD4OOX=>OH+CO+C2H5CHO 0.000        23500.00	6.0000e+11
RALD4OOX=>CO+0.5NC3-QOOH+0.5IC3-QOOH 0.000        19000.00	3.0000e+10
O2+QA4X=>ZA4X 0.000        0.00	4.0000e+12
ZA4X=>O2+QA4X 0.000        31500.00	1.0000e+13
QA4X=>OH+ETALD4X 0.000        18000.00	1.0000e+12
QA4X=>HO2+C3H5CHO 0.000        23500.00	4.0000e+13
QA4X=>OH+C2H4+CHOCHO 0.000        23000.00	2.4000e+13
QA4X=>OH+CH2O+C2H3CHO 0.000        23000.00	2.4000e+13
ZA4X=>OH+KEA4X 0.000        18000.00	1.0000e+11
ZA4X=>OH+CO+C3-OQOOH 0.000        18000.00	1.0000e+11
KEA4X=>OH+CH2CHO+CHOCHO 0.000        41000.00	3.0000e+14

KEA4X=>OH+HCO+CHOCH2CHO	3.0000e+14
0.000 41000.00	
KEA4X=>OH+CO+CH2O+CH2CHO	6.0000e+14
0.000 41000.00	
KEA4X=>OH+CH3CO+CHOCHO	3.0000e+14
0.000 41000.00	
KEA4X=>OH+HCO+CH3COCHO	3.0000e+14
0.000 41000.00	
KEA4X=>OH+CH2O+HCO+CH2CO	1.0000e+15
0.000 41000.00	
KEA4X=>OH+CO+HCO+CH3CHO	1.0000e+15
0.000 41000.00	
H+ETALD4X=>H2+0.5HCO+0.5C2H3+0.5CHOCHO+0.5C2H3CHO	9.0000e+06
2.000 6349.34	
CH3+ETALD4X=>CH4+0.5HCO+0.5C2H3+0.5CHOCHO+0.5C2H3CHO	9.0000e+04
2.000 7443.70	
C2H3+ETALD4X=>0.5HCO+C2H4+0.5C2H3+0.5CHOCHO+0.5C2H3CHO	2.0340e+05
2.000 6239.48	
C2H5+ETALD4X=>0.5HCO+C2H6+0.5C2H3+0.5CHOCHO+0.5C2H3CHO	6.0000e+04
2.000 9289.16	
NC3H7+ETALD4X=>0.5HCO+0.5C2H3+0.5CHOCHO+C3H8+0.5C2H3CHO	4.0500e+04
2.000 9289.16	
IC3H7+ETALD4X=>0.5HCO+0.5C2H3+0.5CHOCHO+C3H8+0.5C2H3CHO	4.0500e+04
2.000 12725.62	
C3H5-S+ETALD4X=>0.5HCO+0.5C2H3+0.5CHOCHO+C3H6+0.5C2H3CHO	8.1000e+04
2.000 6897.45	
C3H5-T+ETALD4X=>0.5HCO+0.5C2H3+0.5CHOCHO+C3H6+0.5C2H3CHO	8.1000e+04
2.000 6897.45	
C3H5-A+ETALD4X=>0.5HCO+0.5C2H3+0.5CHOCHO+C3H6+0.5C2H3CHO	1.6170e+05
2.000 15810.16	
C4H5+ETALD4X=>0.5HCO+0.5C2H3+0.5CHOCHO+0.5C2H3CHO+C4H6	8.1000e+04
2.000 6897.45	
C4H71-4+ETALD4X=>0.5HCO+0.5C2H3+0.5CHOCHO+0.5C2H3CHO+C4H8-1	4.0500e+04
2.000 9181.05	
C4H71-3+ETALD4X=>0.5HCO+0.5C2H3+0.5CHOCHO+0.5C2H3CHO+C4H8-2	1.0200e+05
2.000 16763.05	
IC4H7+ETALD4X=>0.5HCO+0.5C2H3+0.5CHOCHO+0.5C2H3CHO+IC4H8	8.1000e+04
2.000 16763.05	

$C_4H_3 + ETALD_4X \Rightarrow 0.5HCO + 0.5C_2H_3 + 0.5CHOCHO + 0.5C_2H_3CHO + C_4H_4$  1.2270e+05  
 2.000 7661.72

$C_6H_5 + ETALD_4X \Rightarrow 0.5HCO + 0.5C_2H_3 + 0.5CHOCHO + 0.5C_2H_3CHO + C_6H_6$  1.1100e+08  
 1.000 3864.72

$O + ETALD_4X \Rightarrow OH + 0.5HCO + 0.5C_2H_3 + 0.5CHOCHO + 0.5C_2H_3CHO$  7.0500e+06  
 2.000 4691.70

$O_2 + ETALD_4X \Rightarrow HO_2 + 0.5HCO + 0.5C_2H_3 + 0.5CHOCHO + 0.5C_2H_3CHO$  5.1000e+06  
 2.000 48272.65

$OH + ETALD_4X \Rightarrow H_2O + 0.5HCO + 0.5C_2H_3 + 0.5CHOCHO + 0.5C_2H_3CHO$  4.5000e+09  
 1.000 1540.75

$HO_2 + ETALD_4X \Rightarrow H_2O_2 + 0.5HCO + 0.5C_2H_3 + 0.5CHOCHO + 0.5C_2H_3CHO$  2.4000e+06  
 2.000 19190.53

$CH_3O + ETALD_4X \Rightarrow CH_3OH + 0.5HCO + 0.5C_2H_3 + 0.5CHOCHO + 0.5C_2H_3CHO$  1.2840e+05  
 2.000 3572.50

$CH_2OH + ETALD_4X \Rightarrow CH_3OH + 0.5HCO + 0.5C_2H_3 + 0.5CHOCHO + 0.5C_2H_3CHO$  8.4900e+04  
 2.000 13045.84

$HCO + ETALD_4X \Rightarrow CH_2O + 0.5HCO + 0.5C_2H_3 + 0.5CHOCHO + 0.5C_2H_3CHO$  3.7800e+05  
 2.000 15279.95

$CH_3CO + ETALD_4X \Rightarrow 0.5HCO + 0.5C_2H_3 + CH_3CHO + 0.5CHOCHO + 0.5C_2H_3CHO$  4.0500e+05  
 2.000 17080.28

$CH_2CHO + ETALD_4X \Rightarrow 0.5HCO + 0.5C_2H_3 + CH_3CHO + 0.5CHOCHO + 0.5C_2H_3CHO$  6.9000e+04  
 2.000 14430.30

$C_3H_3 + ETALD_4X \Rightarrow 0.5HCO + 0.5C_2H_3 + 0.5CHOCHO + C_3H_4 - A + 0.5C_2H_3CHO$  8.1000e+04  
 2.000 17080.28

$HCCO + ETALD_4X \Rightarrow 0.5HCO + 0.5C_2H_3 + CH_2CO + 0.5CHOCHO + 0.5C_2H_3CHO$  1.2840e+05  
 2.000 7661.72

$CH_3O_2 + ETALD_4X \Rightarrow CH_3O_2H + 0.5HCO + 0.5C_2H_3 + 0.5CHOCHO + 0.5C_2H_3CHO$  2.2800e+05  
 2.000 15598.15

$C_2H_5O_2 + ETALD_4X \Rightarrow 0.5HCO + C_2H_5O_2H + 0.5C_2H_3 + 0.5CHOCHO + 0.5C_2H_3CHO$  2.2800e+05  
 2.000 15598.15

$NC_3H_7O_2 + ETALD_4X \Rightarrow 0.5HCO + 0.5C_2H_3 + 0.5CHOCHO + 0.5C_2H_3CHO + C_3H_7OOH$  2.2800e+05  
 2.000 15598.15

$IC_3H_7O_2 + ETALD_4X \Rightarrow 0.5HCO + 0.5C_2H_3 + 0.5CHOCHO + 0.5C_2H_3CHO + C_3H_7OOH$  2.2800e+05  
 2.000 15598.15

$HCO_3 + ETALD_4X \Rightarrow 0.5HCO + 0.5C_2H_3 + 0.5CHOCHO + 0.5C_2H_3CHO + HCO_3H$  1.0200e+05  
 2.000 9072.89

$CH_3CO_3 + ETALD_4X \Rightarrow 0.5HCO + 0.5C_2H_3 + CH_3CO_3H + 0.5CHOCHO + 0.5C_2H_3CHO$  1.0200e+05  
 2.000 9072.89

CH3COCH2+ETALD4X=>0.5HCO+0.5C2H3+0.5CHOCHO+0.5C2H3CHO+CH3COCH3 6.9000e+04  
 2.000 10690.26

ETALD4X+C6H5O=>0.5HCO+0.5C2H3+0.5CHOCHO+0.5C2H3CHO+C6H5OH 8.1000e+04  
 2.000 15492.11

ETALD4X+C5H7=>0.5HCO+0.5C2H3+0.5CHOCHO+0.5C2H3CHO+LC5H8 8.1000e+04  
 2.000 18136.38

ETALD4X+C7H7=>0.5HCO+0.5C2H3+0.5CHOCHO+0.5C2H3CHO+C7H8 4.0500e+04  
 2.000 19190.53

ETALD4X+CH3C6H4=>0.5HCO+0.5C2H3+0.5CHOCHO+0.5C2H3CHO+C7H8 1.1100e+08  
 1.000 3864.72

ETALD4X+RCRESOLO=>0.5HCO+0.5C2H3+0.5CHOCHO+0.5C2H3CHO+CRE SOL 8.1000e+04  
 2.000 15810.16

ETALD4X+C10H7=>0.5HCO+0.5C2H3+0.5CHOCHO+0.5C2H3CHO+C10H8 1.1100e+08  
 1.000 3864.72

ETALD4X+INDENYL=>0.5HCO+0.5C2H3+0.5CHOCHO+0.5C2H3CHO+INDENE 3.9000e+04  
 2.000 19190.53

ETALD4X+C10H6CH3=>0.5HCO+0.5C2H3+0.5CHOCHO+0.5C2H3CHO+C10H7CH3 1.1100e+08  
 1.000 3864.72

H+ETALD4X=>H2+HCO+C2H3CHO 6.0000e+06  
 2.000 2825.33

CH3+ETALD4X=>CH4+HCO+C2H3CHO 6.0000e+04  
 2.000 3778.15

C2H3+ETALD4X=>HCO+C2H4+C2H3CHO 1.3560e+05  
 2.000 2730.26

C2H5+ETALD4X=>HCO+C2H6+C2H3CHO 4.0000e+04  
 2.000 5405.42

NC3H7+ETALD4X=>HCO+C3H8+C2H3CHO 2.7000e+04  
 2.000 5405.42

IC3H7+ETALD4X=>HCO+C3H8+C2H3CHO 2.7000e+04  
 2.000 8487.19

C3H5-S+ETALD4X=>HCO+C3H6+C2H3CHO 5.4000e+04  
 2.000 3301.28

C3H5-T+ETALD4X=>HCO+C3H6+C2H3CHO 5.4000e+04  
 2.000 3301.28

C3H5-A+ETALD4X=>HCO+C3H6+C2H3CHO 1.0780e+05  
 2.000 11294.92

C4H5+ETALD4X=>HCO+C2H3CHO+C4H6 5.4000e+04  
 2.000 3301.28

C4H71-4+ETALD4X=>HCO+C2H3CHO+C4H8-1 2.000        5309.47	2.7000e+04
C4H71-3+ETALD4X=>HCO+C2H3CHO+C4H8-2 2.000        12168.47	6.8000e+04
IC4H7+ETALD4X=>HCO+C2H3CHO+IC4H8 2.000        12168.47	5.4000e+04
C4H3+ETALD4X=>HCO+C2H3CHO+C4H4 2.000        3969.14	8.1800e+04
C6H5+ETALD4X=>HCO+C2H3CHO+C6H6 1.000        1067.64	7.4000e+07
O+ETALD4X=>OH+HCO+C2H3CHO 2.000        1404.15	4.7000e+06
O2+ETALD4X=>HO2+HCO+C2H3CHO 2.000        41863.68	3.4000e+06
OH+ETALD4X=>H2O+HCO+C2H3CHO 1.000        -695.37	3.0000e+09
HO2+ETALD4X=>H2O2+HCO+C2H3CHO 2.000        14404.74	1.6000e+06
CH3O+ETALD4X=>CH3OH+HCO+C2H3CHO 2.000        463.75	8.5600e+04
CH2OH+ETALD4X=>CH3OH+HCO+C2H3CHO 2.000        8777.08	5.6600e+04
HCO+ETALD4X=>CH2O+HCO+C2H3CHO 2.000        10810.03	2.5200e+05
CH3CO+ETALD4X=>HCO+CH3CHO+C2H3CHO 2.000        12459.86	2.7000e+05
CH2CHO+ETALD4X=>HCO+CH3CHO+C2H3CHO 2.000        10034.85	4.6000e+04
C3H3+ETALD4X=>HCO+C3H4-A+C2H3CHO 2.000        12459.86	5.4000e+04
HCCO+ETALD4X=>HCO+CH2CO+C2H3CHO 2.000        3969.14	8.5600e+04
CH3O2+ETALD4X=>CH3O2H+HCO+C2H3CHO 2.000        11100.93	1.5200e+05
C2H5O2+ETALD4X=>HCO+C2H5O2H+C2H3CHO 2.000        11100.93	1.5200e+05
NC3H7O2+ETALD4X=>HCO+C2H3CHO+C3H7OOH 2.000        11100.93	1.5200e+05



IC3H7O2+ETALD4X=>HCO+C2H3CHO+C3H7OOH	1.5200e+05
2.000 11100.93	
HCO3+ETALD4X=>HCO+C2H3CHO+HCO3H	6.8000e+04
2.000 5213.56	
CH3CO3+ETALD4X=>HCO+CH3CO3H+C2H3CHO	6.8000e+04
2.000 5213.56	
CH3COCH2+ETALD4X=>HCO+C2H3CHO+CH3COCH3	4.6000e+04
2.000 6654.87	
ETALD4X+C6H5O=>HCO+C2H3CHO+C6H5OH	5.4000e+04
2.000 11003.95	
ETALD4X+C5H7=>HCO+C2H3CHO+LC5H8	5.4000e+04
2.000 13431.81	
ETALD4X+C7H7=>HCO+C2H3CHO+C7H8	2.7000e+04
2.000 14404.74	
ETALD4X+CH3C6H4=>HCO+C2H3CHO+C7H8	7.4000e+07
1.000 1067.64	
ETALD4X+RCRESOLO=>HCO+C2H3CHO+CRESOL	5.4000e+04
2.000 11294.92	
ETALD4X+C10H7=>HCO+C2H3CHO+C10H8	7.4000e+07
1.000 1067.64	
ETALD4X+INDENYL=>HCO+C2H3CHO+INDENE	2.6000e+04
2.000 14404.74	
ETALD4X+C10H6CH3=>HCO+C2H3CHO+C10H7CH3	7.4000e+07
1.000 1067.64	
H+ETALD4X=>H2+0.5H+CO+0.5CH3+0.5CH2CO+0.5C2H3CHO	1.2000e+07
2.000 2573.61	
CH3+ETALD4X=>0.5H+CO+CH4+0.5CH3+0.5CH2CO+0.5C2H3CHO	1.2000e+05
2.000 3516.32	
C2H3+ETALD4X=>0.5H+CO+0.5CH3+C2H4+0.5CH2CO+0.5C2H3CHO	2.7120e+05
2.000 2479.60	
C2H5+ETALD4X=>0.5H+CO+0.5CH3+C2H6+0.5CH2CO+0.5C2H3CHO	8.0000e+04
2.000 5128.01	
NC3H7+ETALD4X=>0.5H+CO+0.5CH3+0.5CH2CO+C3H8+0.5C2H3CHO	5.4000e+04
2.000 5128.01	
IC3H7+ETALD4X=>0.5H+CO+0.5CH3+0.5CH2CO+C3H8+0.5C2H3CHO	5.4000e+04
2.000 8184.45	
C3H5-S+ETALD4X=>0.5H+CO+0.5CH3+0.5CH2CO+C3H6+0.5C2H3CHO	1.0800e+05
2.000 3044.41	

C3H5-T+ETALD4X=>0.5H+CO+0.5CH3+0.5CH2CO+C3H6+0.5C2H3CHO 1.0800e+05  
2.000 3044.41

C3H5-A+ETALD4X=>0.5H+CO+0.5CH3+0.5CH2CO+C3H6+0.5C2H3CHO 2.1560e+05  
2.000 10972.41

C4H5+ETALD4X=>0.5H+CO+0.5CH3+0.5CH2CO+0.5C2H3CHO+C4H6 1.0800e+05  
2.000 3044.41

C4H71-4+ETALD4X=>0.5H+CO+0.5CH3+0.5CH2CO+0.5C2H3CHO+C4H8-1 5.4000e+04  
2.000 5032.93

C4H71-3+ETALD4X=>0.5H+CO+0.5CH3+0.5CH2CO+0.5C2H3CHO+C4H8-2 1.3600e+05  
2.000 11840.29

IC4H7+ETALD4X=>0.5H+CO+0.5CH3+0.5CH2CO+0.5C2H3CHO+IC4H8 1.0800e+05  
2.000 11840.29

C4H3+ETALD4X=>0.5H+CO+0.5CH3+0.5CH2CO+0.5C2H3CHO+C4H4 1.6360e+05  
2.000 3705.38

C6H5+ETALD4X=>0.5H+CO+0.5CH3+0.5CH2CO+0.5C2H3CHO+C6H6 1.4800e+08  
1.000 867.85

O+ETALD4X=>0.5H+OH+CO+0.5CH3+0.5CH2CO+0.5C2H3CHO 9.4000e+06  
2.000 1169.32

O2+ETALD4X=>0.5H+HO2+CO+0.5CH3+0.5CH2CO+0.5C2H3CHO 6.8000e+06  
2.000 41405.89

OH+ETALD4X=>0.5H+H2O+CO+0.5CH3+0.5CH2CO+0.5C2H3CHO 6.0000e+09  
1.000 -855.10

HO2+ETALD4X=>0.5H+H2O2+CO+0.5CH3+0.5CH2CO+0.5C2H3CHO 3.2000e+06  
2.000 14062.89

CH3O+ETALD4X=>0.5H+CO+0.5CH3+CH3OH+0.5CH2CO+0.5C2H3CHO 1.7120e+05  
2.000 241.70

CH2OH+ETALD4X=>0.5H+CO+0.5CH3+CH3OH+0.5CH2CO+0.5C2H3CHO 1.1320e+05  
2.000 8472.17

HCO+ETALD4X=>0.5H+CO+0.5CH3+CH2O+0.5CH2CO+0.5C2H3CHO 5.0400e+05  
2.000 10490.75

CH3CO+ETALD4X=>0.5H+CO+0.5CH3+CH3CHO+0.5CH2CO+0.5C2H3CHO 5.4000e+05  
2.000 12129.83

CH2CHO+ETALD4X=>0.5H+CO+0.5CH3+CH3CHO+0.5CH2CO+0.5C2H3CHO 9.2000e+04  
2.000 9720.89

C3H3+ETALD4X=>0.5H+CO+0.5CH3+0.5CH2CO+C3H4-A+0.5C2H3CHO 1.0800e+05  
2.000 12129.83

HCCO+ETALD4X=>0.5H+CO+0.5CH3+1.5CH2CO+0.5C2H3CHO 1.7120e+05  
2.000 3705.38

$\text{CH}_3\text{O}_2 + \text{ETALD}_4\text{X} \Rightarrow 0.5\text{H} + \text{CO} + 0.5\text{CH}_3 + \text{CH}_3\text{O}_2\text{H} + 0.5\text{CH}_2\text{CO} + 0.5\text{C}_2\text{H}_3\text{CHO}$  3.0400e+05  
 2.000 10779.70

$\text{C}_2\text{H}_5\text{O}_2 + \text{ETALD}_4\text{X} \Rightarrow 0.5\text{H} + \text{CO} + 0.5\text{CH}_3 + \text{C}_2\text{H}_5\text{O}_2\text{H} + 0.5\text{CH}_2\text{CO} + 0.5\text{C}_2\text{H}_3\text{CHO}$  3.0400e+05  
 2.000 10779.70

$\text{NC}_3\text{H}_7\text{O}_2 + \text{ETALD}_4\text{X} \Rightarrow 0.5\text{H} + \text{CO} + 0.5\text{CH}_3 + 0.5\text{CH}_2\text{CO} + 0.5\text{C}_2\text{H}_3\text{CHO} + \text{C}_3\text{H}_7\text{OOH}$  3.0400e+05  
 2.000 10779.70

$\text{IC}_3\text{H}_7\text{O}_2 + \text{ETALD}_4\text{X} \Rightarrow 0.5\text{H} + \text{CO} + 0.5\text{CH}_3 + 0.5\text{CH}_2\text{CO} + 0.5\text{C}_2\text{H}_3\text{CHO} + \text{C}_3\text{H}_7\text{OOH}$  3.0400e+05  
 2.000 10779.70

$\text{HCO}_3 + \text{ETALD}_4\text{X} \Rightarrow 0.5\text{H} + \text{CO} + 0.5\text{CH}_3 + 0.5\text{CH}_2\text{CO} + 0.5\text{C}_2\text{H}_3\text{CHO} + \text{HCO}_3\text{H}$  1.3600e+05  
 2.000 4937.89

$\text{CH}_3\text{CO}_3 + \text{ETALD}_4\text{X} \Rightarrow 0.5\text{H} + \text{CO} + 0.5\text{CH}_3 + 0.5\text{CH}_2\text{CO} + \text{CH}_3\text{CO}_3\text{H} + 0.5\text{C}_2\text{H}_3\text{CHO}$  1.3600e+05  
 2.000 4937.89

$\text{CH}_3\text{COCH}_2 + \text{ETALD}_4\text{X} \Rightarrow 0.5\text{H} + \text{CO} + 0.5\text{CH}_3 + 0.5\text{CH}_2\text{CO} + 0.5\text{C}_2\text{H}_3\text{CHO} + \text{CH}_3\text{COCH}_3$  9.2000e+04  
 2.000 6366.63

$\text{ETALD}_4\text{X} + \text{C}_6\text{H}_5\text{O} \Rightarrow 0.5\text{H} + \text{CO} + 0.5\text{CH}_3 + 0.5\text{CH}_2\text{CO} + 0.5\text{C}_2\text{H}_3\text{CHO} + \text{C}_6\text{H}_5\text{OH}$  1.0800e+05  
 2.000 10683.36

$\text{ETALD}_4\text{X} + \text{C}_5\text{H}_7 \Rightarrow 0.5\text{H} + \text{CO} + 0.5\text{CH}_3 + 0.5\text{CH}_2\text{CO} + 0.5\text{C}_2\text{H}_3\text{CHO} + \text{LC}_5\text{H}_8$  1.0800e+05  
 2.000 13095.77

$\text{ETALD}_4\text{X} + \text{C}_7\text{H}_7 \Rightarrow 0.5\text{H} + \text{CO} + 0.5\text{CH}_3 + 0.5\text{CH}_2\text{CO} + 0.5\text{C}_2\text{H}_3\text{CHO} + \text{C}_7\text{H}_8$  5.4000e+04  
 2.000 14062.89

$\text{ETALD}_4\text{X} + \text{CH}_3\text{C}_6\text{H}_4 \Rightarrow 0.5\text{H} + \text{CO} + 0.5\text{CH}_3 + 0.5\text{CH}_2\text{CO} + 0.5\text{C}_2\text{H}_3\text{CHO} + \text{C}_7\text{H}_8$  1.4800e+08  
 1.000 867.85

$\text{ETALD}_4\text{X} + \text{RCRESOLO} \Rightarrow 0.5\text{H} + \text{CO} + 0.5\text{CH}_3 + 0.5\text{CH}_2\text{CO} + 0.5\text{C}_2\text{H}_3\text{CHO} + \text{CRESOL}$  1.0800e+05  
 2.000 10972.41

$\text{ETALD}_4\text{X} + \text{C}_{10}\text{H}_7 \Rightarrow 0.5\text{H} + \text{CO} + 0.5\text{CH}_3 + 0.5\text{CH}_2\text{CO} + 0.5\text{C}_2\text{H}_3\text{CHO} + \text{C}_{10}\text{H}_8$  1.4800e+08  
 1.000 867.85

$\text{ETALD}_4\text{X} + \text{INDENYL} \Rightarrow 0.5\text{H} + \text{CO} + 0.5\text{CH}_3 + 0.5\text{CH}_2\text{CO} + 0.5\text{C}_2\text{H}_3\text{CHO} + \text{INDENE}$  5.2000e+04  
 2.000 14062.89

$\text{ETALD}_4\text{X} + \text{C}_{10}\text{H}_6\text{CH}_3 \Rightarrow 0.5\text{H} + \text{CO} + 0.5\text{CH}_3 + 0.5\text{CH}_2\text{CO} + 0.5\text{C}_2\text{H}_3\text{CHO} + \text{C}_{10}\text{H}_7\text{CH}_3$  1.4800e+08  
 1.000 867.85

$\text{H} + \text{CH}_3\text{COCHO} \Rightarrow \text{H}_2 + \text{HCO} + \text{CH}_2\text{CO}$  9.0000e+06  
 2.000 6349.34

$\text{CH}_3 + \text{CH}_3\text{COCHO} \Rightarrow \text{CH}_4 + \text{HCO} + \text{CH}_2\text{CO}$  9.0000e+04  
 2.000 7443.70

$\text{C}_2\text{H}_3 + \text{CH}_3\text{COCHO} \Rightarrow \text{HCO} + \text{C}_2\text{H}_4 + \text{CH}_2\text{CO}$  2.0340e+05  
 2.000 6239.48

$\text{C}_2\text{H}_5 + \text{CH}_3\text{COCHO} \Rightarrow \text{HCO} + \text{C}_2\text{H}_6 + \text{CH}_2\text{CO}$  6.0000e+04  
 2.000 9289.16

NC3H7+CH3COCHO=>HCO+CH2CO+C3H8 2.000        9289.16	4.0500e+04
IC3H7+CH3COCHO=>HCO+CH2CO+C3H8 2.000        12725.62	4.0500e+04
C3H5-S+CH3COCHO=>HCO+CH2CO+C3H6 2.000        6897.45	8.1000e+04
C3H5-T+CH3COCHO=>HCO+CH2CO+C3H6 2.000        6897.45	8.1000e+04
C3H5-A+CH3COCHO=>HCO+CH2CO+C3H6 2.000        15810.16	1.6170e+05
C4H5+CH3COCHO=>HCO+CH2CO+C4H6 2.000        6897.45	8.1000e+04
C4H71-4+CH3COCHO=>HCO+CH2CO+C4H8-1 2.000        9181.05	4.0500e+04
C4H71-3+CH3COCHO=>HCO+CH2CO+C4H8-2 2.000        16763.05	1.0200e+05
IC4H7+CH3COCHO=>HCO+CH2CO+IC4H8 2.000        16763.05	8.1000e+04
C4H3+CH3COCHO=>HCO+CH2CO+C4H4 2.000        7661.72	1.2270e+05
C6H5+CH3COCHO=>HCO+CH2CO+C6H6 1.000        3864.72	1.1100e+08
O+CH3COCHO=>OH+HCO+CH2CO 2.000        4691.70	7.0500e+06
O2+CH3COCHO=>HO2+HCO+CH2CO 2.000        48272.65	5.1000e+06
OH+CH3COCHO=>H2O+HCO+CH2CO 1.000        1540.75	4.5000e+09
HO2+CH3COCHO=>H2O2+HCO+CH2CO 2.000        19190.53	2.4000e+06
CH3O+CH3COCHO=>CH3OH+HCO+CH2CO 2.000        3572.50	1.2840e+05
CH2OH+CH3COCHO=>CH3OH+HCO+CH2CO 2.000        13045.84	8.4900e+04
HCO+CH3COCHO=>CH2O+HCO+CH2CO 2.000        15279.95	3.7800e+05
CH3CO+CH3COCHO=>HCO+CH3CHO+CH2CO 2.000        17080.28	4.0500e+05

CH2CHO+CH3COCHO=>HCO+CH3CHO+CH2CO 2.000        14430.30	6.9000e+04
C3H3+CH3COCHO=>HCO+CH2CO+C3H4-A 2.000        17080.28	8.1000e+04
HCCO+CH3COCHO=>HCO+2CH2CO 2.000        7661.72	1.2840e+05
CH3O2+CH3COCHO=>CH3O2H+HCO+CH2CO 2.000        15598.15	2.2800e+05
C2H5O2+CH3COCHO=>HCO+C2H5O2H+CH2CO 2.000        15598.15	2.2800e+05
NC3H7O2+CH3COCHO=>HCO+CH2CO+C3H7OOH 2.000        15598.15	2.2800e+05
IC3H7O2+CH3COCHO=>HCO+CH2CO+C3H7OOH 2.000        15598.15	2.2800e+05
HCO3+CH3COCHO=>HCO+CH2CO+HCO3H 2.000        9072.89	1.0200e+05
CH3CO3+CH3COCHO=>HCO+CH2CO+CH3CO3H 2.000        9072.89	1.0200e+05
CH3COCH2+CH3COCHO=>HCO+CH2CO+CH3COCH3 2.000        10690.26	6.9000e+04
CH3COCHO+C6H5O=>HCO+CH2CO+C6H5OH 2.000        15492.11	8.1000e+04
CH3COCHO+C5H7=>HCO+CH2CO+LC5H8 2.000        18136.38	8.1000e+04
CH3COCHO+C7H7=>HCO+CH2CO+C7H8 2.000        19190.53	4.0500e+04
CH3COCHO+CH3C6H4=>HCO+CH2CO+C7H8 1.000        3864.72	1.1100e+08
CH3COCHO+RCRESOLO=>HCO+CH2CO+CRESOL 2.000        15810.16	8.1000e+04
CH3COCHO+C10H7=>HCO+CH2CO+C10H8 1.000        3864.72	1.1100e+08
CH3COCHO+INDENYL=>HCO+CH2CO+INDENE 2.000        19190.53	3.9000e+04
CH3COCHO+C10H6CH3=>HCO+CH2CO+C10H7CH3 1.000        3864.72	1.1100e+08
H+CH3COCHO=>H2+CO+CH3CO 2.000        2573.61	2.1600e+07

CH3+CH3COCHO=>CO+CH4+CH3CO	2.1600e+05
2.000 3516.32	
C2H3+CH3COCHO=>CO+C2H4+CH3CO	4.8816e+05
2.000 2479.60	
C2H5+CH3COCHO=>CO+C2H6+CH3CO	1.4400e+05
2.000 5128.01	
NC3H7+CH3COCHO=>CO+CH3CO+C3H8	9.7200e+04
2.000 5128.01	
IC3H7+CH3COCHO=>CO+CH3CO+C3H8	9.7200e+04
2.000 8184.45	
C3H5-S+CH3COCHO=>CO+CH3CO+C3H6	1.9440e+05
2.000 3044.41	
C3H5-T+CH3COCHO=>CO+CH3CO+C3H6	1.9440e+05
2.000 3044.41	
C3H5-A+CH3COCHO=>CO+CH3CO+C3H6	3.8808e+05
2.000 10972.41	
C4H5+CH3COCHO=>CO+CH3CO+C4H6	1.9440e+05
2.000 3044.41	
C4H71-4+CH3COCHO=>CO+CH3CO+C4H8-1	9.7200e+04
2.000 5032.93	
C4H71-3+CH3COCHO=>CO+CH3CO+C4H8-2	2.4480e+05
2.000 11840.29	
IC4H7+CH3COCHO=>CO+CH3CO+IC4H8	1.9440e+05
2.000 11840.29	
C4H3+CH3COCHO=>CO+CH3CO+C4H4	2.9448e+05
2.000 3705.38	
C6H5+CH3COCHO=>CO+CH3CO+C6H6	2.6640e+08
1.000 867.85	
O+CH3COCHO=>OH+CO+CH3CO	1.6920e+07
2.000 1169.32	
O2+CH3COCHO=>HO2+CO+CH3CO	1.2240e+07
2.000 41405.89	
OH+CH3COCHO=>H2O+CO+CH3CO	1.0800e+10
1.000 -855.10	
HO2+CH3COCHO=>H2O2+CO+CH3CO	5.7600e+06
2.000 14062.89	
CH3O+CH3COCHO=>CO+CH3OH+CH3CO	3.0816e+05
2.000 241.70	

CH2OH+CH3COCHO=>CO+CH3OH+CH3CO 2.000        8472.17	2.0376e+05
HCO+CH3COCHO=>CO+CH2O+CH3CO 2.000        10490.75	9.0720e+05
CH3CO+CH3COCHO=>CO+CH3CHO+CH3CO 2.000        12129.83	9.7200e+05
CH2CHO+CH3COCHO=>CO+CH3CHO+CH3CO 2.000        9720.89	1.6560e+05
C3H3+CH3COCHO=>CO+CH3CO+C3H4-A 2.000        12129.83	1.9440e+05
HCCO+CH3COCHO=>CO+CH3CO+CH2CO 2.000        3705.38	3.0816e+05
CH3O2+CH3COCHO=>CO+CH3O2H+CH3CO 2.000        10779.70	5.4720e+05
C2H5O2+CH3COCHO=>CO+C2H5O2H+CH3CO 2.000        10779.70	5.4720e+05
NC3H7O2+CH3COCHO=>CO+CH3CO+C3H7OOH 2.000        10779.70	5.4720e+05
IC3H7O2+CH3COCHO=>CO+CH3CO+C3H7OOH 2.000        10779.70	5.4720e+05
HCO3+CH3COCHO=>CO+CH3CO+HCO3H 2.000        4937.89	2.4480e+05
CH3CO3+CH3COCHO=>CO+CH3CO+CH3CO3H 2.000        4937.89	2.4480e+05
CH3COCH2+CH3COCHO=>CO+CH3CO+CH3COCH3 2.000        6366.63	1.6560e+05
CH3COCHO+C6H5O=>CO+CH3CO+C6H5OH 2.000        10683.36	1.9440e+05
CH3COCHO+C5H7=>CO+CH3CO+LC5H8 2.000        13095.77	1.9440e+05
CH3COCHO+C7H7=>CO+CH3CO+C7H8 2.000        14062.89	9.7200e+04
CH3COCHO+CH3C6H4=>CO+CH3CO+C7H8 1.000        867.85	2.6640e+08
CH3COCHO+RCRESOLO=>CO+CH3CO+CRESOL 2.000        10972.41	1.9440e+05
CH3COCHO+C10H7=>CO+CH3CO+C10H8 1.000        867.85	2.6640e+08

CH3COCHO+INDENYL=>CO+CH3CO+INDENE	9.3600e+04
2.000 14062.89	
CH3COCHO+C10H6CH3=>CO+CH3CO+C10H7CH3	2.6640e+08
1.000 867.85	
O2+RIBALDG=>RIBALDGOO	4.0000e+12
0.000 0.00	
O2+RIBALDB=>RIBALDBOO	4.0000e+12
0.000 0.00	
RIBALDGOO=>O2+RIBALDG	1.0000e+13
0.000 31000.00	
RIBALDBOO=>O2+RIBALDB	1.0000e+13
0.000 31000.00	
HO2+RIBALDGOO=>O2+OH+CH2O+RALD3	1.0000e+11
0.000 -1200.00	
CH3O2+RIBALDGOO=>O2+CH3O+CH2O+RALD3	1.0000e+11
0.000 -1200.00	
HO2+RIBALDBOO=>O2+OH+HCO+CH3COCH3	1.0000e+11
0.000 -1200.00	
CH3O2+RIBALDBOO=>O2+CH3O+HCO+CH3COCH3	1.0000e+11
0.000 -1200.00	
IC3H7O2+RIBALDBOO=>O2+CH2O+HCO+C2H5+CH3COCH3	1.0000e+11
0.000 -1200.00	
IC3H7O2+RIBALDGOO=>O2+2CH2O+C2H5+RALD3	1.0000e+11
0.000 -1200.00	
RIBALDGOO=QIBALDG2	6.0000e+11
0.000 24600.00	
RIBALDGOO=QIBALDG3	3.0000e+11
0.000 23000.00	
RIBALDGOO=CO+NC3-QOOH	1.0000e+11
0.000 18500.00	
RIBALDBOO=QIBALDB3	1.8000e+12
0.000 29100.00	
RIBALDBOO=>OH+CO+CH3COCH3	6.0000e+11
0.000 24600.00	
QIBALDG2=OH+ETIBALDGB	1.0000e+12
0.000 18000.00	
QIBALDG2=HO2+IC3H5CHO	1.0000e+14
0.000 23000.00	



QIBALDG3=OH+ETIBALDGG 0.000 17000.00	1.6000e+11
QIBALDG3=>OH+CH2O+C2H3CHO 0.000 22500.00	1.5000e+13
O2+QIBALDG2=>ZIBALDG2 0.000 0.00	4.0000e+12
ZIBALDG2=>O2+QIBALDG2 0.000 31000.00	1.0000e+13
O2+QIBALDG3=>ZIBALDG3 0.000 0.00	4.0000e+12
ZIBALDG3=>O2+QIBALDG3 0.000 31000.00	1.0000e+13
O2+QIBALDB3=>ZIBALDB3 0.000 0.00	4.0000e+12
ZIBALDB3=>O2+QIBALDB3 0.000 31000.00	1.0000e+13
QIBALDB3=HO2+IC3H5CHO 0.000 23000.00	1.0000e+14
QIBALDB3=OH+ETIBALDGB 0.000 18000.00	1.0000e+12
ZIBALDB3=>OH+CO+C3-OQOOH 0.000 18500.00	1.0000e+11
ZIBALDG2=>OH+KIA4G2 0.000 25600.00	6.0000e+11
ZIBALDG2=>OH+CO+C3-OQOOH 0.000 24600.00	6.0000e+11
ZIBALDG3=>OH+KIA4G2 0.000 19500.00	1.0000e+11
ZIBALDG3=>HO2+CO+AC3H5OOH 0.000 18500.00	1.0000e+11
KIA4G2=>OH+HCO+CH3COCHO 0.000 41000.00	6.0000e+14
KIA4G2=>OH+CO+CH2O+CH2CHO 0.000 41000.00	4.0000e+14
H+ETIBALDGB=>H2+CO+CH3+CH2CO 2.000 2573.61	1.2000e+07
CH3+ETIBALDGB=>CO+CH4+CH3+CH2CO 2.000 3516.32	1.2000e+05

C2H3+ETIBALDGB=>CO+CH3+C2H4+CH2CO	2.7120e+05
2.000 2479.60	
C2H5+ETIBALDGB=>CO+CH3+C2H6+CH2CO	8.0000e+04
2.000 5128.01	
NC3H7+ETIBALDGB=>CO+CH3+CH2CO+C3H8	5.4000e+04
2.000 5128.01	
IC3H7+ETIBALDGB=>CO+CH3+CH2CO+C3H8	5.4000e+04
2.000 8184.45	
C3H5-S+ETIBALDGB=>CO+CH3+CH2CO+C3H6	1.0800e+05
2.000 3044.41	
C3H5-T+ETIBALDGB=>CO+CH3+CH2CO+C3H6	1.0800e+05
2.000 3044.41	
C3H5-A+ETIBALDGB=>CO+CH3+CH2CO+C3H6	2.1560e+05
2.000 10972.41	
C4H5+ETIBALDGB=>CO+CH3+CH2CO+C4H6	1.0800e+05
2.000 3044.41	
C4H71-4+ETIBALDGB=>CO+CH3+CH2CO+C4H8-1	5.4000e+04
2.000 5032.93	
C4H71-3+ETIBALDGB=>CO+CH3+CH2CO+C4H8-2	1.3600e+05
2.000 11840.29	
IC4H7+ETIBALDGB=>CO+CH3+CH2CO+IC4H8	1.0800e+05
2.000 11840.29	
C4H3+ETIBALDGB=>CO+CH3+CH2CO+C4H4	1.6360e+05
2.000 3705.38	
C6H5+ETIBALDGB=>CO+CH3+CH2CO+C6H6	1.4800e+08
1.000 867.85	
O+ETIBALDGB=>OH+CO+CH3+CH2CO	9.4000e+06
2.000 1169.32	
O2+ETIBALDGB=>HO2+CO+CH3+CH2CO	6.8000e+06
2.000 41405.89	
OH+ETIBALDGB=>H2O+CO+CH3+CH2CO	6.0000e+09
1.000 -855.10	
HO2+ETIBALDGB=>H2O2+CO+CH3+CH2CO	3.2000e+06
2.000 14062.89	
CH3O+ETIBALDGB=>CO+CH3+CH3OH+CH2CO	1.7120e+05
2.000 241.70	
CH2OH+ETIBALDGB=>CO+CH3+CH3OH+CH2CO	1.1320e+05
2.000 8472.17	

HCO+ETIBALDGB=>CO+CH3+CH2O+CH2CO	5.0400e+05
2.000 10490.75	
CH3CO+ETIBALDGB=>CO+CH3+CH3CHO+CH2CO	5.4000e+05
2.000 12129.83	
CH2CHO+ETIBALDGB=>CO+CH3+CH3CHO+CH2CO	9.2000e+04
2.000 9720.89	
C3H3+ETIBALDGB=>CO+CH3+CH2CO+C3H4-A	1.0800e+05
2.000 12129.83	
HCCO+ETIBALDGB=>CO+CH3+2CH2CO	1.7120e+05
2.000 3705.38	
CH3O2+ETIBALDGB=>CO+CH3+CH3O2H+CH2CO	3.0400e+05
2.000 10779.70	
C2H5O2+ETIBALDGB=>CO+CH3+C2H5O2H+CH2CO	3.0400e+05
2.000 10779.70	
NC3H7O2+ETIBALDGB=>CO+CH3+CH2CO+C3H7OOH	3.0400e+05
2.000 10779.70	
IC3H7O2+ETIBALDGB=>CO+CH3+CH2CO+C3H7OOH	3.0400e+05
2.000 10779.70	
HCO3+ETIBALDGB=>CO+CH3+CH2CO+HCO3H	1.3600e+05
2.000 4937.89	
CH3CO3+ETIBALDGB=>CO+CH3+CH2CO+CH3CO3H	1.3600e+05
2.000 4937.89	
CH3COCH2+ETIBALDGB=>CO+CH3+CH2CO+CH3COCH3	9.2000e+04
2.000 6366.63	
ETIBALDGB+C6H5O=>CO+CH3+CH2CO+C6H5OH	1.0800e+05
2.000 10683.36	
ETIBALDGB+C5H7=>CO+CH3+CH2CO+LC5H8	1.0800e+05
2.000 13095.77	
ETIBALDGB+C7H7=>CO+CH3+CH2CO+C7H8	5.4000e+04
2.000 14062.89	
ETIBALDGB+CH3C6H4=>CO+CH3+CH2CO+C7H8	1.4800e+08
1.000 867.85	
ETIBALDGB+RCRESOLO=>CO+CH3+CH2CO+CRE SOL	1.0800e+05
2.000 10972.41	
ETIBALDGB+C10H7=>CO+CH3+CH2CO+C10H8	1.4800e+08
1.000 867.85	
ETIBALDGB+INDENYL=>CO+CH3+CH2CO+INDENE	5.2000e+04
2.000 14062.89	

ETIBALDGB+C10H6CH3=>CO+CH3+CH2CO+C10H7CH3	1.4800e+08
1.000            867.85	
H+ETIBALDGB=>H2+CH2O+HCO+C2H2	1.5000e+07
2.000            6349.34	
CH3+ETIBALDGB=>CH4+CH2O+HCO+C2H2	1.5000e+05
2.000            7443.70	
C2H3+ETIBALDGB=>CH2O+HCO+C2H4+C2H2	3.3900e+05
2.000            6239.48	
C2H5+ETIBALDGB=>CH2O+HCO+C2H6+C2H2	1.0000e+05
2.000            9289.16	
NC3H7+ETIBALDGB=>CH2O+HCO+C2H2+C3H8	6.7500e+04
2.000            9289.16	
IC3H7+ETIBALDGB=>CH2O+HCO+C2H2+C3H8	6.7500e+04
2.000            12725.62	
C3H5-S+ETIBALDGB=>CH2O+HCO+C2H2+C3H6	1.3500e+05
2.000            6897.45	
C3H5-T+ETIBALDGB=>CH2O+HCO+C2H2+C3H6	1.3500e+05
2.000            6897.45	
C3H5-A+ETIBALDGB=>CH2O+HCO+C2H2+C3H6	2.6950e+05
2.000            15810.16	
C4H5+ETIBALDGB=>CH2O+HCO+C2H2+C4H6	1.3500e+05
2.000            6897.45	
C4H71-4+ETIBALDGB=>CH2O+HCO+C2H2+C4H8-1	6.7500e+04
2.000            9181.05	
C4H71-3+ETIBALDGB=>CH2O+HCO+C2H2+C4H8-2	1.7000e+05
2.000            16763.05	
IC4H7+ETIBALDGB=>CH2O+HCO+C2H2+IC4H8	1.3500e+05
2.000            16763.05	
C4H3+ETIBALDGB=>CH2O+HCO+C2H2+C4H4	2.0450e+05
2.000            7661.72	
C6H5+ETIBALDGB=>CH2O+HCO+C2H2+C6H6	1.8500e+08
1.000            3864.72	
O+ETIBALDGB=>OH+CH2O+HCO+C2H2	1.1750e+07
2.000            4691.70	
O2+ETIBALDGB=>HO2+CH2O+HCO+C2H2	8.5000e+06
2.000            48272.65	
OH+ETIBALDGB=>H2O+CH2O+HCO+C2H2	7.5000e+09
1.000            1540.75	

HO2+ETIBALDGB=>H2O2+CH2O+HCO+C2H2	4.0000e+06
2.000 19190.53	
CH3O+ETIBALDGB=>CH3OH+CH2O+HCO+C2H2	2.1400e+05
2.000 3572.50	
CH2OH+ETIBALDGB=>CH3OH+CH2O+HCO+C2H2	1.4150e+05
2.000 13045.84	
HCO+ETIBALDGB=>2CH2O+HCO+C2H2	6.3000e+05
2.000 15279.95	
CH3CO+ETIBALDGB=>CH2O+HCO+C2H2+CH3CHO	6.7500e+05
2.000 17080.28	
CH2CHO+ETIBALDGB=>CH2O+HCO+C2H2+CH3CHO	1.1500e+05
2.000 14430.30	
C3H3+ETIBALDGB=>CH2O+HCO+C2H2+C3H4-A	1.3500e+05
2.000 17080.28	
HCCO+ETIBALDGB=>CH2O+HCO+C2H2+CH2CO	2.1400e+05
2.000 7661.72	
CH3O2+ETIBALDGB=>CH3O2H+CH2O+HCO+C2H2	3.8000e+05
2.000 15598.15	
C2H5O2+ETIBALDGB=>CH2O+HCO+C2H5O2H+C2H2	3.8000e+05
2.000 15598.15	
NC3H7O2+ETIBALDGB=>CH2O+HCO+C2H2+C3H7OOH	3.8000e+05
2.000 15598.15	
IC3H7O2+ETIBALDGB=>CH2O+HCO+C2H2+C3H7OOH	3.8000e+05
2.000 15598.15	
HCO3+ETIBALDGB=>CH2O+HCO+C2H2+HCO3H	1.7000e+05
2.000 9072.89	
CH3CO3+ETIBALDGB=>CH2O+HCO+C2H2+CH3CO3H	1.7000e+05
2.000 9072.89	
CH3COCH2+ETIBALDGB=>CH2O+HCO+C2H2+CH3COCH3	1.1500e+05
2.000 10690.26	
ETIBALDGB+C6H5O=>CH2O+HCO+C2H2+C6H5OH	1.3500e+05
2.000 15492.11	
ETIBALDGB+C5H7=>CH2O+HCO+C2H2+LC5H8	1.3500e+05
2.000 18136.38	
ETIBALDGB+C7H7=>CH2O+HCO+C2H2+C7H8	6.7500e+04
2.000 19190.53	
ETIBALDGB+CH3C6H4=>CH2O+HCO+C2H2+C7H8	1.8500e+08
1.000 3864.72	

ETIBALDGB+RCRESOLO=>CH2O+HCO+C2H2+CRESOL	1.3500e+05
2.000 15810.16	
ETIBALDGB+C10H7=>CH2O+HCO+C2H2+C10H8	1.8500e+08
1.000 3864.72	
ETIBALDGB+INDENYL=>CH2O+HCO+C2H2+INDENE	6.5000e+04
2.000 19190.53	
ETIBALDGB+C10H6CH3=>CH2O+HCO+C2H2+C10H7CH3	1.8500e+08
1.000 3864.72	
H+ETIBALDGG=>H2+CO+CH2O+C2H3	1.2000e+07
2.000 2573.61	
CH3+ETIBALDGG=>CO+CH4+CH2O+C2H3	1.2000e+05
2.000 3516.32	
C2H3+ETIBALDGG=>CO+CH2O+C2H4+C2H3	2.7120e+05
2.000 2479.60	
C2H5+ETIBALDGG=>CO+CH2O+C2H6+C2H3	8.0000e+04
2.000 5128.01	
NC3H7+ETIBALDGG=>CO+CH2O+C2H3+C3H8	5.4000e+04
2.000 5128.01	
IC3H7+ETIBALDGG=>CO+CH2O+C2H3+C3H8	5.4000e+04
2.000 8184.45	
C3H5-S+ETIBALDGG=>CO+CH2O+C2H3+C3H6	1.0800e+05
2.000 3044.41	
C3H5-T+ETIBALDGG=>CO+CH2O+C2H3+C3H6	1.0800e+05
2.000 3044.41	
C3H5-A+ETIBALDGG=>CO+CH2O+C2H3+C3H6	2.1560e+05
2.000 10972.41	
C4H5+ETIBALDGG=>CO+CH2O+C2H3+C4H6	1.0800e+05
2.000 3044.41	
C4H71-4+ETIBALDGG=>CO+CH2O+C2H3+C4H8-1	5.4000e+04
2.000 5032.93	
C4H71-3+ETIBALDGG=>CO+CH2O+C2H3+C4H8-2	1.3600e+05
2.000 11840.29	
IC4H7+ETIBALDGG=>CO+CH2O+C2H3+IC4H8	1.0800e+05
2.000 11840.29	
C4H3+ETIBALDGG=>CO+CH2O+C2H3+C4H4	1.6360e+05
2.000 3705.38	
C6H5+ETIBALDGG=>CO+CH2O+C2H3+C6H6	1.4800e+08
1.000 867.85	

O+ETIBALDGG=>OH+CO+CH2O+C2H3	9.4000e+06
2.000 1169.32	
O2+ETIBALDGG=>HO2+CO+CH2O+C2H3	6.8000e+06
2.000 41405.89	
OH+ETIBALDGG=>H2O+CO+CH2O+C2H3	6.0000e+09
1.000 -855.10	
HO2+ETIBALDGG=>H2O2+CO+CH2O+C2H3	3.2000e+06
2.000 14062.89	
CH3O+ETIBALDGG=>CO+CH3OH+CH2O+C2H3	1.7120e+05
2.000 241.70	
CH2OH+ETIBALDGG=>CO+CH3OH+CH2O+C2H3	1.1320e+05
2.000 8472.17	
HCO+ETIBALDGG=>CO+2CH2O+C2H3	5.0400e+05
2.000 10490.75	
CH3CO+ETIBALDGG=>CO+CH2O+C2H3+CH3CHO	5.4000e+05
2.000 12129.83	
CH2CHO+ETIBALDGG=>CO+CH2O+C2H3+CH3CHO	9.2000e+04
2.000 9720.89	
C3H3+ETIBALDGG=>CO+CH2O+C2H3+C3H4-A	1.0800e+05
2.000 12129.83	
HCCO+ETIBALDGG=>CO+CH2O+C2H3+CH2CO	1.7120e+05
2.000 3705.38	
CH3O2+ETIBALDGG=>CO+CH3O2H+CH2O+C2H3	3.0400e+05
2.000 10779.70	
C2H5O2+ETIBALDGG=>CO+CH2O+C2H5O2H+C2H3	3.0400e+05
2.000 10779.70	
NC3H7O2+ETIBALDGG=>CO+CH2O+C2H3+C3H7OOH	3.0400e+05
2.000 10779.70	
IC3H7O2+ETIBALDGG=>CO+CH2O+C2H3+C3H7OOH	3.0400e+05
2.000 10779.70	
HCO3+ETIBALDGG=>CO+CH2O+C2H3+HCO3H	1.3600e+05
2.000 4937.89	
CH3CO3+ETIBALDGG=>CO+CH2O+C2H3+CH3CO3H	1.3600e+05
2.000 4937.89	
CH3COCH2+ETIBALDGG=>CO+CH2O+C2H3+CH3COCH3	9.2000e+04
2.000 6366.63	
ETIBALDGG+C6H5O=>CO+CH2O+C2H3+C6H5OH	1.0800e+05
2.000 10683.36	

ETIBALDGG+C5H7=>CO+CH2O+C2H3+LC5H8	1.0800e+05
2.000 13095.77	
ETIBALDGG+C7H7=>CO+CH2O+C2H3+C7H8	5.4000e+04
2.000 14062.89	
ETIBALDGG+CH3C6H4=>CO+CH2O+C2H3+C7H8	1.4800e+08
1.000 867.85	
ETIBALDGG+RCRESOLO=>CO+CH2O+C2H3+CRESOL	1.0800e+05
2.000 10972.41	
ETIBALDGG+C10H7=>CO+CH2O+C2H3+C10H8	1.4800e+08
1.000 867.85	
ETIBALDGG+INDENYL=>CO+CH2O+C2H3+INDENE	5.2000e+04
2.000 14062.89	
ETIBALDGG+C10H6CH3=>CO+CH2O+C2H3+C10H7CH3	1.4800e+08
1.000 867.85	
H+ETIBALDGG=>H2+CH2O+HCO+C2H2	1.2000e+07
2.000 6349.34	
CH3+ETIBALDGG=>CH4+CH2O+HCO+C2H2	1.2000e+05
2.000 7443.70	
C2H3+ETIBALDGG=>CH2O+HCO+C2H4+C2H2	2.7120e+05
2.000 6239.48	
C2H5+ETIBALDGG=>CH2O+HCO+C2H6+C2H2	8.0000e+04
2.000 9289.16	
NC3H7+ETIBALDGG=>CH2O+HCO+C2H2+C3H8	5.4000e+04
2.000 9289.16	
IC3H7+ETIBALDGG=>CH2O+HCO+C2H2+C3H8	5.4000e+04
2.000 12725.62	
C3H5-S+ETIBALDGG=>CH2O+HCO+C2H2+C3H6	1.0800e+05
2.000 6897.45	
C3H5-T+ETIBALDGG=>CH2O+HCO+C2H2+C3H6	1.0800e+05
2.000 6897.45	
C3H5-A+ETIBALDGG=>CH2O+HCO+C2H2+C3H6	2.1560e+05
2.000 15810.16	
C4H5+ETIBALDGG=>CH2O+HCO+C2H2+C4H6	1.0800e+05
2.000 6897.45	
C4H71-4+ETIBALDGG=>CH2O+HCO+C2H2+C4H8-1	5.4000e+04
2.000 9181.05	
C4H71-3+ETIBALDGG=>CH2O+HCO+C2H2+C4H8-2	1.3600e+05
2.000 16763.05	



IC4H7+ETIBALDGG=>CH2O+HCO+C2H2+IC4H8	1.0800e+05
2.000 16763.05	
C4H3+ETIBALDGG=>CH2O+HCO+C2H2+C4H4	1.6360e+05
2.000 7661.72	
C6H5+ETIBALDGG=>CH2O+HCO+C2H2+C6H6	1.4800e+08
1.000 3864.72	
O+ETIBALDGG=>OH+CH2O+HCO+C2H2	9.4000e+06
2.000 4691.70	
O2+ETIBALDGG=>HO2+CH2O+HCO+C2H2	6.8000e+06
2.000 48272.65	
OH+ETIBALDGG=>H2O+CH2O+HCO+C2H2	6.0000e+09
1.000 1540.75	
HO2+ETIBALDGG=>H2O2+CH2O+HCO+C2H2	3.2000e+06
2.000 19190.53	
CH3O+ETIBALDGG=>CH3OH+CH2O+HCO+C2H2	1.7120e+05
2.000 3572.50	
CH2OH+ETIBALDGG=>CH3OH+CH2O+HCO+C2H2	1.1320e+05
2.000 13045.84	
HCO+ETIBALDGG=>2CH2O+HCO+C2H2	5.0400e+05
2.000 15279.95	
CH3CO+ETIBALDGG=>CH2O+HCO+C2H2+CH3CHO	5.4000e+05
2.000 17080.28	
CH2CHO+ETIBALDGG=>CH2O+HCO+C2H2+CH3CHO	9.2000e+04
2.000 14430.30	
C3H3+ETIBALDGG=>CH2O+HCO+C2H2+C3H4-A	1.0800e+05
2.000 17080.28	
HCCO+ETIBALDGG=>CH2O+HCO+C2H2+CH2CO	1.7120e+05
2.000 7661.72	
CH3O2+ETIBALDGG=>CH3O2H+CH2O+HCO+C2H2	3.0400e+05
2.000 15598.15	
C2H5O2+ETIBALDGG=>CH2O+HCO+C2H5O2H+C2H2	3.0400e+05
2.000 15598.15	
NC3H7O2+ETIBALDGG=>CH2O+HCO+C2H2+C3H7OOH	3.0400e+05
2.000 15598.15	
IC3H7O2+ETIBALDGG=>CH2O+HCO+C2H2+C3H7OOH	3.0400e+05
2.000 15598.15	
HCO3+ETIBALDGG=>CH2O+HCO+C2H2+HCO3H	1.3600e+05
2.000 9072.89	

CH3CO3+ETIBALDGG=>CH2O+HCO+C2H2+CH3CO3H	1.3600e+05
2.000 9072.89	
CH3COCH2+ETIBALDGG=>CH2O+HCO+C2H2+CH3COCH3	9.2000e+04
2.000 10690.26	
ETIBALDGG+C6H5O=>CH2O+HCO+C2H2+C6H5OH	1.0800e+05
2.000 15492.11	
ETIBALDGG+C5H7=>CH2O+HCO+C2H2+LC5H8	1.0800e+05
2.000 18136.38	
ETIBALDGG+C7H7=>CH2O+HCO+C2H2+C7H8	5.4000e+04
2.000 19190.53	
ETIBALDGG+CH3C6H4=>CH2O+HCO+C2H2+C7H8	1.4800e+08
1.000 3864.72	
ETIBALDGG+RCRESOLO=>CH2O+HCO+C2H2+CRESOL	1.0800e+05
2.000 15810.16	
ETIBALDGG+C10H7=>CH2O+HCO+C2H2+C10H8	1.4800e+08
1.000 3864.72	
ETIBALDGG+INDENYL=>CH2O+HCO+C2H2+INDENE	5.2000e+04
2.000 19190.53	
ETIBALDGG+C10H6CH3=>CH2O+HCO+C2H2+C10H7CH3	1.4800e+08
1.000 3864.72	
O2+RALD5X=>RALD5XOO	4.0000e+12
0.000 0.00	
RALD5XOO=>O2+RALD5X	1.0000e+13
0.000 31500.00	
HO2+RALD5XOO=>O2+OH+HCO+C3H7CHO	4.0000e+10
0.000 -1200.00	
HO2+RALD5XOO=>O2+OH+CH2CHO+C2H5CHO	3.0000e+10
0.000 -1200.00	
HO2+RALD5XOO=>O2+OH+CH3CHO+RALD3	1.0000e+10
0.000 -1200.00	
HO2+RALD5XOO=>O2+OH+CH2O+RALD4X	1.0000e+10
0.000 -1200.00	
CH3O2+RALD5XOO=>O2+CH3O+HCO+C3H7CHO	4.0000e+10
0.000 -1200.00	
CH3O2+RALD5XOO=>O2+CH3O+CH2CHO+C2H5CHO	3.0000e+10
0.000 -1200.00	
CH3O2+RALD5XOO=>O2+CH3O+CH3CHO+RALD3	1.0000e+10
0.000 -1200.00	

CH3O2+RALD5XOO=>O2+CH3O+CH2O+RALD4X 0.000        -1200.00	1.0000e+10
NC4H9-OO+RALD5XOO=>O2+CH2O+HCO+NC3H7+C3H7CHO 0.000        -1200.00	4.0000e+10
NC4H9-OO+RALD5XOO=>O2+CH2O+CH2CHO+NC3H7+C2H5CHO 0.000        -1200.00	3.0000e+10
NC4H9-OO+RALD5XOO=>O2+CH2O+CH3CHO+NC3H7+RALD3 0.000        -1200.00	1.0000e+10
NC4H9-OO+RALD5XOO=>O2+2CH2O+NC3H7+RALD4X 0.000        -1200.00	1.0000e+10
RALD5XOO=>QA5X 0.000        24500.00	2.5000e+12
QA5X=>RALD5XOO 0.000        15000.00	3.0000e+10
RALD5XOO=>OH+CO+C3H7CHO 0.000        23500.00	6.0000e+11
RALD5XOO=>CO+NC4-QOOH 0.000        19000.00	3.0000e+10
O2+QA5X=>ZA5X 0.000            0.00	4.0000e+12
ZA5X=>O2+QA5X 0.000        31500.00	1.0000e+13
QA5X=>HO2+0.5C3H5CHO+0.5C5H9CHO 0.000        23500.00	4.0000e+13
QA5X=>OH+CHOCHO+C3H6 0.000        23000.00	2.0000e+13
QA5X=>OH+CH2O+C3H5CHO 0.000        23000.00	3.0000e+12
QA5X=>OH+CH3CHO+C2H3CHO 0.000        23000.00	1.5000e+13
QA5X=>OH+C2H4+CHOCH2CHO 0.000        23000.00	9.0000e+12
QA5X=>OH+0.5ETALD4X+0.5ETALD6X 0.000        17000.00	1.0000e+12
ZA5X=>OH+KEA5X 0.000        18000.00	1.0000e+11
ZA5X=>OH+CO+NC4-QOOH 0.000        18000.00	1.0000e+11

KEA5X=>OH+CO+CH2O+RALD3	3.0000e+14
0.000 41000.00	
KEA5X=>OH+CH2CHO+CHOCH2CHO	3.0000e+14
0.000 41000.00	
KEA5X=>OH+CHOCHO+RALD3	6.0000e+14
0.000 41000.00	
KEA5X=>OH+CO+C2H5+CHOCHO	6.0000e+14
0.000 41000.00	
KEA5X=>OH+CHOCHO+CH3COCH2	1.0000e+15
0.000 41000.00	
KEA5X=>OH+CO+CH2O+HCO+C2H4	1.0000e+15
0.000 41000.00	
O2+RALD6X=>RALD6XOO	4.0000e+12
0.000 0.00	
RALD6XOO=>O2+RALD6X	1.0000e+13
0.000 31500.00	
HO2+RALD6XOO=>O2+OH+HCO+C4H9CHO	4.0000e+10
0.000 -1200.00	
HO2+RALD6XOO=>O2+OH+CH2CHO+C3H7CHO	3.0000e+10
0.000 -1200.00	
HO2+RALD6XOO=>O2+OH+C2H5CHO+RALD3	1.0000e+10
0.000 -1200.00	
HO2+RALD6XOO=>O2+OH+CH3CHO+RALD4X	1.0000e+10
0.000 -1200.00	
HO2+RALD6XOO=>O2+OH+CH2O+RALD5X	1.0000e+10
0.000 -1200.00	
CH3O2+RALD6XOO=>O2+CH3O+HCO+C4H9CHO	4.0000e+10
0.000 -1200.00	
CH3O2+RALD6XOO=>O2+CH3O+CH2CHO+C3H7CHO	3.0000e+10
0.000 -1200.00	
CH3O2+RALD6XOO=>O2+CH3O+C2H5CHO+RALD3	1.0000e+10
0.000 -1200.00	
CH3O2+RALD6XOO=>O2+CH3O+CH3CHO+RALD4X	1.0000e+10
0.000 -1200.00	
CH3O2+RALD6XOO=>O2+CH3O+CH2O+RALD5X	1.0000e+10
0.000 -1200.00	
NC5H12OO+RALD6XOO=>O2+HCO+CH3CHO+NC3H7+C4H9CHO	4.0000e+10
0.000 -1200.00	

NC5H12OO+RALD6XOO=>O2+CH3CHO+CH2CHO+NC3H7+C3H7CHO 0.000        -1200.00	3.0000e+10
NC5H12OO+RALD6XOO=>O2+CH3CHO+NC3H7+C2H5CHO+RALD3 0.000        -1200.00	1.0000e+10
NC5H12OO+RALD6XOO=>O2+2CH3CHO+NC3H7+RALD4X 0.000        -1200.00	1.0000e+10
NC5H12OO+RALD6XOO=>O2+CH2O+CH3CHO+NC3H7+RALD5X 0.000        -1200.00	1.0000e+10
RALD6XOO=>QA6X 0.000        24000.00	3.0000e+12
QA6X=>RALD6XOO 0.000        15000.00	3.0000e+10
RALD6XOO=>OH+CO+C4H9CHO 0.000        23500.00	6.0000e+11
RALD6XOO=>CO+NC5-QOOH 0.000        19000.00	3.0000e+10
O2+QA6X=>ZA6X 0.000            0.00	4.0000e+12
ZA6X=>O2+QA6X 0.000        31500.00	1.0000e+13
QA6X=>HO2+C5H9CHO 0.000        23500.00	4.0000e+13
QA6X=>OH+CHOCHO+C4H8-1 0.000        23000.00	1.5000e+13
QA6X=>OH+C3H6+CHOCH2CHO 0.000        23000.00	4.5000e+12
QA6X=>OH+C2H5CHO+C2H3CHO 0.000        23000.00	1.5000e+13
QA6X=>OH+C2H4+C4H6O2 0.000        23000.00	4.5000e+12
QA6X=>OH+CH3CHO+C3H5CHO 0.000        23000.00	4.5000e+12
QA6X=>OH+CH2O+0.5C3H5CHO+0.5C5H9CHO 0.000        23000.00	4.5000e+12
ZA6X=>OH+KEA6X 0.000        18000.00	1.0000e+11
ZA6X=>OH+CO+NC5-QOOH 0.000        18000.00	1.0000e+11

KEA6X=>OH+CH2O+CH2CO+RALD3	3.0000e+14
0.000 41000.00	
KEA6X=>OH+CH2CHO+C4H6O2	3.0000e+14
0.000 41000.00	
KEA6X=>OH+RALD3+CHOCH2CHO	6.0000e+14
0.000 41000.00	
KEA6X=>OH+C2H5+CH2CO+CHOCHO	6.0000e+14
0.000 41000.00	
KEA6X=>OH+CH3COCH2+CHOCH2CHO	1.0000e+15
0.000 41000.00	
KEA6X=>OH+CO+HCO+C2H4+CH3CHO	1.0000e+15
0.000 41000.00	
QA6X=>OH+ETALD6X	1.0000e+12
0.000 17000.00	
H+ETALD6X=>H2+CO+C2H3+C2H5CHO	9.6270e+06
2.000 2387.18	
OH+ETALD6X=>H2O+CO+C2H3+C2H5CHO	1.5980e+06
2.000 -3343.83	
CH3+ETALD6X=>CO+CH4+C2H3+C2H5CHO	1.5610e+05
2.000 3259.77	
HO2+ETALD6X=>H2O2+CO+C2H3+C2H5CHO	2.1550e+05
2.000 9982.61	
O+ETALD6X=>OH+CO+C2H3+C2H5CHO	5.4130e+06
2.000 1094.46	
H+ETALD6X=>H2+CO+C2H5+C2H3CHO	2.4070e+06
2.000 2663.07	
OH+ETALD6X=>H2O+CO+C2H5+C2H3CHO	3.9940e+05
2.000 -2802.24	
CH3+ETALD6X=>CO+CH4+C2H5+C2H3CHO	3.9030e+04
2.000 3687.13	
HO2+ETALD6X=>H2O2+CO+C2H5+C2H3CHO	5.3880e+04
2.000 10045.36	
O+ETALD6X=>OH+CO+C2H5+C2H3CHO	1.3530e+06
2.000 1356.53	
H+ETALD6X=>H2+HCO+C2H4+C2H3CHO	7.2200e+06
2.000 3950.57	
OH+ETALD6X=>H2O+HCO+C2H4+C2H3CHO	1.1980e+06
2.000 -2259.83	

CH3+ETALD6X=>CH4+HCO+C2H4+C2H3CHO				1.1710e+05
2.000	4871.29			
HO2+ETALD6X=>H2O2+HCO+C2H4+C2H3CHO				1.6160e+05
2.000	11887.73			
O+ETALD6X=>OH+HCO+C2H4+C2H3CHO				4.0600e+06
2.000	2579.54			
O2+B1M3=CH2O+IC3H7CHO				1.0000e+14
0.000	39000.00			
OH+B1M2=>CH3+IC3H7CHO				1.0000e+12
0.000	1000.00			
OH+B1M3=>CH3+IC3H7CHO				1.5000e+12
0.000	1000.00			
OH+B2M2=>CH3+IC3H7CHO				1.5000e+12
0.000	1000.00			
OH+B2M2=>CH3+C3H7CHO				1.5000e+12
0.000	1000.00			
OH+B1M3=>CH3+C3H7CHO				1.5000e+12
0.000	1000.00			
O2+B1M2=CH2O+MEK				1.0000e+14
0.000	39000.00			
OH+B1M2=CH3+MEK				4.0000e+12
0.000	1000.00			
OH+IC3H5CHO=>H+CO+CH3COCH3				5.0000e+11
0.000	0.00			
HO2+C4H6=>OH+IC3H5CHO				4.0000e+12
0.000	15000.00			
H+IC3H5CHO=>HCO+C3H6				1.0000e+13
0.000	2500.00			
O2+C4H71-3=>OH+IC3H5CHO				1.5000e+13
0.000	16000.00			
O2+IC4H7=>OH+IC3H5CHO				5.0000e+12
0.000	23000.00			
N1C4H9OH=C2H5+PC2H4OH				3.0100e+25
2.573	89900.00			-
PLOG /	1.000000e-02	5.770000e+104	-2.590700e+01	1.327100e+05
/				
PLOG /	3.900000e-02	1.120000e+97	-2.352000e+01	1.298600e+05
/				
PLOG /	1.000000e+00	3.260000e+71	-1.590200e+01	1.174200e+05
/				
PLOG /	1.000000e+01	8.600000e+50	-9.909000e+00	1.056000e+05
/				

PLOG /	1.000000e+02	1.640000e+36	-5.650000e+00	9.688000e+04	
/					
PLOG /	1.000000e+03	4.210000e+25	-2.573000e+00	8.990000e+04	
/					
N1C4H9OH=CH3+CH2CH2CH2OH				5.1300e+26	-
2.918	90470.00				
PLOG /	1.000000e-02	1.860000e+86	-2.078700e+01	1.234800e+05	
/					
PLOG /	3.900000e-02	1.600000e+81	-1.912000e+01	1.227200e+05	
/					
PLOG /	1.000000e+00	2.700000e+59	-1.250900e+01	1.134700e+05	
/					
PLOG /	1.000000e+01	9.860000e+39	-6.808000e+00	1.027700e+05	
/					
PLOG /	1.000000e+02	2.040000e+25	-2.550000e+00	9.430000e+04	
/					
PLOG /	1.000000e+03	7.180000e+26	-2.918000e+00	9.047000e+04	
/					
N1C4H9OH=CH2OH+NC3H7				4.1300e+17	-
0.295	89720.00				
PLOG /	1.000000e-02	2.560000e+98	-2.410300e+01	1.284000e+05	
/					
PLOG /	3.900000e-02	6.150000e+91	-2.202000e+01	1.263300e+05	
/					
PLOG /	1.000000e+00	2.510000e+68	-1.502500e+01	1.152300e+05	
/					
PLOG /	1.000000e+01	1.510000e+48	-9.142000e+00	1.035100e+05	
/					
PLOG /	1.000000e+02	2.900000e+34	-5.170000e+00	9.539000e+04	
/					
PLOG /	1.000000e+03	5.780000e+17	-2.950000e-01	8.972000e+04	
/					
N1C4H9OH=OH+PC4H9				2.8200e+29	-
3.679	101930.00				
PLOG /	1.000000e-02	2.480000e+107	-2.688300e+01	1.411000e+05	
/					
PLOG /	3.900000e-02	4.680000e+101	-2.502000e+01	1.399500e+05	
/					
PLOG /	1.000000e+00	6.220000e+77	-1.778000e+01	1.294700e+05	
/					
PLOG /	1.000000e+01	7.130000e+56	-1.162900e+01	1.180600e+05	
/					
PLOG /	1.000000e+02	1.620000e+40	-6.800000e+00	1.084600e+05	
/					
PLOG /	1.000000e+03	3.950000e+29	-3.679000e+00	1.019300e+05	
/					
N1C4H9OH=H2O+C4H8-1				1.0000e+14	
0.000	67600.00				
PLOG /	1.000000e-02	1.500000e+13	0.000000e+00	6.760000e+04	
/					
PLOG /	1.000000e-01	4.000000e+13	0.000000e+00	6.760000e+04	
/					
PLOG /	1.000000e+00	8.000000e+13	0.000000e+00	6.760000e+04	
/					



PLOG /	1.000000e+02	1.000000e+14	0.000000e+00	6.760000e+04
/				
N1C4H9OH=H2+C3H7CHO				5.1000e+08
1.356	69680.00			
PLOG /	1.000000e-02	1.120000e+80	-1.949100e+01	1.096200e+05
/				
PLOG /	3.900000e-02	1.310000e+70	-1.653000e+01	1.047700e+05
/				
PLOG /	1.000000e+00	2.650000e+43	-8.694000e+00	9.024000e+04
/				
PLOG /	1.000000e+01	1.710000e+26	-3.704000e+00	8.023000e+04
/				
PLOG /	1.000000e+02	3.990000e+19	-1.740000e+00	7.717000e+04
/				
PLOG /	1.000000e+03	5.100000e+08	1.356000e+00	6.968000e+04
/				
H+CH3CH2CH2CH2O=N1C4H9OH				5.0000e+13
0.000	0.00			
H+CH3CH2CH2CHOH=N1C4H9OH				5.0000e+13
0.000	0.00			
H+CH3CH2CHCH2OH=N1C4H9OH				5.0000e+13
0.000	0.00			
H+CH3CHCH2CH2OH=N1C4H9OH				5.0000e+13
0.000	0.00			
H+CH2CH2CH2CH2OH=N1C4H9OH				5.0000e+13
0.000	0.00			
H+N1C4H9OH=H2+CH2CH2CH2CH2OH				5.6000e+06
2.000	6525.60			
HO2+N1C4H9OH=H2O2+CH3CH2CH2CHOH				5.0000e+06
2.000	16000.00			
CH2CH2CH2CH2OH=C2H4+PC2H4OH				3.0000e+13
0.000	30000.00			
CH3CHCH2CH2OH=H+NC4H7OH				3.0000e+13
0.000	38000.00			
CH3CHCH2CH2OH=CH2OH+C3H6				6.0000e+13
0.000	31000.00			
CH3CH2CHCH2OH=H+C3H7CHO				3.0000e+13
0.000	38000.00			
CH3CH2CHCH2OH=CH3+C3H5OH				3.0000e+13
0.000	33000.00			
CH3CH2CHCH2OH=OH+C4H8-1				3.0000e+13
0.000	32500.00			

CH3CH2CH2CHOH=H+C3H7CHO	3.0000e+13
0.000 38000.00	
CH3CH2CH2CHOH=C2H5+CH3CHO	3.0000e+13
0.000 31000.00	
CH3CH2CH2CH2O=CH2O+NC3H7	3.0000e+13
0.000 15000.00	
CH3CH2CH2CH2O=H+C3H7CHO	3.0000e+13
0.000 26000.00	
CH2CH2CH2CH2OH=CH3CH2CH2CH2O	1.6000e+10
0.000 16000.00	
CH2CH2CH2CH2OH=CH3CH2CH2CHOH	2.0000e+11
0.000 19600.00	
CH3CHCH2CH2OH=CH3CH2CH2CH2O	1.0000e+11
0.000 23000.00	
CH3CH2CHCH2OH=CH3CH2CH2CH2O	5.0000e+11
0.000 26000.00	
O2+CH3CH2CH2CH2O=HO2+C3H7CHO	3.0000e+12
0.000 3500.00	
O2+CH3CH2CH2CHOH=HO2+C3H7CHO	5.1030e+11
0.302 -1068.66	
O2+CH3CH2CHCH2OH=>HO2+0.67C3H7CHO+0.33NC4H7OH	4.5000e+12
0.000 3500.00	
O2+CH3CHCH2CH2OH=HO2+NC4H7OH	4.5000e+12
0.000 3500.00	
O2+CH2CH2CH2CH2OH=HO2+NC4H7OH	3.0000e+12
0.000 3500.00	
CH3+N1C4H9OH=>CH4+CH2CH2CH2CH2OH	9.0000e+04
2.000 7443.70	
C2H3+N1C4H9OH=>C2H4+CH2CH2CH2CH2OH	2.0340e+05
2.000 6239.48	
C2H5+N1C4H9OH=>C2H6+CH2CH2CH2CH2OH	6.0000e+04
2.000 9289.16	
NC3H7+N1C4H9OH=>C3H8+CH2CH2CH2CH2OH	4.0500e+04
2.000 9289.16	
IC3H7+N1C4H9OH=>C3H8+CH2CH2CH2CH2OH	4.0500e+04
2.000 12725.62	
C3H5-S+N1C4H9OH=>C3H6+CH2CH2CH2CH2OH	8.1000e+04
2.000 6897.45	

C3H5-T+N1C4H9OH=>C3H6+CH2CH2CH2CH2OH	8.1000e+04
2.000 6897.45	
C3H5-A+N1C4H9OH=>C3H6+CH2CH2CH2CH2OH	1.6170e+05
2.000 15810.16	
C4H5+N1C4H9OH=>C4H6+CH2CH2CH2CH2OH	8.1000e+04
2.000 6897.45	
C4H71-4+N1C4H9OH=>C4H8-1+CH2CH2CH2CH2OH	4.0500e+04
2.000 9181.05	
C4H71-3+N1C4H9OH=>C4H8-2+CH2CH2CH2CH2OH	1.0200e+05
2.000 16763.05	
IC4H7+N1C4H9OH=>IC4H8+CH2CH2CH2CH2OH	8.1000e+04
2.000 16763.05	
C4H3+N1C4H9OH=>C4H4+CH2CH2CH2CH2OH	1.2270e+05
2.000 7661.72	
C6H5+N1C4H9OH=>C6H6+CH2CH2CH2CH2OH	1.1100e+08
1.000 3864.72	
O+N1C4H9OH=>OH+CH2CH2CH2CH2OH	7.0500e+06
2.000 4691.70	
O2+N1C4H9OH=>HO2+CH2CH2CH2CH2OH	5.1000e+06
2.000 48272.65	
OH+N1C4H9OH=>H2O+CH2CH2CH2CH2OH	4.5000e+09
1.000 1540.75	
HO2+N1C4H9OH=>H2O2+CH2CH2CH2CH2OH	2.4000e+06
2.000 19190.53	
CH3O+N1C4H9OH=>CH3OH+CH2CH2CH2CH2OH	1.2840e+05
2.000 3572.50	
CH2OH+N1C4H9OH=>CH3OH+CH2CH2CH2CH2OH	8.4900e+04
2.000 13045.84	
HCO+N1C4H9OH=>CH2O+CH2CH2CH2CH2OH	3.7800e+05
2.000 15279.95	
CH3CO+N1C4H9OH=>CH3CHO+CH2CH2CH2CH2OH	4.0500e+05
2.000 17080.28	
CH2CHO+N1C4H9OH=>CH3CHO+CH2CH2CH2CH2OH	6.9000e+04
2.000 14430.30	
C3H3+N1C4H9OH=>C3H4-A+CH2CH2CH2CH2OH	8.1000e+04
2.000 17080.28	
HCCO+N1C4H9OH=>CH2CO+CH2CH2CH2CH2OH	1.2840e+05
2.000 7661.72	

CH3O2+N1C4H9OH=>CH3O2H+CH2CH2CH2CH2OH	2.2800e+05
2.000 15598.15	
C2H5O2+N1C4H9OH=>C2H5O2H+CH2CH2CH2CH2OH	2.2800e+05
2.000 15598.15	
NC3H7O2+N1C4H9OH=>C3H7OOH+CH2CH2CH2CH2OH	2.2800e+05
2.000 15598.15	
IC3H7O2+N1C4H9OH=>C3H7OOH+CH2CH2CH2CH2OH	2.2800e+05
2.000 15598.15	
HCO3+N1C4H9OH=>HCO3H+CH2CH2CH2CH2OH	1.0200e+05
2.000 9072.89	
CH3CO3+N1C4H9OH=>CH3CO3H+CH2CH2CH2CH2OH	1.0200e+05
2.000 9072.89	
CH3COCH2+N1C4H9OH=>CH3COCH3+CH2CH2CH2CH2OH	6.9000e+04
2.000 10690.26	
N1C4H9OH+C6H5O=>CH2CH2CH2CH2OH+C6H5OH	8.1000e+04
2.000 15492.11	
N1C4H9OH+C5H7=>CH2CH2CH2CH2OH+LC5H8	8.1000e+04
2.000 18136.38	
N1C4H9OH+C7H7=>CH2CH2CH2CH2OH+C7H8	4.0500e+04
2.000 19190.53	
N1C4H9OH+CH3C6H4=>CH2CH2CH2CH2OH+C7H8	1.1100e+08
1.000 3864.72	
N1C4H9OH+RCRESOLO=>CH2CH2CH2CH2OH+RCRESOL	8.1000e+04
2.000 15810.16	
N1C4H9OH+C10H7=>C10H8+CH2CH2CH2CH2OH	1.1100e+08
1.000 3864.72	
N1C4H9OH+INDENYL=>CH2CH2CH2CH2OH+INDENE	3.9000e+04
2.000 19190.53	
N1C4H9OH+C10H6CH3=>CH2CH2CH2CH2OH+C10H7CH3	1.1100e+08
1.000 3864.72	
H+N1C4H9OH=>H2+CH3CHCH2CH2OH	6.6000e+06
2.000 4000.00	
CH3+N1C4H9OH=>CH4+CH3CHCH2CH2OH	6.6000e+04
2.000 5000.00	
C2H3+N1C4H9OH=>C2H4+CH3CHCH2CH2OH	1.4916e+05
2.000 3900.00	
C2H5+N1C4H9OH=>C2H6+CH3CHCH2CH2OH	4.4000e+04
2.000 6700.00	

NC3H7+N1C4H9OH=>C3H8+CH3CHCH2CH2OH	2.9700e+04
2.000        6700.00	
IC3H7+N1C4H9OH=>C3H8+CH3CHCH2CH2OH	2.9700e+04
2.000        9900.00	
C3H5-S+N1C4H9OH=>C3H6+CH3CHCH2CH2OH	5.9400e+04
2.000        4500.00	
C3H5-T+N1C4H9OH=>C3H6+CH3CHCH2CH2OH	5.9400e+04
2.000        4500.00	
C3H5-A+N1C4H9OH=>C3H6+CH3CHCH2CH2OH	1.1858e+05
2.000        12800.00	
C4H5+N1C4H9OH=>C4H6+CH3CHCH2CH2OH	5.9400e+04
2.000        4500.00	
C4H71-4+N1C4H9OH=>C4H8-1+CH3CHCH2CH2OH	2.9700e+04
2.000        6600.00	
C4H71-3+N1C4H9OH=>C4H8-2+CH3CHCH2CH2OH	7.4800e+04
2.000        13700.00	
IC4H7+N1C4H9OH=>IC4H8+CH3CHCH2CH2OH	5.9400e+04
2.000        13700.00	
C4H3+N1C4H9OH=>C4H4+CH3CHCH2CH2OH	8.9980e+04
2.000        5200.00	
C6H5+N1C4H9OH=>C6H6+CH3CHCH2CH2OH	8.1400e+07
1.000        2000.00	
O+N1C4H9OH=>OH+CH3CHCH2CH2OH	5.1700e+06
2.000        2500.00	
O2+N1C4H9OH=>HO2+CH3CHCH2CH2OH	3.7400e+06
2.000        44000.00	
OH+N1C4H9OH=>H2O+CH3CHCH2CH2OH	3.3000e+09
1.000        50.00	
HO2+N1C4H9OH=>H2O2+CH3CHCH2CH2OH	1.7600e+06
2.000        16000.00	
CH3O+N1C4H9OH=>CH3OH+CH3CHCH2CH2OH	9.4160e+04
2.000        1500.00	
CH2OH+N1C4H9OH=>CH3OH+CH3CHCH2CH2OH	6.2260e+04
2.000        10200.00	
HCO+N1C4H9OH=>CH2O+CH3CHCH2CH2OH	2.7720e+05
2.000        12300.00	
CH3CO+N1C4H9OH=>CH3CHO+CH3CHCH2CH2OH	2.9700e+05
2.000        14000.00	

CH2CHO+N1C4H9OH=>CH3CHO+CH3CHCH2CH2OH	5.0600e+04
2.000 11500.00	
C3H3+N1C4H9OH=>C3H4-A+CH3CHCH2CH2OH	5.9400e+04
2.000 14000.00	
HCCO+N1C4H9OH=>CH2CO+CH3CHCH2CH2OH	9.4160e+04
2.000 5200.00	
CH3O2+N1C4H9OH=>CH3O2H+CH3CHCH2CH2OH	1.6720e+05
2.000 12600.00	
C2H5O2+N1C4H9OH=>C2H5O2H+CH3CHCH2CH2OH	1.6720e+05
2.000 12600.00	
NC3H7O2+N1C4H9OH=>C3H7OOH+CH3CHCH2CH2OH	1.6720e+05
2.000 12600.00	
IC3H7O2+N1C4H9OH=>C3H7OOH+CH3CHCH2CH2OH	1.6720e+05
2.000 12600.00	
HCO3+N1C4H9OH=>HCO3H+CH3CHCH2CH2OH	7.4800e+04
2.000 6500.00	
CH3CO3+N1C4H9OH=>CH3CO3H+CH3CHCH2CH2OH	7.4800e+04
2.000 6500.00	
CH3COCH2+N1C4H9OH=>CH3COCH3+CH3CHCH2CH2OH	5.0600e+04
2.000 8000.00	
N1C4H9OH+C6H5O=>CH3CHCH2CH2OH+C6H5OH	5.9400e+04
2.000 12500.00	
N1C4H9OH+C5H7=>CH3CHCH2CH2OH+LC5H8	5.9400e+04
2.000 15000.00	
N1C4H9OH+C7H7=>CH3CHCH2CH2OH+C7H8	2.9700e+04
2.000 16000.00	
N1C4H9OH+CH3C6H4=>CH3CHCH2CH2OH+C7H8	8.1400e+07
1.000 2000.00	
N1C4H9OH+RCRESOLO=>CH3CHCH2CH2OH+CRESOL	5.9400e+04
2.000 12800.00	
N1C4H9OH+C10H7=>C10H8+CH3CHCH2CH2OH	8.1400e+07
1.000 2000.00	
N1C4H9OH+INDENYL=>CH3CHCH2CH2OH+INDENE	2.8600e+04
2.000 16000.00	
N1C4H9OH+C10H6CH3=>CH3CHCH2CH2OH+C10H7CH3	8.1400e+07
1.000 2000.00	
H+N1C4H9OH=>H2+CH3CH2CHCH2OH	4.5000e+06
2.000 4000.00	

CH3+N1C4H9OH=>CH4+CH3CH2CHCH2OH	4.5000e+04
2.000 5000.00	
C2H3+N1C4H9OH=>C2H4+CH3CH2CHCH2OH	1.0170e+05
2.000 3900.00	
C2H5+N1C4H9OH=>C2H6+CH3CH2CHCH2OH	3.0000e+04
2.000 6700.00	
NC3H7+N1C4H9OH=>C3H8+CH3CH2CHCH2OH	2.0250e+04
2.000 6700.00	
IC3H7+N1C4H9OH=>C3H8+CH3CH2CHCH2OH	2.0250e+04
2.000 9900.00	
C3H5-S+N1C4H9OH=>C3H6+CH3CH2CHCH2OH	4.0500e+04
2.000 4500.00	
C3H5-T+N1C4H9OH=>C3H6+CH3CH2CHCH2OH	4.0500e+04
2.000 4500.00	
C3H5-A+N1C4H9OH=>C3H6+CH3CH2CHCH2OH	8.0850e+04
2.000 12800.00	
C4H5+N1C4H9OH=>C4H6+CH3CH2CHCH2OH	4.0500e+04
2.000 4500.00	
C4H71-4+N1C4H9OH=>C4H8-1+CH3CH2CHCH2OH	2.0250e+04
2.000 6600.00	
C4H71-3+N1C4H9OH=>C4H8-2+CH3CH2CHCH2OH	5.1000e+04
2.000 13700.00	
IC4H7+N1C4H9OH=>IC4H8+CH3CH2CHCH2OH	4.0500e+04
2.000 13700.00	
C4H3+N1C4H9OH=>C4H4+CH3CH2CHCH2OH	6.1350e+04
2.000 5200.00	
C6H5+N1C4H9OH=>C6H6+CH3CH2CHCH2OH	5.5500e+07
1.000 2000.00	
O+N1C4H9OH=>OH+CH3CH2CHCH2OH	3.5250e+06
2.000 2500.00	
O2+N1C4H9OH=>HO2+CH3CH2CHCH2OH	2.5500e+06
2.000 44000.00	
OH+N1C4H9OH=>H2O+CH3CH2CHCH2OH	2.2500e+09
1.000 50.00	
HO2+N1C4H9OH=>H2O2+CH3CH2CHCH2OH	1.2000e+06
2.000 16000.00	
CH3O+N1C4H9OH=>CH3OH+CH3CH2CHCH2OH	6.4200e+04
2.000 1500.00	

CH2OH+N1C4H9OH=>CH3OH+CH3CH2CHCH2OH 2.000 10200.00	4.2450e+04
HCO+N1C4H9OH=>CH2O+CH3CH2CHCH2OH 2.000 12300.00	1.8900e+05
CH3CO+N1C4H9OH=>CH3CHO+CH3CH2CHCH2OH 2.000 14000.00	2.0250e+05
CH2CHO+N1C4H9OH=>CH3CHO+CH3CH2CHCH2OH 2.000 11500.00	3.4500e+04
C3H3+N1C4H9OH=>C3H4-A+CH3CH2CHCH2OH 2.000 14000.00	4.0500e+04
HCCO+N1C4H9OH=>CH2CO+CH3CH2CHCH2OH 2.000 5200.00	6.4200e+04
CH3O2+N1C4H9OH=>CH3O2H+CH3CH2CHCH2OH 2.000 12600.00	1.1400e+05
C2H5O2+N1C4H9OH=>C2H5O2H+CH3CH2CHCH2OH 2.000 12600.00	1.1400e+05
NC3H7O2+N1C4H9OH=>C3H7OOH+CH3CH2CHCH2OH 2.000 12600.00	1.1400e+05
IC3H7O2+N1C4H9OH=>C3H7OOH+CH3CH2CHCH2OH 2.000 12600.00	1.1400e+05
HCO3+N1C4H9OH=>HCO3H+CH3CH2CHCH2OH 2.000 6500.00	5.1000e+04
CH3CO3+N1C4H9OH=>CH3CO3H+CH3CH2CHCH2OH 2.000 6500.00	5.1000e+04
CH3COCH2+N1C4H9OH=>CH3COCH3+CH3CH2CHCH2OH 2.000 8000.00	3.4500e+04
N1C4H9OH+C6H5O=>CH3CH2CHCH2OH+C6H5OH 2.000 12500.00	4.0500e+04
N1C4H9OH+C5H7=>CH3CH2CHCH2OH+LC5H8 2.000 15000.00	4.0500e+04
N1C4H9OH+C7H7=>CH3CH2CHCH2OH+C7H8 2.000 16000.00	2.0250e+04
N1C4H9OH+CH3C6H4=>CH3CH2CHCH2OH+C7H8 1.000 2000.00	5.5500e+07
N1C4H9OH+RCRESOLO=>CH3CH2CHCH2OH+CRESOL 2.000 12800.00	4.0500e+04
N1C4H9OH+C10H7=>C10H8+CH3CH2CHCH2OH 1.000 2000.00	5.5500e+07



N1C4H9OH+INDENYL=>CH3CH2CHCH2OH+INDENE	1.9500e+04
2.000 16000.00	
N1C4H9OH+C10H6CH3=>CH3CH2CHCH2OH+C10H7CH3	5.5500e+07
1.000 2000.00	
H+N1C4H9OH=>H2+CH3CH2CH2CHOH	1.0500e+07
2.000 4000.00	
CH3+N1C4H9OH=>CH4+CH3CH2CH2CHOH	1.0500e+05
2.000 5000.00	
C2H3+N1C4H9OH=>C2H4+CH3CH2CH2CHOH	2.3730e+05
2.000 3900.00	
C2H5+N1C4H9OH=>C2H6+CH3CH2CH2CHOH	7.0000e+04
2.000 6700.00	
NC3H7+N1C4H9OH=>C3H8+CH3CH2CH2CHOH	4.7250e+04
2.000 6700.00	
IC3H7+N1C4H9OH=>C3H8+CH3CH2CH2CHOH	4.7250e+04
2.000 9900.00	
C3H5-S+N1C4H9OH=>C3H6+CH3CH2CH2CHOH	9.4500e+04
2.000 4500.00	
C3H5-T+N1C4H9OH=>C3H6+CH3CH2CH2CHOH	9.4500e+04
2.000 4500.00	
C3H5-A+N1C4H9OH=>C3H6+CH3CH2CH2CHOH	1.8865e+05
2.000 12800.00	
C4H5+N1C4H9OH=>C4H6+CH3CH2CH2CHOH	9.4500e+04
2.000 4500.00	
C4H71-4+N1C4H9OH=>C4H8-1+CH3CH2CH2CHOH	4.7250e+04
2.000 6600.00	
C4H71-3+N1C4H9OH=>C4H8-2+CH3CH2CH2CHOH	1.1900e+05
2.000 13700.00	
IC4H7+N1C4H9OH=>IC4H8+CH3CH2CH2CHOH	9.4500e+04
2.000 13700.00	
C4H3+N1C4H9OH=>C4H4+CH3CH2CH2CHOH	1.4315e+05
2.000 5200.00	
C6H5+N1C4H9OH=>C6H6+CH3CH2CH2CHOH	1.2950e+08
1.000 2000.00	
O+N1C4H9OH=>OH+CH3CH2CH2CHOH	8.2250e+06
2.000 2500.00	
O2+N1C4H9OH=>HO2+CH3CH2CH2CHOH	5.9500e+06
2.000 44000.00	

OH+N1C4H9OH=>H2O+CH3CH2CH2CHOH	5.2500e+09
1.000            50.00	
CH3O+N1C4H9OH=>CH3OH+CH3CH2CH2CHOH	1.4980e+05
2.000            1500.00	
CH2OH+N1C4H9OH=>CH3OH+CH3CH2CH2CHOH	9.9050e+04
2.000            10200.00	
HCO+N1C4H9OH=>CH2O+CH3CH2CH2CHOH	4.4100e+05
2.000            12300.00	
CH3CO+N1C4H9OH=>CH3CHO+CH3CH2CH2CHOH	4.7250e+05
2.000            14000.00	
CH2CHO+N1C4H9OH=>CH3CHO+CH3CH2CH2CHOH	8.0500e+04
2.000            11500.00	
C3H3+N1C4H9OH=>C3H4-A+CH3CH2CH2CHOH	9.4500e+04
2.000            14000.00	
HCCO+N1C4H9OH=>CH2CO+CH3CH2CH2CHOH	1.4980e+05
2.000            5200.00	
CH3O2+N1C4H9OH=>CH3O2H+CH3CH2CH2CHOH	2.6600e+05
2.000            12600.00	
C2H5O2+N1C4H9OH=>C2H5O2H+CH3CH2CH2CHOH	2.6600e+05
2.000            12600.00	
NC3H7O2+N1C4H9OH=>C3H7OOH+CH3CH2CH2CHOH	2.6600e+05
2.000            12600.00	
IC3H7O2+N1C4H9OH=>C3H7OOH+CH3CH2CH2CHOH	2.6600e+05
2.000            12600.00	
HCO3+N1C4H9OH=>HCO3H+CH3CH2CH2CHOH	1.1900e+05
2.000            6500.00	
CH3CO3+N1C4H9OH=>CH3CO3H+CH3CH2CH2CHOH	1.1900e+05
2.000            6500.00	
CH3COCH2+N1C4H9OH=>CH3COCH3+CH3CH2CH2CHOH	8.0500e+04
2.000            8000.00	
N1C4H9OH+C6H5O=>CH3CH2CH2CHOH+C6H5OH	9.4500e+04
2.000            12500.00	
N1C4H9OH+C5H7=>CH3CH2CH2CHOH+LC5H8	9.4500e+04
2.000            15000.00	
N1C4H9OH+C7H7=>CH3CH2CH2CHOH+C7H8	4.7250e+04
2.000            16000.00	
N1C4H9OH+CH3C6H4=>CH3CH2CH2CHOH+C7H8	1.2950e+08
1.000            2000.00	

N1C4H9OH+RCRESOLO=>CH3CH2CH2CHOH+CRESOL 2.000 12800.00	9.4500e+04
N1C4H9OH+C10H7=>C10H8+CH3CH2CH2CHOH 1.000 2000.00	1.2950e+08
N1C4H9OH+INDENYL=>CH3CH2CH2CHOH+INDENE 2.000 16000.00	4.5500e+04
N1C4H9OH+C10H6CH3=>CH3CH2CH2CHOH+C10H7CH3 1.000 2000.00	1.2950e+08
H+N1C4H9OH=>H2+CH3CH2CH2CH2O 2.000 6349.34	3.0000e+06
CH3+N1C4H9OH=>CH4+CH3CH2CH2CH2O 2.000 7443.70	3.0000e+04
C2H3+N1C4H9OH=>C2H4+CH3CH2CH2CH2O 2.000 6239.48	6.7800e+04
C2H5+N1C4H9OH=>C2H6+CH3CH2CH2CH2O 2.000 9289.16	2.0000e+04
NC3H7+N1C4H9OH=>C3H8+CH3CH2CH2CH2O 2.000 9289.16	1.3500e+04
IC3H7+N1C4H9OH=>C3H8+CH3CH2CH2CH2O 2.000 12725.62	1.3500e+04
C3H5-S+N1C4H9OH=>C3H6+CH3CH2CH2CH2O 2.000 6897.45	2.7000e+04
C3H5-T+N1C4H9OH=>C3H6+CH3CH2CH2CH2O 2.000 6897.45	2.7000e+04
C3H5-A+N1C4H9OH=>C3H6+CH3CH2CH2CH2O 2.000 15810.16	5.3900e+04
C4H5+N1C4H9OH=>C4H6+CH3CH2CH2CH2O 2.000 6897.45	2.7000e+04
C4H71-4+N1C4H9OH=>C4H8-1+CH3CH2CH2CH2O 2.000 9181.05	1.3500e+04
C4H71-3+N1C4H9OH=>C4H8-2+CH3CH2CH2CH2O 2.000 16763.05	3.4000e+04
IC4H7+N1C4H9OH=>IC4H8+CH3CH2CH2CH2O 2.000 16763.05	2.7000e+04
C4H3+N1C4H9OH=>C4H4+CH3CH2CH2CH2O 2.000 7661.72	4.0900e+04
C6H5+N1C4H9OH=>C6H6+CH3CH2CH2CH2O 1.000 3864.72	3.7000e+07

O+N1C4H9OH=>OH+CH3CH2CH2CH2O	2.3500e+06
2.000 4691.70	
O2+N1C4H9OH=>HO2+CH3CH2CH2CH2O	1.7000e+06
2.000 48272.65	
OH+N1C4H9OH=>H2O+CH3CH2CH2CH2O	1.5000e+09
1.000 1540.75	
HO2+N1C4H9OH=>H2O2+CH3CH2CH2CH2O	8.0000e+05
2.000 19190.53	
CH3O+N1C4H9OH=>CH3OH+CH3CH2CH2CH2O	4.2800e+04
2.000 3572.50	
CH2OH+N1C4H9OH=>CH3OH+CH3CH2CH2CH2O	2.8300e+04
2.000 13045.84	
HCO+N1C4H9OH=>CH2O+CH3CH2CH2CH2O	1.2600e+05
2.000 15279.95	
CH3CO+N1C4H9OH=>CH3CHO+CH3CH2CH2CH2O	1.3500e+05
2.000 17080.28	
CH2CHO+N1C4H9OH=>CH3CHO+CH3CH2CH2CH2O	2.3000e+04
2.000 14430.30	
C3H3+N1C4H9OH=>C3H4-A+CH3CH2CH2CH2O	2.7000e+04
2.000 17080.28	
HCCO+N1C4H9OH=>CH2CO+CH3CH2CH2CH2O	4.2800e+04
2.000 7661.72	
CH3O2+N1C4H9OH=>CH3O2H+CH3CH2CH2CH2O	7.6000e+04
2.000 15598.15	
C2H5O2+N1C4H9OH=>C2H5O2H+CH3CH2CH2CH2O	7.6000e+04
2.000 15598.15	
NC3H7O2+N1C4H9OH=>C3H7OOH+CH3CH2CH2CH2O	7.6000e+04
2.000 15598.15	
IC3H7O2+N1C4H9OH=>C3H7OOH+CH3CH2CH2CH2O	7.6000e+04
2.000 15598.15	
HCO3+N1C4H9OH=>HCO3H+CH3CH2CH2CH2O	3.4000e+04
2.000 9072.89	
CH3CO3+N1C4H9OH=>CH3CO3H+CH3CH2CH2CH2O	3.4000e+04
2.000 9072.89	
CH3COCH2+N1C4H9OH=>CH3COCH3+CH3CH2CH2CH2O	2.3000e+04
2.000 10690.26	
N1C4H9OH+C6H5O=>CH3CH2CH2CH2O+C6H5OH	2.7000e+04
2.000 15492.11	

N1C4H9OH+C5H7=>CH3CH2CH2CH2O+LC5H8	2.7000e+04
2.000 18136.38	
N1C4H9OH+C7H7=>CH3CH2CH2CH2O+C7H8	1.3500e+04
2.000 19190.53	
N1C4H9OH+CH3C6H4=>CH3CH2CH2CH2O+C7H8	3.7000e+07
1.000 3864.72	
N1C4H9OH+RCRESOLO=>CH3CH2CH2CH2O+CRESOL	2.7000e+04
2.000 15810.16	
N1C4H9OH+C10H7=>C10H8+CH3CH2CH2CH2O	3.7000e+07
1.000 3864.72	
N1C4H9OH+INDENYL=>CH3CH2CH2CH2O+INDENE	1.3000e+04
2.000 19190.53	
N1C4H9OH+C10H6CH3=>CH3CH2CH2CH2O+C10H7CH3	3.7000e+07
1.000 3864.72	
H+NC4H7OH=>H2+0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6	
9.0000e+06 2.000 2825.33	
CH3+NC4H7OH=>0.6OH+CH4+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6	
9.0000e+04 2.000 3778.15	
C2H3+NC4H7OH=>0.6OH+0.3CH2O+C2H4+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6	
2.0340e+05 2.000 2730.26	
C2H5+NC4H7OH=>0.6OH+0.3CH2O+C2H6+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6	
6.0000e+04 2.000 5405.42	
NC3H7+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+C3H8+0.3C3H5-A+0.6C4H6	
4.0500e+04 2.000 5405.42	
IC3H7+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+C3H8+0.3C3H5-A+0.6C4H6	
4.0500e+04 2.000 8487.19	
C3H5-S+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+C3H6+0.3C3H5-A+0.6C4H6	
8.1000e+04 2.000 3301.28	
C3H5-T+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+C3H6+0.3C3H5-A+0.6C4H6	
8.1000e+04 2.000 3301.28	
C3H5-A+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+C3H6+0.3C3H5-A+0.6C4H6	
1.6170e+05 2.000 11294.92	
C4H5+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+1.6C4H6	
8.1000e+04 2.000 3301.28	
C4H71-4+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+C4H8-1+0.6C4H6	
4.0500e+04 2.000 5309.47	
C4H71-3+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+C4H8-2+0.6C4H6	
1.0200e+05 2.000 12168.47	

IC4H7+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+IC4H8+0.6C4H6  
8.1000e+04 2.000 12168.47

C4H3+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6+C4H4  
1.2270e+05 2.000 3969.14

C6H5+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6+C6H6  
1.1100e+08 1.000 1067.64

O+NC4H7OH=>1.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6 7.0500e+06  
2.000 1404.15

O2+NC4H7OH=>0.6OH+HO2+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6  
5.1000e+06 2.000 41863.68

OH+NC4H7OH=>H2O+0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6  
4.5000e+09 1.000 -695.37

HO2+NC4H7OH=>0.6OH+H2O2+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6  
2.4000e+06 2.000 14404.74

CH3O+NC4H7OH=>0.6OH+CH3OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6  
1.2840e+05 2.000 463.75

CH2OH+NC4H7OH=>0.6OH+CH3OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6  
8.4900e+04 2.000 8777.08

HCO+NC4H7OH=>0.6OH+1.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6 3.7800e+05  
2.000 10810.03

CH3CO+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+1.1CH3CHO+0.3C3H5-A+0.6C4H6  
4.0500e+05 2.000 12459.86

CH2CHO+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+1.1CH3CHO+0.3C3H5-A+0.6C4H6  
6.9000e+04 2.000 10034.85

C3H3+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+C3H4-A+0.6C4H6  
8.1000e+04 2.000 12459.86

HCCO+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+CH2CO+0.3C3H5-A+0.6C4H6  
1.2840e+05 2.000 3969.14

CH3O2+NC4H7OH=>0.6OH+CH3O2H+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6  
2.2800e+05 2.000 11100.93

C2H5O2+NC4H7OH=>0.6OH+0.3CH2O+C2H5O2H+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6  
2.2800e+05 2.000 11100.93

NC3H7O2+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6+C3H7OOH  
2.2800e+05 2.000 11100.93

IC3H7O2+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6+C3H7OOH  
2.2800e+05 2.000 11100.93

HCO3+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6+HCO3H  
1.0200e+05 2.000 5213.56

CH3CO3+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+CH3CO3H+0.3C3H5-A+0.6C4H6  
1.0200e+05 2.000 5213.56

CH3COCH2+NC4H7OH=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-  
A+CH3COCH3+0.6C4H6 6.9000e+04 2.000 6654.87

NC4H7OH+C6H5O=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6+C6H5OH  
8.1000e+04 2.000 11003.95

NC4H7OH+C5H7=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6+LC5H8  
8.1000e+04 2.000 13431.81

NC4H7OH+C7H7=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6+C7H8  
4.0500e+04 2.000 14404.74

NC4H7OH+CH3C6H4=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6+C7H8  
1.1100e+08 1.000 1067.64

NC4H7OH+RCRESOLO=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-  
A+0.6C4H6+CRESOL 8.1000e+04 2.000 11294.92

NC4H7OH+C10H7=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6+C10H8  
1.1100e+08 1.000 1067.64

NC4H7OH+INDENYL=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-A+0.6C4H6+INDENE  
3.9000e+04 2.000 14404.74

NC4H7OH+C10H6CH3=>0.6OH+0.3CH2O+0.1C2H3+0.1CH3CHO+0.3C3H5-  
A+0.6C4H6+C10H7CH3 1.1100e+08 1.000 1067.64

H+IC4H7OH=>H2+0.4CH3+0.6CH2OH+0.6C3H4-A+0.4C2H3CHO 9.0000e+06  
2.000 2825.33

CH3+IC4H7OH=>CH4+0.4CH3+0.6CH2OH+0.6C3H4-A+0.4C2H3CHO 9.0000e+04  
2.000 3778.15

C2H3+IC4H7OH=>0.4CH3+0.6CH2OH+C2H4+0.6C3H4-A+0.4C2H3CHO 2.0340e+05  
2.000 2730.26

C2H5+IC4H7OH=>0.4CH3+0.6CH2OH+C2H6+0.6C3H4-A+0.4C2H3CHO 6.0000e+04  
2.000 5405.42

NC3H7+IC4H7OH=>0.4CH3+0.6CH2OH+C3H8+0.6C3H4-A+0.4C2H3CHO 4.0500e+04  
2.000 5405.42

IC3H7+IC4H7OH=>0.4CH3+0.6CH2OH+C3H8+0.6C3H4-A+0.4C2H3CHO 4.0500e+04  
2.000 8487.19

C3H5-S+IC4H7OH=>0.4CH3+0.6CH2OH+C3H6+0.6C3H4-A+0.4C2H3CHO 8.1000e+04  
2.000 3301.28

C3H5-T+IC4H7OH=>0.4CH3+0.6CH2OH+C3H6+0.6C3H4-A+0.4C2H3CHO 8.1000e+04  
2.000 3301.28

C3H5-A+IC4H7OH=>0.4CH3+0.6CH2OH+C3H6+0.6C3H4-A+0.4C2H3CHO 1.6170e+05  
2.000 11294.92

$C_4H_5 + IC_4H_7OH \Rightarrow 0.4CH_3 + 0.6CH_2OH + 0.6C_3H_4 - A + 0.4C_2H_3CHO + C_4H_6$  8.1000e+04  
 2.000 3301.28

$C_4H_7-4 + IC_4H_7OH \Rightarrow 0.4CH_3 + 0.6CH_2OH + 0.6C_3H_4 - A + 0.4C_2H_3CHO + C_4H_8-1$  4.0500e+04  
 2.000 5309.47

$C_4H_7-3 + IC_4H_7OH \Rightarrow 0.4CH_3 + 0.6CH_2OH + 0.6C_3H_4 - A + 0.4C_2H_3CHO + C_4H_8-2$  1.0200e+05  
 2.000 12168.47

$IC_4H_7 + IC_4H_7OH \Rightarrow 0.4CH_3 + 0.6CH_2OH + 0.6C_3H_4 - A + 0.4C_2H_3CHO + IC_4H_8$  8.1000e+04  
 2.000 12168.47

$C_4H_3 + IC_4H_7OH \Rightarrow 0.4CH_3 + 0.6CH_2OH + 0.6C_3H_4 - A + 0.4C_2H_3CHO + C_4H_4$  1.2270e+05  
 2.000 3969.14

$C_6H_5 + IC_4H_7OH \Rightarrow 0.4CH_3 + 0.6CH_2OH + 0.6C_3H_4 - A + 0.4C_2H_3CHO + C_6H_6$  1.1100e+08  
 1.000 1067.64

$O + IC_4H_7OH \Rightarrow OH + 0.4CH_3 + 0.6CH_2OH + 0.6C_3H_4 - A + 0.4C_2H_3CHO$  7.0500e+06  
 2.000 1404.15

$O_2 + IC_4H_7OH \Rightarrow HO_2 + 0.4CH_3 + 0.6CH_2OH + 0.6C_3H_4 - A + 0.4C_2H_3CHO$  5.1000e+06  
 2.000 41863.68

$OH + IC_4H_7OH \Rightarrow H_2O + 0.4CH_3 + 0.6CH_2OH + 0.6C_3H_4 - A + 0.4C_2H_3CHO$  4.5000e+09  
 1.000 -695.37

$HO_2 + IC_4H_7OH \Rightarrow H_2O_2 + 0.4CH_3 + 0.6CH_2OH + 0.6C_3H_4 - A + 0.4C_2H_3CHO$  2.4000e+06  
 2.000 14404.74

$CH_3O + IC_4H_7OH \Rightarrow 0.4CH_3 + CH_3OH + 0.6CH_2OH + 0.6C_3H_4 - A + 0.4C_2H_3CHO$  1.2840e+05  
 2.000 463.75

$CH_2OH + IC_4H_7OH \Rightarrow 0.4CH_3 + CH_3OH + 0.6CH_2OH + 0.6C_3H_4 - A + 0.4C_2H_3CHO$  8.4900e+04  
 2.000 8777.08

$HCO + IC_4H_7OH \Rightarrow 0.4CH_3 + 0.6CH_2OH + CH_2O + 0.6C_3H_4 - A + 0.4C_2H_3CHO$  3.7800e+05  
 2.000 10810.03

$CH_3CO + IC_4H_7OH \Rightarrow 0.4CH_3 + 0.6CH_2OH + CH_3CHO + 0.6C_3H_4 - A + 0.4C_2H_3CHO$  4.0500e+05  
 2.000 12459.86

$CH_2CHO + IC_4H_7OH \Rightarrow 0.4CH_3 + 0.6CH_2OH + CH_3CHO + 0.6C_3H_4 - A + 0.4C_2H_3CHO$  6.9000e+04  
 2.000 10034.85

$C_3H_3 + IC_4H_7OH \Rightarrow 0.4CH_3 + 0.6CH_2OH + 1.6C_3H_4 - A + 0.4C_2H_3CHO$  8.1000e+04  
 2.000 12459.86

$HCCO + IC_4H_7OH \Rightarrow 0.4CH_3 + 0.6CH_2OH + CH_2CO + 0.6C_3H_4 - A + 0.4C_2H_3CHO$  1.2840e+05  
 2.000 3969.14

$CH_3O_2 + IC_4H_7OH \Rightarrow 0.4CH_3 + CH_3O_2H + 0.6CH_2OH + 0.6C_3H_4 - A + 0.4C_2H_3CHO$  2.2800e+05  
 2.000 11100.93

$C_2H_5O_2 + IC_4H_7OH \Rightarrow 0.4CH_3 + 0.6CH_2OH + C_2H_5O_2H + 0.6C_3H_4 - A + 0.4C_2H_3CHO$  2.2800e+05  
 2.000 11100.93



NC3H7O2+IC4H7OH=>0.4CH3+0.6CH2OH+0.6C3H4-A+0.4C2H3CHO+C3H7OOH 2.2800e+05  
2.000 11100.93

IC3H7O2+IC4H7OH=>0.4CH3+0.6CH2OH+0.6C3H4-A+0.4C2H3CHO+C3H7OOH 2.2800e+05  
2.000 11100.93

HCO3+IC4H7OH=>0.4CH3+0.6CH2OH+0.6C3H4-A+0.4C2H3CHO+HCO3H 1.0200e+05  
2.000 5213.56

CH3CO3+IC4H7OH=>0.4CH3+0.6CH2OH+CH3CO3H+0.6C3H4-A+0.4C2H3CHO 1.0200e+05  
2.000 5213.56

CH3COCH2+IC4H7OH=>0.4CH3+0.6CH2OH+0.6C3H4-A+0.4C2H3CHO+CH3COCH3  
6.9000e+04 2.000 6654.87

IC4H7OH+C6H5O=>0.4CH3+0.6CH2OH+0.6C3H4-A+0.4C2H3CHO+C6H5OH 8.1000e+04  
2.000 11003.95

IC4H7OH+C5H7=>0.4CH3+0.6CH2OH+0.6C3H4-A+0.4C2H3CHO+LC5H8 8.1000e+04  
2.000 13431.81

IC4H7OH+C7H7=>0.4CH3+0.6CH2OH+0.6C3H4-A+0.4C2H3CHO+C7H8 4.0500e+04  
2.000 14404.74

IC4H7OH+CH3C6H4=>0.4CH3+0.6CH2OH+0.6C3H4-A+0.4C2H3CHO+C7H8 1.1100e+08  
1.000 1067.64

IC4H7OH+RCRESOLO=>0.4CH3+0.6CH2OH+0.6C3H4-A+0.4C2H3CHO+CRESOL 8.1000e+04  
2.000 11294.92

IC4H7OH+C10H7=>0.4CH3+0.6CH2OH+0.6C3H4-A+0.4C2H3CHO+C10H8 1.1100e+08  
1.000 1067.64

IC4H7OH+INDENYL=>0.4CH3+0.6CH2OH+0.6C3H4-A+0.4C2H3CHO+INDENE 3.9000e+04  
2.000 14404.74

IC4H7OH+C10H6CH3=>0.4CH3+0.6CH2OH+0.6C3H4-A+0.4C2H3CHO+C10H7CH3  
1.1100e+08 1.000 1067.64

N2C4H9OH=C2H5+SC2H4OH 2.0000e+16  
0.000 86500.00

N2C4H9OH=CH3+CH3CH2CHOH 2.0000e+16  
0.000 87000.00

N2C4H9OH=CH3+CH2CHOHCH3 2.0000e+16  
0.000 87000.00

N2C4H9OH=OH+PC4H9 1.5000e+16  
0.000 93200.00

H+CH3CH2CHOHCH2=N2C4H9OH 5.0000e+13  
0.000 0.00

H+CH3CH2COHCH3=N2C4H9OH 5.0000e+13  
0.000 0.00

H+CH3CHCHOHCH3=N2C4H9OH 0.000            0.00	5.0000e+13
H+CH2CH2CHOHCH3=N2C4H9OH 0.000            0.00	5.0000e+13
N2C4H9OH=H2O+C4H8-1 0.000            67100.00	1.5000e+14
N2C4H9OH=H2O+C4H8-2 0.000            66100.00	1.0000e+14
N2C4H9OH=H2+MEK 0.000            69500.00	5.0000e+13
CH3CH2CHOHCH2=C2H5+CH3CHO 0.000            30000.00	3.0000e+13
CH3CH2CHOHCH2=OH+C4H8-1 0.000            35000.00	3.0000e+13
CH3CH2CHOHCH2=H+MEK 0.000            36000.00	3.0000e+13
CH3CH2COHCH3=CH3+CH3COCH3 0.000            32000.00	3.0000e+13
CH3CH2COHCH3=H+MEK 0.000            36000.00	3.0000e+13
CH3CHCHOHCH3=CH3+C2H5CHO 0.000            33000.00	3.0000e+13
CH3CHCHOHCH3=OH+C4H8-2 0.000            35000.00	3.0000e+13
CH3CHCHOHCH3=H+MEK 0.000            36000.00	3.0000e+13
CH3CHCHOHCH3=H+IC4H7OH 0.000            37000.00	3.0000e+13
CH2CH2CHOHCH3=C2H4+SC2H4OH 0.000            30000.00	3.0000e+13
CH2CH2CHOHCH3=H+NC4H7OH 0.000            37000.00	3.0000e+13
O2+CH3CH2CHOHCH2=HO2+MEK 0.000            3500.00	1.5000e+12
O2+CH3CH2COHCH3=HO2+MEK 0.000            3500.00	1.5000e+12
O2+CH3CHCHOHCH3=>HO2+0.33NC4H7OH+0.67MEK 0.000            3500.00	1.5000e+12

O2+CH2CH2CHOHCH3=HO2+NC4H7OH	1.5000e+12
0.000 3500.00	
CH2CH2CHOHCH3=CH3CH2CHOHCH2	3.0000e+11
0.000 19500.00	
H+N2C4H9OH=>H2+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	1.2000e+07
2.000 6349.34	
CH3+N2C4H9OH=>CH4+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	1.2000e+05
2.000 7443.70	
C2H3+N2C4H9OH=>C2H4+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	2.7120e+05
2.000 6239.48	
C2H5+N2C4H9OH=>C2H6+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	8.0000e+04
2.000 9289.16	
NC3H7+N2C4H9OH=>C3H8+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	5.4000e+04
2.000 9289.16	
IC3H7+N2C4H9OH=>C3H8+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	5.4000e+04
2.000 12725.62	
C3H5-S+N2C4H9OH=>C3H6+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	1.0800e+05
2.000 6897.45	
C3H5-T+N2C4H9OH=>C3H6+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	1.0800e+05
2.000 6897.45	
C3H5-A+N2C4H9OH=>C3H6+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	2.1560e+05
2.000 15810.16	
C4H5+N2C4H9OH=>C4H6+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	1.0800e+05
2.000 6897.45	
C4H71-4+N2C4H9OH=>C4H8-1+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	5.4000e+04
2.000 9181.05	
C4H71-3+N2C4H9OH=>C4H8-2+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	1.3600e+05
2.000 16763.05	
IC4H7+N2C4H9OH=>IC4H8+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	1.0800e+05
2.000 16763.05	
C4H3+N2C4H9OH=>C4H4+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	1.6360e+05
2.000 7661.72	
C6H5+N2C4H9OH=>C6H6+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	1.4800e+08
1.000 3864.72	
O+N2C4H9OH=>OH+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	9.4000e+06
2.000 4691.70	
O2+N2C4H9OH=>HO2+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	6.8000e+06
2.000 48272.65	

OH+N2C4H9OH=>H2O+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	6.0000e+09
1.000 1540.75	
HO2+N2C4H9OH=>H2O2+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	3.2000e+06
2.000 19190.53	
CH3O+N2C4H9OH=>CH3OH+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	1.7120e+05
2.000 3572.50	
CH2OH+N2C4H9OH=>CH3OH+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	1.1320e+05
2.000 13045.84	
HCO+N2C4H9OH=>CH2O+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	5.0400e+05
2.000 15279.95	
CH3CO+N2C4H9OH=>CH3CHO+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	5.4000e+05
2.000 17080.28	
CH2CHO+N2C4H9OH=>CH3CHO+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	9.2000e+04
2.000 14430.30	
C3H3+N2C4H9OH=>C3H4-A+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	1.0800e+05
2.000 17080.28	
HCCO+N2C4H9OH=>CH2CO+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	1.7120e+05
2.000 7661.72	
CH3O2+N2C4H9OH=>CH3O2H+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	3.0400e+05
2.000 15598.15	
C2H5O2+N2C4H9OH=>C2H5O2H+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	3.0400e+05
2.000 15598.15	
NC3H7O2+N2C4H9OH=>C3H7OOH+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	3.0400e+05
2.000 15598.15	
IC3H7O2+N2C4H9OH=>C3H7OOH+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	3.0400e+05
2.000 15598.15	
HCO3+N2C4H9OH=>HCO3H+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	1.3600e+05
2.000 9072.89	
CH3CO3+N2C4H9OH=>CH3CO3H+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	1.3600e+05
2.000 9072.89	
CH3COCH2+N2C4H9OH=>CH3COCH3+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2	9.2000e+04
2.000 10690.26	
N2C4H9OH+C6H5O=>0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2+C6H5OH	1.0800e+05
2.000 15492.11	
N2C4H9OH+C5H7=>0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2+LC5H8	1.0800e+05
2.000 18136.38	
N2C4H9OH+C7H7=>0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2+C7H8	5.4000e+04
2.000 19190.53	

$N2C4H9OH+CH3C6H4=>0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2+C7H8$  1.4800e+08  
 1.000 3864.72

$N2C4H9OH+RCRESOLO=>0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2+CRESOL$  1.0800e+05  
 2.000 15810.16

$N2C4H9OH+C10H7=>C10H8+0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2$  1.4800e+08  
 1.000 3864.72

$N2C4H9OH+INDENYL=>0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2+INDENE$  5.2000e+04  
 2.000 19190.53

$N2C4H9OH+C10H6CH3=>0.5CH2CH2CHOHCH3+0.5CH3CH2CHOHCH2+C10H7CH3$  1.4800e+08  
 1.000 3864.72

$H+N2C4H9OH=>H2+0.2CH3+0.8C2H5+0.8CH3CHO+0.2C2H5CHO$  3.0000e+06  
 2.000 6349.34

$CH3+N2C4H9OH=>CH4+0.2CH3+0.8C2H5+0.8CH3CHO+0.2C2H5CHO$  3.0000e+04  
 2.000 7443.70

$C2H3+N2C4H9OH=>0.2CH3+0.8C2H5+C2H4+0.8CH3CHO+0.2C2H5CHO$  6.7800e+04  
 2.000 6239.48

$C2H5+N2C4H9OH=>0.2CH3+C2H6+0.8C2H5+0.8CH3CHO+0.2C2H5CHO$  2.0000e+04  
 2.000 9289.16

$NC3H7+N2C4H9OH=>0.2CH3+0.8C2H5+0.8CH3CHO+C3H8+0.2C2H5CHO$  1.3500e+04  
 2.000 9289.16

$IC3H7+N2C4H9OH=>0.2CH3+0.8C2H5+0.8CH3CHO+C3H8+0.2C2H5CHO$  1.3500e+04  
 2.000 12725.62

$C3H5-S+N2C4H9OH=>0.2CH3+0.8C2H5+0.8CH3CHO+C3H6+0.2C2H5CHO$  2.7000e+04  
 2.000 6897.45

$C3H5-T+N2C4H9OH=>0.2CH3+0.8C2H5+0.8CH3CHO+C3H6+0.2C2H5CHO$  2.7000e+04  
 2.000 6897.45

$C3H5-A+N2C4H9OH=>0.2CH3+0.8C2H5+0.8CH3CHO+C3H6+0.2C2H5CHO$  5.3900e+04  
 2.000 15810.16

$C4H5+N2C4H9OH=>0.2CH3+0.8C2H5+0.8CH3CHO+0.2C2H5CHO+C4H6$  2.7000e+04  
 2.000 6897.45

$C4H71-4+N2C4H9OH=>0.2CH3+0.8C2H5+0.8CH3CHO+0.2C2H5CHO+C4H8-1$  1.3500e+04  
 2.000 9181.05

$C4H71-3+N2C4H9OH=>0.2CH3+0.8C2H5+0.8CH3CHO+0.2C2H5CHO+C4H8-2$  3.4000e+04  
 2.000 16763.05

$IC4H7+N2C4H9OH=>0.2CH3+0.8C2H5+0.8CH3CHO+0.2C2H5CHO+IC4H8$  2.7000e+04  
 2.000 16763.05

$C4H3+N2C4H9OH=>0.2CH3+0.8C2H5+0.8CH3CHO+0.2C2H5CHO+C4H4$  4.0900e+04  
 2.000 7661.72

$C_6H_5 + N_2C_4H_9OH \Rightarrow 0.2CH_3 + 0.8C_2H_5 + 0.8CH_3CHO + 0.2C_2H_5CHO + C_6H_6$  3.7000e+07  
 1.000 3864.72

$O + N_2C_4H_9OH \Rightarrow OH + 0.2CH_3 + 0.8C_2H_5 + 0.8CH_3CHO + 0.2C_2H_5CHO$  2.3500e+06  
 2.000 4691.70

$O_2 + N_2C_4H_9OH \Rightarrow HO_2 + 0.2CH_3 + 0.8C_2H_5 + 0.8CH_3CHO + 0.2C_2H_5CHO$  1.7000e+06  
 2.000 48272.65

$OH + N_2C_4H_9OH \Rightarrow H_2O + 0.2CH_3 + 0.8C_2H_5 + 0.8CH_3CHO + 0.2C_2H_5CHO$  1.5000e+09  
 1.000 1540.75

$HO_2 + N_2C_4H_9OH \Rightarrow H_2O_2 + 0.2CH_3 + 0.8C_2H_5 + 0.8CH_3CHO + 0.2C_2H_5CHO$  8.0000e+05  
 2.000 19190.53

$CH_3O + N_2C_4H_9OH \Rightarrow 0.2CH_3 + CH_3OH + 0.8C_2H_5 + 0.8CH_3CHO + 0.2C_2H_5CHO$  4.2800e+04  
 2.000 3572.50

$CH_2OH + N_2C_4H_9OH \Rightarrow 0.2CH_3 + CH_3OH + 0.8C_2H_5 + 0.8CH_3CHO + 0.2C_2H_5CHO$  2.8300e+04  
 2.000 13045.84

$HCO + N_2C_4H_9OH \Rightarrow 0.2CH_3 + CH_2O + 0.8C_2H_5 + 0.8CH_3CHO + 0.2C_2H_5CHO$  1.2600e+05  
 2.000 15279.95

$CH_3CO + N_2C_4H_9OH \Rightarrow 0.2CH_3 + 0.8C_2H_5 + 1.8CH_3CHO + 0.2C_2H_5CHO$  1.3500e+05  
 2.000 17080.28

$CH_2CHO + N_2C_4H_9OH \Rightarrow 0.2CH_3 + 0.8C_2H_5 + 1.8CH_3CHO + 0.2C_2H_5CHO$  2.3000e+04  
 2.000 14430.30

$C_3H_3 + N_2C_4H_9OH \Rightarrow 0.2CH_3 + 0.8C_2H_5 + 0.8CH_3CHO + C_3H_4-A + 0.2C_2H_5CHO$  2.7000e+04  
 2.000 17080.28

$HCCO + N_2C_4H_9OH \Rightarrow 0.2CH_3 + 0.8C_2H_5 + 0.8CH_3CHO + CH_2CO + 0.2C_2H_5CHO$  4.2800e+04  
 2.000 7661.72

$CH_3O_2 + N_2C_4H_9OH \Rightarrow 0.2CH_3 + CH_3O_2H + 0.8C_2H_5 + 0.8CH_3CHO + 0.2C_2H_5CHO$  7.6000e+04  
 2.000 15598.15

$C_2H_5O_2 + N_2C_4H_9OH \Rightarrow 0.2CH_3 + 0.8C_2H_5 + C_2H_5O_2H + 0.8CH_3CHO + 0.2C_2H_5CHO$  7.6000e+04  
 2.000 15598.15

$NC_3H_7O_2 + N_2C_4H_9OH \Rightarrow 0.2CH_3 + 0.8C_2H_5 + 0.8CH_3CHO + 0.2C_2H_5CHO + C_3H_7OOH$  7.6000e+04  
 2.000 15598.15

$IC_3H_7O_2 + N_2C_4H_9OH \Rightarrow 0.2CH_3 + 0.8C_2H_5 + 0.8CH_3CHO + 0.2C_2H_5CHO + C_3H_7OOH$  7.6000e+04  
 2.000 15598.15

$HCO_3 + N_2C_4H_9OH \Rightarrow 0.2CH_3 + 0.8C_2H_5 + 0.8CH_3CHO + 0.2C_2H_5CHO + HCO_3H$  3.4000e+04  
 2.000 9072.89

$CH_3CO_3 + N_2C_4H_9OH \Rightarrow 0.2CH_3 + 0.8C_2H_5 + 0.8CH_3CHO + CH_3CO_3H + 0.2C_2H_5CHO$  3.4000e+04  
 2.000 9072.89

$CH_3COCH_2 + N_2C_4H_9OH \Rightarrow 0.2CH_3 + 0.8C_2H_5 + 0.8CH_3CHO + 0.2C_2H_5CHO + CH_3COCH_3$   
 2.3000e+04 2.000 10690.26

N2C4H9OH+C6H5O=>0.2CH3+0.8C2H5+0.8CH3CHO+0.2C2H5CHO+C6H5OH	2.7000e+04
2.000 15492.11	
N2C4H9OH+C5H7=>0.2CH3+0.8C2H5+0.8CH3CHO+0.2C2H5CHO+LC5H8	2.7000e+04
2.000 18136.38	
N2C4H9OH+C7H7=>0.2CH3+0.8C2H5+0.8CH3CHO+0.2C2H5CHO+C7H8	1.3500e+04
2.000 19190.53	
N2C4H9OH+CH3C6H4=>0.2CH3+0.8C2H5+0.8CH3CHO+0.2C2H5CHO+C7H8	3.7000e+07
1.000 3864.72	
N2C4H9OH+RCRESOLO=>0.2CH3+0.8C2H5+0.8CH3CHO+0.2C2H5CHO+CRESOL	2.7000e+04
2.000 15810.16	
N2C4H9OH+C10H7=>0.2CH3+0.8C2H5+0.8CH3CHO+0.2C2H5CHO+C10H8	3.7000e+07
1.000 3864.72	
N2C4H9OH+INDENYL=>0.2CH3+0.8C2H5+0.8CH3CHO+0.2C2H5CHO+INDENE	1.3000e+04
2.000 19190.53	
N2C4H9OH+C10H6CH3=>0.2CH3+0.8C2H5+0.8CH3CHO+0.2C2H5CHO+C10H7CH3	
3.7000e+07 1.000 3864.72	
HO2+N2C4H9OH=>H2O2+CH3CH2COHCH3	2.4000e+06
2.000 14404.74	
H+N2C4H9OH=>H2+CH3CH2COHCH3	4.5000e+06
2.000 2825.33	
CH3+N2C4H9OH=>CH4+CH3CH2COHCH3	4.5000e+04
2.000 3778.15	
C2H3+N2C4H9OH=>C2H4+CH3CH2COHCH3	1.0170e+05
2.000 2730.26	
C2H5+N2C4H9OH=>C2H6+CH3CH2COHCH3	3.0000e+04
2.000 5405.42	
NC3H7+N2C4H9OH=>C3H8+CH3CH2COHCH3	2.0250e+04
2.000 5405.42	
IC3H7+N2C4H9OH=>C3H8+CH3CH2COHCH3	2.0250e+04
2.000 8487.19	
C3H5-S+N2C4H9OH=>C3H6+CH3CH2COHCH3	4.0500e+04
2.000 3301.28	
C3H5-T+N2C4H9OH=>C3H6+CH3CH2COHCH3	4.0500e+04
2.000 3301.28	
C3H5-A+N2C4H9OH=>C3H6+CH3CH2COHCH3	8.0850e+04
2.000 11294.92	
C4H5+N2C4H9OH=>C4H6+CH3CH2COHCH3	4.0500e+04
2.000 3301.28	

C4H71-4+N2C4H9OH=>C4H8-1+CH3CH2COHCH3 2.000            5309.47	2.0250e+04
C4H71-3+N2C4H9OH=>C4H8-2+CH3CH2COHCH3 2.000            12168.47	5.1000e+04
IC4H7+N2C4H9OH=>IC4H8+CH3CH2COHCH3 2.000            12168.47	4.0500e+04
C4H3+N2C4H9OH=>C4H4+CH3CH2COHCH3 2.000            3969.14	6.1350e+04
C6H5+N2C4H9OH=>C6H6+CH3CH2COHCH3 1.000            1067.64	5.5500e+07
O+N2C4H9OH=>OH+CH3CH2COHCH3 2.000            1404.15	3.5250e+06
O2+N2C4H9OH=>HO2+CH3CH2COHCH3 2.000            41863.68	2.5500e+06
OH+N2C4H9OH=>H2O+CH3CH2COHCH3 1.000            -695.37	2.2500e+09
CH3O+N2C4H9OH=>CH3OH+CH3CH2COHCH3 2.000            463.75	6.4200e+04
CH2OH+N2C4H9OH=>CH3OH+CH3CH2COHCH3 2.000            8777.08	4.2450e+04
HCO+N2C4H9OH=>CH2O+CH3CH2COHCH3 2.000            10810.03	1.8900e+05
CH3CO+N2C4H9OH=>CH3CHO+CH3CH2COHCH3 2.000            12459.86	2.0250e+05
CH2CHO+N2C4H9OH=>CH3CHO+CH3CH2COHCH3 2.000            10034.85	3.4500e+04
C3H3+N2C4H9OH=>C3H4-A+CH3CH2COHCH3 2.000            12459.86	4.0500e+04
HCCO+N2C4H9OH=>CH2CO+CH3CH2COHCH3 2.000            3969.14	6.4200e+04
CH3O2+N2C4H9OH=>CH3O2H+CH3CH2COHCH3 2.000            11100.93	1.1400e+05
C2H5O2+N2C4H9OH=>C2H5O2H+CH3CH2COHCH3 2.000            11100.93	1.1400e+05
NC3H7O2+N2C4H9OH=>C3H7OOH+CH3CH2COHCH3 2.000            11100.93	1.1400e+05
IC3H7O2+N2C4H9OH=>C3H7OOH+CH3CH2COHCH3 2.000            11100.93	1.1400e+05



HCO3+N2C4H9OH=>HCO3H+CH3CH2COHCH3	5.1000e+04
2.000            5213.56	
CH3CO3+N2C4H9OH=>CH3CO3H+CH3CH2COHCH3	5.1000e+04
2.000            5213.56	
CH3COCH2+N2C4H9OH=>CH3COCH3+CH3CH2COHCH3	3.4500e+04
2.000            6654.87	
N2C4H9OH+C6H5O=>CH3CH2COHCH3+C6H5OH	4.0500e+04
2.000            11003.95	
N2C4H9OH+C5H7=>CH3CH2COHCH3+LC5H8	4.0500e+04
2.000            13431.81	
N2C4H9OH+C7H7=>CH3CH2COHCH3+C7H8	2.0250e+04
2.000            14404.74	
N2C4H9OH+CH3C6H4=>CH3CH2COHCH3+C7H8	5.5500e+07
1.000            1067.64	
N2C4H9OH+RCRESOLO=>CH3CH2COHCH3+CRESOL	4.0500e+04
2.000            11294.92	
N2C4H9OH+C10H7=>C10H8+CH3CH2COHCH3	5.5500e+07
1.000            1067.64	
N2C4H9OH+INDENYL=>CH3CH2COHCH3+INDENE	1.9500e+04
2.000            14404.74	
N2C4H9OH+C10H6CH3=>CH3CH2COHCH3+C10H7CH3	5.5500e+07
1.000            1067.64	
H+N2C4H9OH=>H2+CH3CHCHOHCH3	6.0000e+06
2.000            4000.00	
CH3+N2C4H9OH=>CH4+CH3CHCHOHCH3	6.0000e+04
2.000            5000.00	
C2H3+N2C4H9OH=>C2H4+CH3CHCHOHCH3	1.3560e+05
2.000            3900.00	
C2H5+N2C4H9OH=>C2H6+CH3CHCHOHCH3	4.0000e+04
2.000            6700.00	
NC3H7+N2C4H9OH=>C3H8+CH3CHCHOHCH3	2.7000e+04
2.000            6700.00	
IC3H7+N2C4H9OH=>C3H8+CH3CHCHOHCH3	2.7000e+04
2.000            9900.00	
C3H5-S+N2C4H9OH=>C3H6+CH3CHCHOHCH3	5.4000e+04
2.000            4500.00	
C3H5-T+N2C4H9OH=>C3H6+CH3CHCHOHCH3	5.4000e+04
2.000            4500.00	

C3H5-A+N2C4H9OH=>C3H6+CH3CHCHOHCH3	1.0780e+05
2.000 12800.00	
C4H5+N2C4H9OH=>C4H6+CH3CHCHOHCH3	5.4000e+04
2.000 4500.00	
C4H71-4+N2C4H9OH=>C4H8-1+CH3CHCHOHCH3	2.7000e+04
2.000 6600.00	
C4H71-3+N2C4H9OH=>C4H8-2+CH3CHCHOHCH3	6.8000e+04
2.000 13700.00	
IC4H7+N2C4H9OH=>IC4H8+CH3CHCHOHCH3	5.4000e+04
2.000 13700.00	
C4H3+N2C4H9OH=>C4H4+CH3CHCHOHCH3	8.1800e+04
2.000 5200.00	
C6H5+N2C4H9OH=>C6H6+CH3CHCHOHCH3	7.4000e+07
1.000 2000.00	
O+N2C4H9OH=>OH+CH3CHCHOHCH3	4.7000e+06
2.000 2500.00	
O2+N2C4H9OH=>HO2+CH3CHCHOHCH3	3.4000e+06
2.000 44000.00	
OH+N2C4H9OH=>H2O+CH3CHCHOHCH3	3.0000e+09
1.000 50.00	
HO2+N2C4H9OH=>H2O2+CH3CHCHOHCH3	1.6000e+06
2.000 16000.00	
CH3O+N2C4H9OH=>CH3OH+CH3CHCHOHCH3	8.5600e+04
2.000 1500.00	
CH2OH+N2C4H9OH=>CH3OH+CH3CHCHOHCH3	5.6600e+04
2.000 10200.00	
HCO+N2C4H9OH=>CH2O+CH3CHCHOHCH3	2.5200e+05
2.000 12300.00	
CH3CO+N2C4H9OH=>CH3CHO+CH3CHCHOHCH3	2.7000e+05
2.000 14000.00	
CH2CHO+N2C4H9OH=>CH3CHO+CH3CHCHOHCH3	4.6000e+04
2.000 11500.00	
C3H3+N2C4H9OH=>C3H4-A+CH3CHCHOHCH3	5.4000e+04
2.000 14000.00	
HCCO+N2C4H9OH=>CH2CO+CH3CHCHOHCH3	8.5600e+04
2.000 5200.00	
CH3O2+N2C4H9OH=>CH3O2H+CH3CHCHOHCH3	1.5200e+05
2.000 12600.00	

C2H5O2+N2C4H9OH=>C2H5O2H+CH3CHCHOHCH3	1.5200e+05
2.000 12600.00	
NC3H7O2+N2C4H9OH=>C3H7OOH+CH3CHCHOHCH3	1.5200e+05
2.000 12600.00	
IC3H7O2+N2C4H9OH=>C3H7OOH+CH3CHCHOHCH3	1.5200e+05
2.000 12600.00	
HCO3+N2C4H9OH=>HCO3H+CH3CHCHOHCH3	6.8000e+04
2.000 6500.00	
CH3CO3+N2C4H9OH=>CH3CO3H+CH3CHCHOHCH3	6.8000e+04
2.000 6500.00	
CH3COCH2+N2C4H9OH=>CH3COCH3+CH3CHCHOHCH3	4.6000e+04
2.000 8000.00	
N2C4H9OH+C6H5O=>CH3CHCHOHCH3+C6H5OH	5.4000e+04
2.000 12500.00	
N2C4H9OH+C5H7=>CH3CHCHOHCH3+LC5H8	5.4000e+04
2.000 15000.00	
N2C4H9OH+C7H7=>CH3CHCHOHCH3+C7H8	2.7000e+04
2.000 16000.00	
N2C4H9OH+CH3C6H4=>CH3CHCHOHCH3+C7H8	7.4000e+07
1.000 2000.00	
N2C4H9OH+RCRESOLO=>CH3CHCHOHCH3+CRESOL	5.4000e+04
2.000 12800.00	
N2C4H9OH+C10H7=>C10H8+CH3CHCHOHCH3	7.4000e+07
1.000 2000.00	
N2C4H9OH+INDENYL=>CH3CHCHOHCH3+INDENE	2.6000e+04
2.000 16000.00	
N2C4H9OH+C10H6CH3=>CH3CHCHOHCH3+C10H7CH3	7.4000e+07
1.000 2000.00	
MEK=CH3+CH3COCH2	2.0000e+16
0.000 84000.00	
MEK=>CO+CH3+C2H5	2.0000e+16
0.000 84000.00	
MEK=C2H5+CH3CO	2.0000e+16
0.000 82500.00	
H+MEK=>H2+CH3+C2H3CHO	6.6000e+06
2.000 4000.00	
CH3+MEK=>CH4+CH3+C2H3CHO	6.6000e+04
2.000 5000.00	

C2H3+MEK=>CH3+C2H4+C2H3CHO	1.4916e+05
2.000 3900.00	
C2H5+MEK=>CH3+C2H6+C2H3CHO	4.4000e+04
2.000 6700.00	
NC3H7+MEK=>CH3+C3H8+C2H3CHO	2.9700e+04
2.000 6700.00	
IC3H7+MEK=>CH3+C3H8+C2H3CHO	2.9700e+04
2.000 9900.00	
C3H5-S+MEK=>CH3+C3H6+C2H3CHO	5.9400e+04
2.000 4500.00	
C3H5-T+MEK=>CH3+C3H6+C2H3CHO	5.9400e+04
2.000 4500.00	
C3H5-A+MEK=>CH3+C3H6+C2H3CHO	1.1858e+05
2.000 12800.00	
C4H5+MEK=>CH3+C2H3CHO+C4H6	5.9400e+04
2.000 4500.00	
C4H71-4+MEK=>CH3+C2H3CHO+C4H8-1	2.9700e+04
2.000 6600.00	
C4H71-3+MEK=>CH3+C2H3CHO+C4H8-2	7.4800e+04
2.000 13700.00	
IC4H7+MEK=>CH3+C2H3CHO+IC4H8	5.9400e+04
2.000 13700.00	
C4H3+MEK=>CH3+C2H3CHO+C4H4	8.9980e+04
2.000 5200.00	
C6H5+MEK=>CH3+C2H3CHO+C6H6	8.1400e+07
1.000 2000.00	
O+MEK=>OH+CH3+C2H3CHO	5.1700e+06
2.000 2500.00	
O2+MEK=>HO2+CH3+C2H3CHO	3.7400e+06
2.000 44000.00	
OH+MEK=>H2O+CH3+C2H3CHO	3.3000e+09
1.000 50.00	
HO2+MEK=>H2O2+CH3+C2H3CHO	1.7600e+06
2.000 16000.00	
CH3O+MEK=>CH3+CH3OH+C2H3CHO	9.4160e+04
2.000 1500.00	
CH2OH+MEK=>CH3+CH3OH+C2H3CHO	6.2260e+04
2.000 10200.00	

HCO+MEK=>CH3+CH2O+C2H3CHO	2.7720e+05
2.000 12300.00	
CH3CO+MEK=>CH3+CH3CHO+C2H3CHO	2.9700e+05
2.000 14000.00	
CH2CHO+MEK=>CH3+CH3CHO+C2H3CHO	5.0600e+04
2.000 11500.00	
C3H3+MEK=>CH3+C3H4-A+C2H3CHO	5.9400e+04
2.000 14000.00	
HCCO+MEK=>CH3+CH2CO+C2H3CHO	9.4160e+04
2.000 5200.00	
CH3O2+MEK=>CH3+CH3O2H+C2H3CHO	1.6720e+05
2.000 12600.00	
C2H5O2+MEK=>CH3+C2H5O2H+C2H3CHO	1.6720e+05
2.000 12600.00	
NC3H7O2+MEK=>CH3+C2H3CHO+C3H7OOH	1.6720e+05
2.000 12600.00	
IC3H7O2+MEK=>CH3+C2H3CHO+C3H7OOH	1.6720e+05
2.000 12600.00	
HCO3+MEK=>CH3+C2H3CHO+HCO3H	7.4800e+04
2.000 6500.00	
CH3CO3+MEK=>CH3+CH3CO3H+C2H3CHO	7.4800e+04
2.000 6500.00	
CH3COCH2+MEK=>CH3+C2H3CHO+CH3COCH3	5.0600e+04
2.000 8000.00	
MEK+C6H5O=>CH3+C2H3CHO+C6H5OH	5.9400e+04
2.000 12500.00	
MEK+C5H7=>CH3+C2H3CHO+LC5H8	5.9400e+04
2.000 15000.00	
MEK+C7H7=>CH3+C2H3CHO+C7H8	2.9700e+04
2.000 16000.00	
MEK+CH3C6H4=>CH3+C2H3CHO+C7H8	8.1400e+07
1.000 2000.00	
MEK+RCRESOLO=>CH3+C2H3CHO+CRESOL	5.9400e+04
2.000 12800.00	
MEK+C10H7=>CH3+C2H3CHO+C10H8	8.1400e+07
1.000 2000.00	
MEK+INDENYL=>CH3+C2H3CHO+INDENE	2.8600e+04
2.000 16000.00	

MEK+C10H6CH3=>CH3+C2H3CHO+C10H7CH3	8.1400e+07
1.000 2000.00	
H+MEK=>H2+0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO	2.1000e+07
2.000 6349.34	
CH3+MEK=>CH4+0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO	2.1000e+05
2.000 7443.70	
C2H3+MEK=>0.55C2H5+1.45C2H4+0.45CH3CO+0.55CH2CO	4.7460e+05
2.000 6239.48	
C2H5+MEK=>C2H6+0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO	1.4000e+05
2.000 9289.16	
NC3H7+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C3H8	9.4500e+04
2.000 9289.16	
IC3H7+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C3H8	9.4500e+04
2.000 12725.62	
C3H5-S+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C3H6	1.8900e+05
2.000 6897.45	
C3H5-T+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C3H6	1.8900e+05
2.000 6897.45	
C3H5-A+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C3H6	3.7730e+05
2.000 15810.16	
C4H5+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C4H6	1.8900e+05
2.000 6897.45	
C4H71-4+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C4H8-1	9.4500e+04
2.000 9181.05	
C4H71-3+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C4H8-2	2.3800e+05
2.000 16763.05	
IC4H7+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+IC4H8	1.8900e+05
2.000 16763.05	
C4H3+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C4H4	2.8630e+05
2.000 7661.72	
C6H5+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C6H6	2.5900e+08
1.000 3864.72	
O+MEK=>OH+0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO	1.6450e+07
2.000 4691.70	
O2+MEK=>HO2+0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO	1.1900e+07
2.000 48272.65	
OH+MEK=>H2O+0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO	1.0500e+10
1.000 1540.75	

HO2+MEK=>H2O2+0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO	5.6000e+06
2.000 19190.53	
CH3O+MEK=>CH3OH+0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO	2.9960e+05
2.000 3572.50	
CH2OH+MEK=>CH3OH+0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO	1.9810e+05
2.000 13045.84	
HCO+MEK=>CH2O+0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO	8.8200e+05
2.000 15279.95	
CH3CO+MEK=>0.55C2H5+0.45C2H4+CH3CHO+0.45CH3CO+0.55CH2CO	9.4500e+05
2.000 17080.28	
CH2CHO+MEK=>0.55C2H5+0.45C2H4+CH3CHO+0.45CH3CO+0.55CH2CO	1.6100e+05
2.000 14430.30	
C3H3+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C3H4-A	1.8900e+05
2.000 17080.28	
HCCO+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+1.55CH2CO	2.9960e+05
2.000 7661.72	
CH3O2+MEK=>CH3O2H+0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO	5.3200e+05
2.000 15598.15	
C2H5O2+MEK=>0.55C2H5+C2H5O2H+0.45C2H4+0.45CH3CO+0.55CH2CO	5.3200e+05
2.000 15598.15	
NC3H7O2+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C3H7OOH	5.3200e+05
2.000 15598.15	
IC3H7O2+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C3H7OOH	5.3200e+05
2.000 15598.15	
HCO3+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+HCO3H	2.3800e+05
2.000 9072.89	
CH3CO3+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+CH3CO3H	2.3800e+05
2.000 9072.89	
CH3COCH2+MEK=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+CH3COCH3	1.6100e+05
2.000 10690.26	
MEK+C6H5O=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C6H5OH	1.8900e+05
2.000 15492.11	
MEK+C5H7=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+LC5H8	1.8900e+05
2.000 18136.38	
MEK+C7H7=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C7H8	9.4500e+04
2.000 19190.53	
MEK+CH3C6H4=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C7H8	2.5900e+08
1.000 3864.72	

MEK+RCRESOLO=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+CRE SOL	1.8900e+05
2.000	15810.16
MEK+C10H7=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C10H8	2.5900e+08
1.000	3864.72
MEK+INDENYL=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+INDENE	9.1000e+04
2.000	19190.53
MEK+C10H6CH3=>0.55C2H5+0.45C2H4+0.45CH3CO+0.55CH2CO+C10H7CH3	2.5900e+08
1.000	3864.72
TC4H9OH=CH3+CH3COHCH3	6.0000e+16
0.000	81500.00
TC4H9OH=OH+TC4H9	1.5000e+16
0.000	93200.00
H+RTC4H8OH=TC4H9OH	5.0000e+13
0.000	0.00
TC4H9OH=H2O+IC4H8	6.7500e+14
0.000	65100.00
RTC4H8OH=CH3+CH3COCH3	3.0000e+13
0.000	33500.00
RTC4H8OH=OH+IC4H8	3.0000e+13
0.000	36000.00
H+TC4H9OH=>H2+CH3+CH3COCH3	3.0000e+06
2.000	6349.34
CH3+TC4H9OH=>CH4+CH3+CH3COCH3	3.0000e+04
2.000	7443.70
C2H3+TC4H9OH=>CH3+C2H4+CH3COCH3	6.7800e+04
2.000	6239.48
C2H5+TC4H9OH=>CH3+C2H6+CH3COCH3	2.0000e+04
2.000	9289.16
NC3H7+TC4H9OH=>CH3+C3H8+CH3COCH3	1.3500e+04
2.000	9289.16
IC3H7+TC4H9OH=>CH3+C3H8+CH3COCH3	1.3500e+04
2.000	12725.62
C3H5-S+TC4H9OH=>CH3+C3H6+CH3COCH3	2.7000e+04
2.000	6897.45
C3H5-T+TC4H9OH=>CH3+C3H6+CH3COCH3	2.7000e+04
2.000	6897.45
C3H5-A+TC4H9OH=>CH3+C3H6+CH3COCH3	5.3900e+04
2.000	15810.16



C4H5+TC4H9OH=>CH3+CH3COCH3+C4H6	2.7000e+04
2.000 6897.45	
C4H71-4+TC4H9OH=>CH3+CH3COCH3+C4H8-1	1.3500e+04
2.000 9181.05	
C4H71-3+TC4H9OH=>CH3+CH3COCH3+C4H8-2	3.4000e+04
2.000 16763.05	
IC4H7+TC4H9OH=>CH3+CH3COCH3+IC4H8	2.7000e+04
2.000 16763.05	
C4H3+TC4H9OH=>CH3+CH3COCH3+C4H4	4.0900e+04
2.000 7661.72	
C6H5+TC4H9OH=>CH3+CH3COCH3+C6H6	3.7000e+07
1.000 3864.72	
O+TC4H9OH=>OH+CH3+CH3COCH3	2.3500e+06
2.000 4691.70	
O2+TC4H9OH=>HO2+CH3+CH3COCH3	1.7000e+06
2.000 48272.65	
OH+TC4H9OH=>H2O+CH3+CH3COCH3	1.5000e+09
1.000 1540.75	
HO2+TC4H9OH=>H2O2+CH3+CH3COCH3	8.0000e+05
2.000 19190.53	
CH3O+TC4H9OH=>CH3+CH3OH+CH3COCH3	4.2800e+04
2.000 3572.50	
CH2OH+TC4H9OH=>CH3+CH3OH+CH3COCH3	2.8300e+04
2.000 13045.84	
HCO+TC4H9OH=>CH3+CH2O+CH3COCH3	1.2600e+05
2.000 15279.95	
CH3CO+TC4H9OH=>CH3+CH3CHO+CH3COCH3	1.3500e+05
2.000 17080.28	
CH2CHO+TC4H9OH=>CH3+CH3CHO+CH3COCH3	2.3000e+04
2.000 14430.30	
C3H3+TC4H9OH=>CH3+C3H4-A+CH3COCH3	2.7000e+04
2.000 17080.28	
HCCO+TC4H9OH=>CH3+CH2CO+CH3COCH3	4.2800e+04
2.000 7661.72	
CH3O2+TC4H9OH=>CH3+CH3O2H+CH3COCH3	7.6000e+04
2.000 15598.15	
C2H5O2+TC4H9OH=>CH3+C2H5O2H+CH3COCH3	7.6000e+04
2.000 15598.15	

NC3H7O2+TC4H9OH=>CH3+CH3COCH3+C3H7OOH 2.000 15598.15	7.6000e+04
IC3H7O2+TC4H9OH=>CH3+CH3COCH3+C3H7OOH 2.000 15598.15	7.6000e+04
HCO3+TC4H9OH=>CH3+CH3COCH3+HCO3H 2.000 9072.89	3.4000e+04
CH3CO3+TC4H9OH=>CH3+CH3CO3H+CH3COCH3 2.000 9072.89	3.4000e+04
CH3COCH2+TC4H9OH=>CH3+2CH3COCH3 2.000 10690.26	2.3000e+04
TC4H9OH+C6H5O=>CH3+CH3COCH3+C6H5OH 2.000 15492.11	2.7000e+04
TC4H9OH+C5H7=>CH3+CH3COCH3+LC5H8 2.000 18136.38	2.7000e+04
TC4H9OH+C7H7=>CH3+CH3COCH3+C7H8 2.000 19190.53	1.3500e+04
TC4H9OH+CH3C6H4=>CH3+CH3COCH3+C7H8 1.000 3864.72	3.7000e+07
TC4H9OH+RCRESOLO=>CH3+CH3COCH3+CRESOL 2.000 15810.16	2.7000e+04
TC4H9OH+C10H7=>CH3+CH3COCH3+C10H8 1.000 3864.72	3.7000e+07
TC4H9OH+INDENYL=>CH3+CH3COCH3+INDENE 2.000 19190.53	1.3000e+04
TC4H9OH+C10H6CH3=>CH3+CH3COCH3+C10H7CH3 1.000 3864.72	3.7000e+07
H+TC4H9OH=>H2+RTC4H8OH 2.000 6349.34	2.7000e+07
CH3+TC4H9OH=>CH4+RTC4H8OH 2.000 7443.70	2.7000e+05
C2H3+TC4H9OH=>C2H4+RTC4H8OH 2.000 6239.48	6.1020e+05
C2H5+TC4H9OH=>C2H6+RTC4H8OH 2.000 9289.16	1.8000e+05
NC3H7+TC4H9OH=>C3H8+RTC4H8OH 2.000 9289.16	1.2150e+05
IC3H7+TC4H9OH=>C3H8+RTC4H8OH 2.000 12725.62	1.2150e+05

C3H5-S+TC4H9OH=>C3H6+RTC4H8OH 2.000        6897.45	2.4300e+05
C3H5-T+TC4H9OH=>C3H6+RTC4H8OH 2.000        6897.45	2.4300e+05
C3H5-A+TC4H9OH=>C3H6+RTC4H8OH 2.000        15810.16	4.8510e+05
C4H5+TC4H9OH=>C4H6+RTC4H8OH 2.000        6897.45	2.4300e+05
C4H71-4+TC4H9OH=>C4H8-1+RTC4H8OH 2.000        9181.05	1.2150e+05
C4H71-3+TC4H9OH=>C4H8-2+RTC4H8OH 2.000        16763.05	3.0600e+05
IC4H7+TC4H9OH=>IC4H8+RTC4H8OH 2.000        16763.05	2.4300e+05
C4H3+TC4H9OH=>C4H4+RTC4H8OH 2.000        7661.72	3.6810e+05
C6H5+TC4H9OH=>C6H6+RTC4H8OH 1.000        3864.72	3.3300e+08
O+TC4H9OH=>OH+RTC4H8OH 2.000        4691.70	2.1150e+07
O2+TC4H9OH=>HO2+RTC4H8OH 2.000        48272.65	1.5300e+07
OH+TC4H9OH=>H2O+RTC4H8OH 1.000        1540.75	1.3500e+10
HO2+TC4H9OH=>H2O2+RTC4H8OH 2.000        19190.53	7.2000e+06
CH3O+TC4H9OH=>CH3OH+RTC4H8OH 2.000        3572.50	3.8520e+05
CH2OH+TC4H9OH=>CH3OH+RTC4H8OH 2.000        13045.84	2.5470e+05
HCO+TC4H9OH=>CH2O+RTC4H8OH 2.000        15279.95	1.1340e+06
CH3CO+TC4H9OH=>CH3CHO+RTC4H8OH 2.000        17080.28	1.2150e+06
CH2CHO+TC4H9OH=>CH3CHO+RTC4H8OH 2.000        14430.30	2.0700e+05
C3H3+TC4H9OH=>C3H4-A+RTC4H8OH 2.000        17080.28	2.4300e+05

HCCO+TC4H9OH=>CH2CO+RTC4H8OH	3.8520e+05
2.000 7661.72	
CH3O2+TC4H9OH=>CH3O2H+RTC4H8OH	6.8400e+05
2.000 15598.15	
C2H5O2+TC4H9OH=>C2H5O2H+RTC4H8OH	6.8400e+05
2.000 15598.15	
NC3H7O2+TC4H9OH=>C3H7OOH+RTC4H8OH	6.8400e+05
2.000 15598.15	
IC3H7O2+TC4H9OH=>C3H7OOH+RTC4H8OH	6.8400e+05
2.000 15598.15	
HCO3+TC4H9OH=>HCO3H+RTC4H8OH	3.0600e+05
2.000 9072.89	
CH3CO3+TC4H9OH=>CH3CO3H+RTC4H8OH	3.0600e+05
2.000 9072.89	
CH3COCH2+TC4H9OH=>CH3COCH3+RTC4H8OH	2.0700e+05
2.000 10690.26	
TC4H9OH+C6H5O=>RTC4H8OH+C6H5OH	2.4300e+05
2.000 15492.11	
TC4H9OH+C5H7=>RTC4H8OH+LC5H8	2.4300e+05
2.000 18136.38	
TC4H9OH+C7H7=>RTC4H8OH+C7H8	1.2150e+05
2.000 19190.53	
TC4H9OH+CH3C6H4=>RTC4H8OH+C7H8	3.3300e+08
1.000 3864.72	
TC4H9OH+RCRESOLO=>RTC4H8OH+CRESOL	2.4300e+05
2.000 15810.16	
TC4H9OH+C10H7=>C10H8+RTC4H8OH	3.3300e+08
1.000 3864.72	
TC4H9OH+INDENYL=>RTC4H8OH+INDENE	1.1700e+05
2.000 19190.53	
TC4H9OH+C10H6CH3=>RTC4H8OH+C10H7CH3	3.3300e+08
1.000 3864.72	
IC4H9OH=CH3+CH3CHCH2OH	6.0000e+16
0.000 88000.00	
IC4H9OH=CH2OH+IC3H7	2.0000e+16
0.000 85000.00	
IC4H9OH=OH+IC4H9	1.5000e+16
0.000 93200.00	

H+CH3CHCH3CHOH=IC4H9OH	5.0000e+13
0.000 0.00	
H+CH3CCH2OHCH3=IC4H9OH	5.0000e+13
0.000 0.00	
H+CH2CHCH2OHCH3=IC4H9OH	5.0000e+13
0.000 0.00	
IC4H9OH=H2O+IC4H8	5.0000e+13
0.000 65600.00	
IC4H9OH=H2+IC3H7CHO	5.0000e+13
0.000 69500.00	
HO2+IC4H9OH=H2O2+CH3CHCH3CHOH	4.8000e+06
2.000 16000.00	
CH3CHCH3CHOH=CH3+C2H5CHO	3.0000e+13
0.000 32500.00	
CH3CHCH3CHOH=H+IC3H7CHO	3.0000e+13
0.000 37000.00	
CH3CCH2OHCH3=OH+IC4H8	3.0000e+13
0.000 33000.00	
CH3CCH2OHCH3=H+IC3H7CHO	3.0000e+13
0.000 37000.00	
CH3CCH2OHCH3=H+IC4H7OH	3.0000e+13
0.000 37000.00	
CH2OH+C3H6=CH2CHCH2OHCH3	8.8000e+03
2.480 6130.00	
CH3+C3H5OH=CH2CHCH2OHCH3	1.9000e+03
2.670 6850.00	
H+IC4H7OH=CH2CHCH2OHCH3	4.2400e+11
0.510 1230.00	
HO2+IC4H7OH=HO2+IC3H7CHO	1.5000e+05
1.670 6810.00	
HCOOH+IC4H7OH=HCOOH+IC3H7CHO	2.8000e-02
3.286 -4509.00	
O2+CH3CHCH3CHOH=HO2+IC3H7CHO	2.0000e+12
0.000 3500.00	
O2+CH3CCH2OHCH3=>HO2+0.67NC4H7OH+0.33IC3H7CHO	2.0000e+12
0.000 3500.00	
O2+CH2CHCH2OHCH3=HO2+IC4H7OH	2.0000e+12
0.000 3500.00	

H+IC4H9OH=>H2+CH3CHCH3CHOH	9.0000e+06
2.000 4000.00	
CH3+IC4H9OH=>CH4+CH3CHCH3CHOH	9.0000e+04
2.000 5000.00	
C2H3+IC4H9OH=>C2H4+CH3CHCH3CHOH	2.0340e+05
2.000 3900.00	
C2H5+IC4H9OH=>C2H6+CH3CHCH3CHOH	6.0000e+04
2.000 6700.00	
NC3H7+IC4H9OH=>C3H8+CH3CHCH3CHOH	4.0500e+04
2.000 6700.00	
IC3H7+IC4H9OH=>C3H8+CH3CHCH3CHOH	4.0500e+04
2.000 9900.00	
C3H5-S+IC4H9OH=>C3H6+CH3CHCH3CHOH	8.1000e+04
2.000 4500.00	
C3H5-T+IC4H9OH=>C3H6+CH3CHCH3CHOH	8.1000e+04
2.000 4500.00	
C3H5-A+IC4H9OH=>C3H6+CH3CHCH3CHOH	1.6170e+05
2.000 12800.00	
C4H5+IC4H9OH=>C4H6+CH3CHCH3CHOH	8.1000e+04
2.000 4500.00	
C4H71-4+IC4H9OH=>C4H8-1+CH3CHCH3CHOH	4.0500e+04
2.000 6600.00	
C4H71-3+IC4H9OH=>C4H8-2+CH3CHCH3CHOH	1.0200e+05
2.000 13700.00	
IC4H7+IC4H9OH=>IC4H8+CH3CHCH3CHOH	8.1000e+04
2.000 13700.00	
C4H3+IC4H9OH=>C4H4+CH3CHCH3CHOH	1.2270e+05
2.000 5200.00	
C6H5+IC4H9OH=>C6H6+CH3CHCH3CHOH	1.1100e+08
1.000 2000.00	
O+IC4H9OH=>OH+CH3CHCH3CHOH	7.0500e+06
2.000 2500.00	
O2+IC4H9OH=>HO2+CH3CHCH3CHOH	5.1000e+06
2.000 44000.00	
OH+IC4H9OH=>H2O+CH3CHCH3CHOH	4.5000e+09
1.000 50.00	
CH3O+IC4H9OH=>CH3OH+CH3CHCH3CHOH	1.2840e+05
2.000 1500.00	

CH2OH+IC4H9OH=>CH3OH+CH3CHCH3CHOH 2.000 10200.00	8.4900e+04
HCO+IC4H9OH=>CH2O+CH3CHCH3CHOH 2.000 12300.00	3.7800e+05
CH3CO+IC4H9OH=>CH3CHO+CH3CHCH3CHOH 2.000 14000.00	4.0500e+05
CH2CHO+IC4H9OH=>CH3CHO+CH3CHCH3CHOH 2.000 11500.00	6.9000e+04
C3H3+IC4H9OH=>C3H4-A+CH3CHCH3CHOH 2.000 14000.00	8.1000e+04
HCCO+IC4H9OH=>CH2CO+CH3CHCH3CHOH 2.000 5200.00	1.2840e+05
CH3O2+IC4H9OH=>CH3O2H+CH3CHCH3CHOH 2.000 12600.00	2.2800e+05
C2H5O2+IC4H9OH=>C2H5O2H+CH3CHCH3CHOH 2.000 12600.00	2.2800e+05
NC3H7O2+IC4H9OH=>C3H7OOH+CH3CHCH3CHOH 2.000 12600.00	2.2800e+05
IC3H7O2+IC4H9OH=>C3H7OOH+CH3CHCH3CHOH 2.000 12600.00	2.2800e+05
HCO3+IC4H9OH=>HCO3H+CH3CHCH3CHOH 2.000 6500.00	1.0200e+05
CH3CO3+IC4H9OH=>CH3CO3H+CH3CHCH3CHOH 2.000 6500.00	1.0200e+05
CH3COCH2+IC4H9OH=>CH3COCH3+CH3CHCH3CHOH 2.000 8000.00	6.9000e+04
IC4H9OH+C6H5O=>CH3CHCH3CHOH+C6H5OH 2.000 12500.00	8.1000e+04
IC4H9OH+C5H7=>CH3CHCH3CHOH+LC5H8 2.000 15000.00	8.1000e+04
IC4H9OH+C7H7=>CH3CHCH3CHOH+C7H8 2.000 16000.00	4.0500e+04
IC4H9OH+CH3C6H4=>CH3CHCH3CHOH+C7H8 1.000 2000.00	1.1100e+08
IC4H9OH+RCRESOLO=>CH3CHCH3CHOH+CRESOLO 2.000 12800.00	8.1000e+04
IC4H9OH+C10H7=>C10H8+CH3CHCH3CHOH 1.000 2000.00	1.1100e+08

IC4H9OH+INDENYL=>CH3CHCH3CHOH+INDENE	3.9000e+04
2.000 16000.00	
IC4H9OH+C10H6CH3=>CH3CHCH3CHOH+C10H7CH3	1.1100e+08
1.000 2000.00	
H+IC4H9OH=>H2+CH3CCH2OHCH3	3.0000e+06
2.000 2825.33	
CH3+IC4H9OH=>CH4+CH3CCH2OHCH3	3.0000e+04
2.000 3778.15	
C2H3+IC4H9OH=>C2H4+CH3CCH2OHCH3	6.7800e+04
2.000 2730.26	
C2H5+IC4H9OH=>C2H6+CH3CCH2OHCH3	2.0000e+04
2.000 5405.42	
NC3H7+IC4H9OH=>C3H8+CH3CCH2OHCH3	1.3500e+04
2.000 5405.42	
IC3H7+IC4H9OH=>C3H8+CH3CCH2OHCH3	1.3500e+04
2.000 8487.19	
C3H5-S+IC4H9OH=>C3H6+CH3CCH2OHCH3	2.7000e+04
2.000 3301.28	
C3H5-T+IC4H9OH=>C3H6+CH3CCH2OHCH3	2.7000e+04
2.000 3301.28	
C3H5-A+IC4H9OH=>C3H6+CH3CCH2OHCH3	5.3900e+04
2.000 11294.92	
C4H5+IC4H9OH=>C4H6+CH3CCH2OHCH3	2.7000e+04
2.000 3301.28	
C4H71-4+IC4H9OH=>C4H8-1+CH3CCH2OHCH3	1.3500e+04
2.000 5309.47	
C4H71-3+IC4H9OH=>C4H8-2+CH3CCH2OHCH3	3.4000e+04
2.000 12168.47	
IC4H7+IC4H9OH=>IC4H8+CH3CCH2OHCH3	2.7000e+04
2.000 12168.47	
C4H3+IC4H9OH=>C4H4+CH3CCH2OHCH3	4.0900e+04
2.000 3969.14	
C6H5+IC4H9OH=>C6H6+CH3CCH2OHCH3	3.7000e+07
1.000 1067.64	
O+IC4H9OH=>OH+CH3CCH2OHCH3	2.3500e+06
2.000 1404.15	
O2+IC4H9OH=>HO2+CH3CCH2OHCH3	1.7000e+06
2.000 41863.68	



OH+IC4H9OH=>H2O+CH3CCH2OHCH3	1.5000e+09
1.000        -695.37	
H02+IC4H9OH=>H2O2+CH3CCH2OHCH3	8.0000e+05
2.000        14404.74	
CH3O+IC4H9OH=>CH3OH+CH3CCH2OHCH3	4.2800e+04
2.000        463.75	
CH2OH+IC4H9OH=>CH3OH+CH3CCH2OHCH3	2.8300e+04
2.000        8777.08	
HCO+IC4H9OH=>CH2O+CH3CCH2OHCH3	1.2600e+05
2.000        10810.03	
CH3CO+IC4H9OH=>CH3CHO+CH3CCH2OHCH3	1.3500e+05
2.000        12459.86	
CH2CHO+IC4H9OH=>CH3CHO+CH3CCH2OHCH3	2.3000e+04
2.000        10034.85	
C3H3+IC4H9OH=>C3H4-A+CH3CCH2OHCH3	2.7000e+04
2.000        12459.86	
HCCO+IC4H9OH=>CH2CO+CH3CCH2OHCH3	4.2800e+04
2.000        3969.14	
CH3O2+IC4H9OH=>CH3O2H+CH3CCH2OHCH3	7.6000e+04
2.000        11100.93	
C2H5O2+IC4H9OH=>C2H5O2H+CH3CCH2OHCH3	7.6000e+04
2.000        11100.93	
NC3H7O2+IC4H9OH=>C3H7OOH+CH3CCH2OHCH3	7.6000e+04
2.000        11100.93	
IC3H7O2+IC4H9OH=>C3H7OOH+CH3CCH2OHCH3	7.6000e+04
2.000        11100.93	
HCO3+IC4H9OH=>HCO3H+CH3CCH2OHCH3	3.4000e+04
2.000        5213.56	
CH3CO3+IC4H9OH=>CH3CO3H+CH3CCH2OHCH3	3.4000e+04
2.000        5213.56	
CH3COCH2+IC4H9OH=>CH3COCH3+CH3CCH2OHCH3	2.3000e+04
2.000        6654.87	
IC4H9OH+C6H5O=>CH3CCH2OHCH3+C6H5OH	2.7000e+04
2.000        11003.95	
IC4H9OH+C5H7=>CH3CCH2OHCH3+LC5H8	2.7000e+04
2.000        13431.81	
IC4H9OH+C7H7=>CH3CCH2OHCH3+C7H8	1.3500e+04
2.000        14404.74	

$\text{IC4H9OH} + \text{CH3C6H4} \Rightarrow \text{CH3CCH2OHCH3} + \text{C7H8}$  3.7000e+07  
 1.000 1067.64

$\text{IC4H9OH} + \text{RCRESOLO} \Rightarrow \text{CH3CCH2OHCH3} + \text{CRESOL}$  2.7000e+04  
 2.000 11294.92

$\text{IC4H9OH} + \text{C10H7} \Rightarrow \text{C10H8} + \text{CH3CCH2OHCH3}$  3.7000e+07  
 1.000 1067.64

$\text{IC4H9OH} + \text{INDENYL} \Rightarrow \text{CH3CCH2OHCH3} + \text{INDENE}$  1.3000e+04  
 2.000 14404.74

$\text{IC4H9OH} + \text{C10H6CH3} \Rightarrow \text{CH3CCH2OHCH3} + \text{C10H7CH3}$  3.7000e+07  
 1.000 1067.64

$\text{H} + \text{IC4H9OH} \Rightarrow \text{H2} + 0.1400000000000000\text{CH2O} + 0.1400000000000000\text{IC3H7} + 0.86\text{CH2CHCH2OHCH3}$  2.1000e+07 2.000 6349.34

$\text{CH3} + \text{IC4H9OH} \Rightarrow \text{CH4} + 0.1400000000000000\text{CH2O} + 0.1400000000000000\text{IC3H7} + 0.86\text{CH2CHCH2OHCH3}$  2.1000e+05 2.000 7443.70

$\text{C2H3} + \text{IC4H9OH} \Rightarrow 0.1400000000000000\text{CH2O} + \text{C2H4} + 0.1400000000000000\text{IC3H7} + 0.86\text{CH2CHCH2OHCH3}$  4.7460e+05 2.000 6239.48

$\text{C2H5} + \text{IC4H9OH} \Rightarrow 0.1400000000000000\text{CH2O} + \text{C2H6} + 0.1400000000000000\text{IC3H7} + 0.86\text{CH2CHCH2OHCH3}$  1.4000e+05 2.000 9289.16

$\text{NC3H7} + \text{IC4H9OH} \Rightarrow 0.1400000000000000\text{CH2O} + \text{C3H8} + 0.1400000000000000\text{IC3H7} + 0.86\text{CH2CHCH2OHCH3}$  9.4500e+04 2.000 9289.16

$\text{IC3H7} + \text{IC4H9OH} \Rightarrow 0.1400000000000000\text{CH2O} + \text{C3H8} + 0.1400000000000000\text{IC3H7} + 0.86\text{CH2CHCH2OHCH3}$  9.4500e+04 2.000 12725.62

$\text{C3H5-}$   
 $\text{S} + \text{IC4H9OH} \Rightarrow 0.1400000000000000\text{CH2O} + 0.1400000000000000\text{IC3H7} + \text{C3H6} + 0.86\text{CH2CHCH2OHCH3}$  1.8900e+05 2.000 6897.45

$\text{C3H5-}$   
 $\text{T} + \text{IC4H9OH} \Rightarrow 0.1400000000000000\text{CH2O} + 0.1400000000000000\text{IC3H7} + \text{C3H6} + 0.86\text{CH2CHCH2OHCH3}$  1.8900e+05 2.000 6897.45

$\text{C3H5-}$   
 $\text{A} + \text{IC4H9OH} \Rightarrow 0.1400000000000000\text{CH2O} + 0.1400000000000000\text{IC3H7} + \text{C3H6} + 0.86\text{CH2CHCH2OHCH3}$  3.7730e+05 2.000 15810.16

$\text{C4H5} + \text{IC4H9OH} \Rightarrow 0.1400000000000000\text{CH2O} + 0.1400000000000000\text{IC3H7} + \text{C4H6} + 0.86\text{CH2CHCH2OHCH3}$  1.8900e+05 2.000 6897.45

$\text{C4H71-4} + \text{IC4H9OH} \Rightarrow 0.1400000000000000\text{CH2O} + 0.1400000000000000\text{IC3H7} + \text{C4H8-1} + 0.86\text{CH2CHCH2OHCH3}$  9.4500e+04 2.000 9181.05

$\text{C4H71-3} + \text{IC4H9OH} \Rightarrow 0.1400000000000000\text{CH2O} + 0.1400000000000000\text{IC3H7} + \text{C4H8-2} + 0.86\text{CH2CHCH2OHCH3}$  2.3800e+05 2.000 16763.05

$\text{IC4H7} + \text{IC4H9OH} \Rightarrow 0.1400000000000000\text{CH2O} + 0.1400000000000000\text{IC3H7} + \text{IC4H8} + 0.86\text{CH2CHCH2OHCH3}$  1.8900e+05 2.000 16763.05

C4H3+IC4H9OH=>0.1400000000000000CH2O+0.1400000000000000IC3H7+C4H4+0.86CH2CH  
CH2OHCH3 2.8630e+05 2.000 7661.72

C6H5+IC4H9OH=>0.1400000000000000CH2O+0.1400000000000000IC3H7+C6H6+0.86CH2CH  
CH2OHCH3 2.5900e+08 1.000 3864.72

O+IC4H9OH=>OH+0.1400000000000000CH2O+0.1400000000000000IC3H7+0.86CH2CHCH2OH  
CH3 1.6450e+07 2.000 4691.70

O2+IC4H9OH=>HO2+0.1400000000000000CH2O+0.1400000000000000IC3H7+0.86CH2CHCH2  
OHCH3 1.1900e+07 2.000 48272.65

OH+IC4H9OH=>H2O+0.1400000000000000CH2O+0.1400000000000000IC3H7+0.86CH2CHCH2  
OHCH3 1.0500e+10 1.000 1540.75

HO2+IC4H9OH=>H2O2+0.1400000000000000CH2O+0.1400000000000000IC3H7+0.86CH2CHC  
H2OHCH3 5.6000e+06 2.000 19190.53

CH3O+IC4H9OH=>CH3OH+0.1400000000000000CH2O+0.1400000000000000IC3H7+0.86CH2C  
HCH2OHCH3 2.9960e+05 2.000 3572.50

CH2OH+IC4H9OH=>CH3OH+0.1400000000000000CH2O+0.1400000000000000IC3H7+0.86CH2  
CHCH2OHCH3 1.9810e+05 2.000 13045.84

HCO+IC4H9OH=>1.1400000000000000CH2O+0.1400000000000000IC3H7+0.86CH2CHCH2OHC  
H3 8.8200e+05 2.000 15279.95

CH3CO+IC4H9OH=>0.1400000000000000CH2O+CH3CHO+0.1400000000000000IC3H7+0.86CH  
2CHCH2OHCH3 9.4500e+05 2.000 17080.28

CH2CHO+IC4H9OH=>0.1400000000000000CH2O+CH3CHO+0.1400000000000000IC3H7+0.86C  
H2CHCH2OHCH3 1.6100e+05 2.000 14430.30

C3H3+IC4H9OH=>0.1400000000000000CH2O+0.1400000000000000IC3H7+C3H4-  
A+0.86CH2CHCH2OHCH3 1.8900e+05 2.000 17080.28

HCCO+IC4H9OH=>0.1400000000000000CH2O+CH2CO+0.1400000000000000IC3H7+0.86CH2C  
HCH2OHCH3 2.9960e+05 2.000 7661.72

CH3O2+IC4H9OH=>CH3O2H+0.1400000000000000CH2O+0.1400000000000000IC3H7+0.86CH  
2CHCH2OHCH3 5.3200e+05 2.000 15598.15

C2H5O2+IC4H9OH=>0.1400000000000000CH2O+C2H5O2H+0.1400000000000000IC3H7+0.86  
CH2CHCH2OHCH3 5.3200e+05 2.000 15598.15

NC3H7O2+IC4H9OH=>0.1400000000000000CH2O+0.1400000000000000IC3H7+C3H7OOH+0.8  
6CH2CHCH2OHCH3 5.3200e+05 2.000 15598.15

IC3H7O2+IC4H9OH=>0.1400000000000000CH2O+0.1400000000000000IC3H7+C3H7OOH+0.8  
6CH2CHCH2OHCH3 5.3200e+05 2.000 15598.15

HCO3+IC4H9OH=>0.1400000000000000CH2O+0.1400000000000000IC3H7+HCO3H+0.86CH2C  
HCH2OHCH3 2.3800e+05 2.000 9072.89

CH3CO3+IC4H9OH=>0.1400000000000000CH2O+CH3CO3H+0.1400000000000000IC3H7+0.86  
CH2CHCH2OHCH3 2.3800e+05 2.000 9072.89

CH3COCH2+IC4H9OH=>0.1400000000000000CH2O+0.1400000000000000IC3H7+CH3COCH3+0.86CH2CHCH2OHCH3 1.6100e+05 2.000 10690.26

IC4H9OH+C6H5O=>0.1400000000000000CH2O+0.1400000000000000IC3H7+0.86CH2CHCH2OHCH3+C6H5OH 1.8900e+05 2.000 15492.11

IC4H9OH+C5H7=>0.1400000000000000CH2O+0.1400000000000000IC3H7+0.86CH2CHCH2OHCH3+LC5H8 1.8900e+05 2.000 18136.38

IC4H9OH+C7H7=>0.1400000000000000CH2O+0.1400000000000000IC3H7+0.86CH2CHCH2OHCH3+C7H8 9.4500e+04 2.000 19190.53

IC4H9OH+CH3C6H4=>0.1400000000000000CH2O+0.1400000000000000IC3H7+0.86CH2CHCH2OHCH3+C7H8 2.5900e+08 1.000 3864.72

IC4H9OH+RCRESOLO=>0.1400000000000000CH2O+0.1400000000000000IC3H7+0.86CH2CHCH2OHCH3+CRESOL 1.8900e+05 2.000 15810.16

IC4H9OH+C10H7=>0.1400000000000000CH2O+0.1400000000000000IC3H7+C10H8+0.86CH2CHCH2OHCH3 2.5900e+08 1.000 3864.72

IC4H9OH+INDENYL=>0.1400000000000000CH2O+0.1400000000000000IC3H7+0.86CH2CHCH2OHCH3+INDENE 9.1000e+04 2.000 19190.53

IC4H9OH+C10H6CH3=>0.1400000000000000CH2O+0.1400000000000000IC3H7+0.86CH2CHCH2OHCH3+C10H7CH3 2.5900e+08 1.000 3864.72

NC4H7OH=OH+C4H71-3 1.0000e+16  
0.000 70000.00

IC4H7OH=OH+IC4H7 1.0000e+16  
0.000 70000.00

NC4H7OH=C3H7CHO 8.6000e+11  
0.318 55900.00

IC4H7OH=IC3H7CHO 8.6000e+11  
0.318 55900.00

HCO+IC3H7=IC3H7CHO 1.8000e+13  
0.000 0.00

IC3H7CHO+M=CH3+RALD3+M 1.1600e+28 -  
2.800 85718.20

IC3H7CHO=>H+CO+IC3H7 2.7150e+17 -  
0.578 88995.00

IC3H7CHO=CO+C3H8 1.0000e+14  
0.000 75000.00

IC3H7CHO=CH4+C2H3CHO 1.0000e+14  
0.000 79000.00

H+IC3H7CHO=>H2+CO+IC3H7 1.6000e+14  
0.000 6360.00

OH+IC3H7CHO=>H2O+CO+IC3H7 0.000        630.00	2.0000e+13
OH+IC3H7CHO=>H2O+RIBALDB 2.000        -3152.50	5.0000e+05
HO2+IC3H7CHO=>H2O2+CO+IC3H7 0.000        12460.00	5.0000e+12
HO2+IC3H7CHO=>H2O2+RIBALDB 0.000        13560.00	2.4000e+12
HO2+IC3H7CHO=>H2O2+RIBALDG 0.000        19000.00	9.0000e+12
CH3+IC3H7CHO=>CO+CH4+IC3H7 0.000        7234.20	1.4000e+12
CH3+C2H3CHO=RIBALDG 2.670        6850.00	1.8900e+03
HCO+C3H6=RIBALDG 2.890        6728.40	1.2800e+02
RIBALDB=H+IC3H5CHO 0.000        40000.00	1.0000e+14
RIBALDG=CO+IC3H7 0.670        30200.00	3.8000e+10
RIBALDB=CO+IC3H7 0.880        37300.00	3.5600e+10
O2+RIBALDG=>HO2+IC3H5CHO 0.000        3000.00	3.0000e+11
O2+RIBALDB=>HO2+IC3H5CHO 0.000        3000.00	3.0000e+11
C2H3+IC3H7CHO=>CO+C2H4+IC3H7 2.000        2479.60	4.8816e+05
C2H5+IC3H7CHO=>CO+C2H6+IC3H7 2.000        5128.01	1.4400e+05
NC3H7+IC3H7CHO=>CO+C3H8+IC3H7 2.000        5128.01	9.7200e+04
IC3H7+IC3H7CHO=>CO+C3H8+IC3H7 2.000        8184.45	9.7200e+04
C3H5-S+IC3H7CHO=>CO+IC3H7+C3H6 2.000        3044.41	1.9440e+05
C3H5-T+IC3H7CHO=>CO+IC3H7+C3H6 2.000        3044.41	1.9440e+05

C3H5-A+IC3H7CHO=>CO+IC3H7+C3H6	3.8808e+05
2.000 10972.41	
C4H5+IC3H7CHO=>CO+IC3H7+C4H6	1.9440e+05
2.000 3044.41	
C4H71-4+IC3H7CHO=>CO+IC3H7+C4H8-1	9.7200e+04
2.000 5032.93	
C4H71-3+IC3H7CHO=>CO+IC3H7+C4H8-2	2.4480e+05
2.000 11840.29	
IC4H7+IC3H7CHO=>CO+IC3H7+IC4H8	1.9440e+05
2.000 11840.29	
C4H3+IC3H7CHO=>CO+IC3H7+C4H4	2.9448e+05
2.000 3705.38	
C6H5+IC3H7CHO=>CO+IC3H7+C6H6	2.6640e+08
1.000 867.85	
O+IC3H7CHO=>OH+CO+IC3H7	1.6920e+07
2.000 1169.32	
O2+IC3H7CHO=>HO2+CO+IC3H7	1.2240e+07
2.000 41405.89	
CH3O+IC3H7CHO=>CO+CH3OH+IC3H7	3.0816e+05
2.000 241.70	
CH2OH+IC3H7CHO=>CO+CH3OH+IC3H7	2.0376e+05
2.000 8472.17	
HCO+IC3H7CHO=>CO+CH2O+IC3H7	9.0720e+05
2.000 10490.75	
CH3CO+IC3H7CHO=>CO+CH3CHO+IC3H7	9.7200e+05
2.000 12129.83	
CH2CHO+IC3H7CHO=>CO+CH3CHO+IC3H7	1.6560e+05
2.000 9720.89	
C3H3+IC3H7CHO=>CO+IC3H7+C3H4-A	1.9440e+05
2.000 12129.83	
HCCO+IC3H7CHO=>CO+CH2CO+IC3H7	3.0816e+05
2.000 3705.38	
CH3O2+IC3H7CHO=>CO+CH3O2H+IC3H7	5.4720e+05
2.000 10779.70	
C2H5O2+IC3H7CHO=>CO+C2H5O2H+IC3H7	5.4720e+05
2.000 10779.70	
NC3H7O2+IC3H7CHO=>CO+IC3H7+C3H7OOH	5.4720e+05
2.000 10779.70	

IC3H7O2+IC3H7CHO=>CO+IC3H7+C3H7OOH	5.4720e+05
2.000 10779.70	
HCO3+IC3H7CHO=>CO+IC3H7+HCO3H	2.4480e+05
2.000 4937.89	
CH3CO3+IC3H7CHO=>CO+CH3CO3H+IC3H7	2.4480e+05
2.000 4937.89	
CH3COCH2+IC3H7CHO=>CO+IC3H7+CH3COCH3	1.6560e+05
2.000 6366.63	
IC3H7CHO+C6H5O=>CO+IC3H7+C6H5OH	1.9440e+05
2.000 10683.36	
IC3H7CHO+C5H7=>CO+IC3H7+LC5H8	1.9440e+05
2.000 13095.77	
IC3H7CHO+C7H7=>CO+IC3H7+C7H8	9.7200e+04
2.000 14062.89	
IC3H7CHO+CH3C6H4=>CO+IC3H7+C7H8	2.6640e+08
1.000 867.85	
IC3H7CHO+RCRESOLO=>CO+IC3H7+CRESOL	1.9440e+05
2.000 10972.41	
IC3H7CHO+C10H7=>CO+IC3H7+C10H8	2.6640e+08
1.000 867.85	
IC3H7CHO+INDENYL=>CO+IC3H7+INDENE	9.3600e+04
2.000 14062.89	
IC3H7CHO+C10H6CH3=>CO+IC3H7+C10H7CH3	2.6640e+08
1.000 867.85	
H+IC3H7CHO=>H2+RIBALDB	3.9000e+06
2.000 2825.33	
CH3+IC3H7CHO=>CH4+RIBALDB	3.9000e+04
2.000 3778.15	
C2H3+IC3H7CHO=>C2H4+RIBALDB	8.8140e+04
2.000 2730.26	
C2H5+IC3H7CHO=>C2H6+RIBALDB	2.6000e+04
2.000 5405.42	
NC3H7+IC3H7CHO=>C3H8+RIBALDB	1.7550e+04
2.000 5405.42	
IC3H7+IC3H7CHO=>C3H8+RIBALDB	1.7550e+04
2.000 8487.19	
C3H5-S+IC3H7CHO=>C3H6+RIBALDB	3.5100e+04
2.000 3301.28	

C3H5-T+IC3H7CHO=>C3H6+RIBALDB 2.000 3301.28	3.5100e+04
C3H5-A+IC3H7CHO=>C3H6+RIBALDB 2.000 11294.92	7.0070e+04
C4H5+IC3H7CHO=>C4H6+RIBALDB 2.000 3301.28	3.5100e+04
C4H71-4+IC3H7CHO=>C4H8-1+RIBALDB 2.000 5309.47	1.7550e+04
C4H71-3+IC3H7CHO=>C4H8-2+RIBALDB 2.000 12168.47	4.4200e+04
IC4H7+IC3H7CHO=>IC4H8+RIBALDB 2.000 12168.47	3.5100e+04
C4H3+IC3H7CHO=>C4H4+RIBALDB 2.000 3969.14	5.3170e+04
C6H5+IC3H7CHO=>C6H6+RIBALDB 1.000 1067.64	4.8100e+07
O+IC3H7CHO=>OH+RIBALDB 2.000 1404.15	3.0550e+06
O2+IC3H7CHO=>HO2+RIBALDB 2.000 41863.68	2.2100e+06
CH3O+IC3H7CHO=>CH3OH+RIBALDB 2.000 463.75	5.5640e+04
CH2OH+IC3H7CHO=>CH3OH+RIBALDB 2.000 8777.08	3.6790e+04
HCO+IC3H7CHO=>CH2O+RIBALDB 2.000 10810.03	1.6380e+05
CH3CO+IC3H7CHO=>CH3CHO+RIBALDB 2.000 12459.86	1.7550e+05
CH2CHO+IC3H7CHO=>CH3CHO+RIBALDB 2.000 10034.85	2.9900e+04
C3H3+IC3H7CHO=>C3H4-A+RIBALDB 2.000 12459.86	3.5100e+04
HCCO+IC3H7CHO=>CH2CO+RIBALDB 2.000 3969.14	5.5640e+04
CH3O2+IC3H7CHO=>CH3O2H+RIBALDB 2.000 11100.93	9.8800e+04
C2H5O2+IC3H7CHO=>C2H5O2H+RIBALDB 2.000 11100.93	9.8800e+04



NC3H7O2+IC3H7CHO=>C3H7OOH+RIBALDB	9.8800e+04
2.000 11100.93	
IC3H7O2+IC3H7CHO=>C3H7OOH+RIBALDB	9.8800e+04
2.000 11100.93	
HCO3+IC3H7CHO=>HCO3H+RIBALDB	4.4200e+04
2.000 5213.56	
CH3CO3+IC3H7CHO=>CH3CO3H+RIBALDB	4.4200e+04
2.000 5213.56	
CH3COCH2+IC3H7CHO=>CH3COCH3+RIBALDB	2.9900e+04
2.000 6654.87	
IC3H7CHO+C6H5O=>RIBALDB+C6H5OH	3.5100e+04
2.000 11003.95	
IC3H7CHO+C5H7=>RIBALDB+LC5H8	3.5100e+04
2.000 13431.81	
IC3H7CHO+C7H7=>RIBALDB+C7H8	1.7550e+04
2.000 14404.74	
IC3H7CHO+CH3C6H4=>RIBALDB+C7H8	4.8100e+07
1.000 1067.64	
IC3H7CHO+RCRESOLO=>RIBALDB+CRESOL	3.5100e+04
2.000 11294.92	
IC3H7CHO+C10H7=>C10H8+RIBALDB	4.8100e+07
1.000 1067.64	
IC3H7CHO+INDENYL=>RIBALDB+INDENE	1.6900e+04
2.000 14404.74	
IC3H7CHO+C10H6CH3=>RIBALDB+C10H7CH3	4.8100e+07
1.000 1067.64	
H+IC3H7CHO=>H2+RIBALDG	1.8000e+07
2.000 6349.34	
CH3+IC3H7CHO=>CH4+RIBALDG	1.8000e+05
2.000 7443.70	
C2H3+IC3H7CHO=>C2H4+RIBALDG	4.0680e+05
2.000 6239.48	
C2H5+IC3H7CHO=>C2H6+RIBALDG	1.2000e+05
2.000 9289.16	
NC3H7+IC3H7CHO=>C3H8+RIBALDG	8.1000e+04
2.000 9289.16	
IC3H7+IC3H7CHO=>C3H8+RIBALDG	8.1000e+04
2.000 12725.62	

C3H5-S+IC3H7CHO=>C3H6+RIBALDG 2.000        6897.45	1.6200e+05
C3H5-T+IC3H7CHO=>C3H6+RIBALDG 2.000        6897.45	1.6200e+05
C3H5-A+IC3H7CHO=>C3H6+RIBALDG 2.000        15810.16	3.2340e+05
C4H5+IC3H7CHO=>C4H6+RIBALDG 2.000        6897.45	1.6200e+05
C4H71-4+IC3H7CHO=>C4H8-1+RIBALDG 2.000        9181.05	8.1000e+04
C4H71-3+IC3H7CHO=>C4H8-2+RIBALDG 2.000        16763.05	2.0400e+05
IC4H7+IC3H7CHO=>IC4H8+RIBALDG 2.000        16763.05	1.6200e+05
C4H3+IC3H7CHO=>C4H4+RIBALDG 2.000        7661.72	2.4540e+05
C6H5+IC3H7CHO=>C6H6+RIBALDG 1.000        3864.72	2.2200e+08
O+IC3H7CHO=>OH+RIBALDG 2.000        4691.70	1.4100e+07
O2+IC3H7CHO=>HO2+RIBALDG 2.000        48272.65	1.0200e+07
OH+IC3H7CHO=>H2O+RIBALDG 1.000        1540.75	9.0000e+09
CH3O+IC3H7CHO=>CH3OH+RIBALDG 2.000        3572.50	2.5680e+05
CH2OH+IC3H7CHO=>CH3OH+RIBALDG 2.000        13045.84	1.6980e+05
HCO+IC3H7CHO=>CH2O+RIBALDG 2.000        15279.95	7.5600e+05
CH3CO+IC3H7CHO=>CH3CHO+RIBALDG 2.000        17080.28	8.1000e+05
CH2CHO+IC3H7CHO=>CH3CHO+RIBALDG 2.000        14430.30	1.3800e+05
C3H3+IC3H7CHO=>C3H4-A+RIBALDG 2.000        17080.28	1.6200e+05
HCCO+IC3H7CHO=>CH2CO+RIBALDG 2.000        7661.72	2.5680e+05

CH3O2+IC3H7CHO=>CH3O2H+RIBALDG 2.000 15598.15	4.5600e+05
C2H5O2+IC3H7CHO=>C2H5O2H+RIBALDG 2.000 15598.15	4.5600e+05
NC3H7O2+IC3H7CHO=>C3H7OOH+RIBALDG 2.000 15598.15	4.5600e+05
IC3H7O2+IC3H7CHO=>C3H7OOH+RIBALDG 2.000 15598.15	4.5600e+05
HCO3+IC3H7CHO=>HCO3H+RIBALDG 2.000 9072.89	2.0400e+05
CH3CO3+IC3H7CHO=>CH3CO3H+RIBALDG 2.000 9072.89	2.0400e+05
CH3COCH2+IC3H7CHO=>CH3COCH3+RIBALDG 2.000 10690.26	1.3800e+05
IC3H7CHO+C6H5O=>RIBALDG+C6H5OH 2.000 15492.11	1.6200e+05
IC3H7CHO+C5H7=>RIBALDG+LC5H8 2.000 18136.38	1.6200e+05
IC3H7CHO+C7H7=>RIBALDG+C7H8 2.000 19190.53	8.1000e+04
IC3H7CHO+CH3C6H4=>RIBALDG+C7H8 1.000 3864.72	2.2200e+08
IC3H7CHO+RCRESOLO=>RIBALDG+CRESOL 2.000 15810.16	1.6200e+05
IC3H7CHO+C10H7=>C10H8+RIBALDG 1.000 3864.72	2.2200e+08
IC3H7CHO+INDENYL=>RIBALDG+INDENE 2.000 19190.53	7.8000e+04
IC3H7CHO+C10H6CH3=>RIBALDG+C10H7CH3 1.000 3864.72	2.2200e+08
H+IC3H5CHO=>H2+0.5CO+0.5HCO+0.5C3H5-S+0.5C3H4-A 2.000 4000.00	1.5000e+07
CH3+IC3H5CHO=>0.5CO+CH4+0.5HCO+0.5C3H5-S+0.5C3H4-A 2.000 5000.00	1.5000e+05
C2H3+IC3H5CHO=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A 2.000 3900.00	3.3900e+05
C2H5+IC3H5CHO=>0.5CO+0.5HCO+C2H6+0.5C3H5-S+0.5C3H4-A 2.000 6700.00	1.0000e+05

NC3H7+IC3H5CHO=>0.5CO+0.5HCO+C3H8+0.5C3H5-S+0.5C3H4-A	6.7500e+04
2.000 6700.00	
IC3H7+IC3H5CHO=>0.5CO+0.5HCO+C3H8+0.5C3H5-S+0.5C3H4-A	6.7500e+04
2.000 9900.00	
C3H5-S+IC3H5CHO=>0.5CO+0.5HCO+C3H6+0.5C3H5-S+0.5C3H4-A	1.3500e+05
2.000 4500.00	
C3H5-T+IC3H5CHO=>0.5CO+0.5HCO+C3H6+0.5C3H5-S+0.5C3H4-A	1.3500e+05
2.000 4500.00	
C3H5-A+IC3H5CHO=>0.5CO+0.5HCO+C3H6+0.5C3H5-S+0.5C3H4-A	2.6950e+05
2.000 12800.00	
C4H5+IC3H5CHO=>0.5CO+0.5HCO+0.5C3H5-S+0.5C3H4-A+C4H6	1.3500e+05
2.000 4500.00	
C4H71-4+IC3H5CHO=>0.5CO+0.5HCO+0.5C3H5-S+0.5C3H4-A+C4H8-1	6.7500e+04
2.000 6600.00	
C4H71-3+IC3H5CHO=>0.5CO+0.5HCO+0.5C3H5-S+0.5C3H4-A+C4H8-2	1.7000e+05
2.000 13700.00	
IC4H7+IC3H5CHO=>0.5CO+0.5HCO+0.5C3H5-S+0.5C3H4-A+IC4H8	1.3500e+05
2.000 13700.00	
C4H3+IC3H5CHO=>0.5CO+0.5HCO+0.5C3H5-S+0.5C3H4-A+C4H4	2.0450e+05
2.000 5200.00	
C6H5+IC3H5CHO=>0.5CO+0.5HCO+0.5C3H5-S+0.5C3H4-A+C6H6	1.8500e+08
1.000 2000.00	
O+IC3H5CHO=>OH+0.5CO+0.5HCO+0.5C3H5-S+0.5C3H4-A	1.1750e+07
2.000 2500.00	
O2+IC3H5CHO=>HO2+0.5CO+0.5HCO+0.5C3H5-S+0.5C3H4-A	8.5000e+06
2.000 44000.00	
OH+IC3H5CHO=>H2O+0.5CO+0.5HCO+0.5C3H5-S+0.5C3H4-A	7.5000e+09
1.000 50.00	
HO2+IC3H5CHO=>H2O2+0.5CO+0.5HCO+0.5C3H5-S+0.5C3H4-A	4.0000e+06
2.000 16000.00	
CH3O+IC3H5CHO=>0.5CO+CH3OH+0.5HCO+0.5C3H5-S+0.5C3H4-A	2.1400e+05
2.000 1500.00	
CH2OH+IC3H5CHO=>0.5CO+CH3OH+0.5HCO+0.5C3H5-S+0.5C3H4-A	1.4150e+05
2.000 10200.00	
HCO+IC3H5CHO=>0.5CO+CH2O+0.5HCO+0.5C3H5-S+0.5C3H4-A	6.3000e+05
2.000 12300.00	
CH3CO+IC3H5CHO=>0.5CO+0.5HCO+CH3CHO+0.5C3H5-S+0.5C3H4-A	6.7500e+05
2.000 14000.00	

$\text{CH}_2\text{CHO} + \text{IC}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{CH}_3\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A}$  1.1500e+05  
 2.000 11500.00

$\text{C}_3\text{H}_3 + \text{IC}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C}_3\text{H}_5\text{-S} + 1.5\text{C}_3\text{H}_4\text{-A}$  1.3500e+05  
 2.000 14000.00

$\text{HCCO} + \text{IC}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{CH}_2\text{CO} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A}$  2.1400e+05  
 2.000 5200.00

$\text{CH}_3\text{O}_2 + \text{IC}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + \text{CH}_3\text{O}_2\text{H} + 0.5\text{HCO} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A}$  3.8000e+05  
 2.000 12600.00

$\text{C}_2\text{H}_5\text{O}_2 + \text{IC}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_5\text{O}_2\text{H} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A}$  3.8000e+05  
 2.000 12600.00

$\text{NC}_3\text{H}_7\text{O}_2 + \text{IC}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{C}_3\text{H}_7\text{OOH}$  3.8000e+05  
 2.000 12600.00

$\text{IC}_3\text{H}_7\text{O}_2 + \text{IC}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{C}_3\text{H}_7\text{OOH}$  3.8000e+05  
 2.000 12600.00

$\text{HCO}_3 + \text{IC}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{HCO}_3\text{H}$  1.7000e+05  
 2.000 6500.00

$\text{CH}_3\text{CO}_3 + \text{IC}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{CH}_3\text{CO}_3\text{H} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A}$  1.7000e+05  
 2.000 6500.00

$\text{CH}_3\text{COCH}_2 + \text{IC}_3\text{H}_5\text{CHO} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{CH}_3\text{COCH}_3$  1.1500e+05  
 2.000 8000.00

$\text{IC}_3\text{H}_5\text{CHO} + \text{C}_6\text{H}_5\text{O} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{C}_6\text{H}_5\text{OH}$  1.3500e+05  
 2.000 12500.00

$\text{IC}_3\text{H}_5\text{CHO} + \text{C}_5\text{H}_7 \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{LC}_5\text{H}_8$  1.3500e+05  
 2.000 15000.00

$\text{IC}_3\text{H}_5\text{CHO} + \text{C}_7\text{H}_7 \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{C}_7\text{H}_8$  6.7500e+04  
 2.000 16000.00

$\text{IC}_3\text{H}_5\text{CHO} + \text{CH}_3\text{C}_6\text{H}_4 \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{C}_7\text{H}_8$  1.8500e+08  
 1.000 2000.00

$\text{IC}_3\text{H}_5\text{CHO} + \text{RCRESOLO} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{CRESOL}$  1.3500e+05  
 2.000 12800.00

$\text{IC}_3\text{H}_5\text{CHO} + \text{C}_{10}\text{H}_7 \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{C}_{10}\text{H}_8$  1.8500e+08  
 1.000 2000.00

$\text{IC}_3\text{H}_5\text{CHO} + \text{INDENYL} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{INDENE}$  6.5000e+04  
 2.000 16000.00

$\text{IC}_3\text{H}_5\text{CHO} + \text{C}_{10}\text{H}_6\text{CH}_3 \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{C}_{10}\text{H}_7\text{CH}_3$  1.8500e+08  
 1.000 2000.00

$\text{C}_5\text{H}_{11}\text{OH} = \text{OH} + \text{NC}_5\text{H}_{11}$  1.5000e+16  
 0.000 93200.00

C5H11OH=CH2OH+PC4H9 2.0000e+16  
 0.000 85000.00  
 PLOG / 1.000000e-02 2.000000e+15 0.000000e+00 8.500000e+04  
 /  
 PLOG / 1.000000e-01 7.000000e+15 0.000000e+00 8.500000e+04  
 /  
 PLOG / 1.000000e+00 2.000000e+16 0.000000e+00 8.500000e+04  
 /  
 PLOG / 1.000000e+02 4.000000e+16 0.000000e+00 8.500000e+04  
 /

C5H11OH=PC2H4OH+NC3H7 6.0000e+16  
 0.000 85000.00  
 PLOG / 1.000000e-02 6.000000e+15 0.000000e+00 8.500000e+04  
 /  
 PLOG / 1.000000e-01 2.000000e+16 0.000000e+00 8.500000e+04  
 /  
 PLOG / 1.000000e+00 6.000000e+16 0.000000e+00 8.500000e+04  
 /  
 PLOG / 1.000000e+02 1.200000e+17 0.000000e+00 8.500000e+04  
 /

C5H11OH=C2H5+CH2CH2CH2OH 8.0000e+16  
 0.000 85000.00  
 PLOG / 1.000000e-02 8.000000e+15 0.000000e+00 8.500000e+04  
 /  
 PLOG / 1.000000e-01 2.600000e+16 0.000000e+00 8.500000e+04  
 /  
 PLOG / 1.000000e+00 8.000000e+16 0.000000e+00 8.500000e+04  
 /  
 PLOG / 1.000000e+02 1.600000e+17 0.000000e+00 8.500000e+04  
 /

C5H11OH=CH3+CH2CH2CH2CH2OH 6.0000e+16  
 0.000 86000.00  
 PLOG / 1.000000e-02 6.000000e+15 0.000000e+00 8.600000e+04  
 /  
 PLOG / 1.000000e-01 2.000000e+16 0.000000e+00 8.600000e+04  
 /  
 PLOG / 1.000000e+00 6.000000e+16 0.000000e+00 8.600000e+04  
 /  
 PLOG / 1.000000e+02 1.200000e+17 0.000000e+00 8.600000e+04  
 /

C5H11OH=H2O+NC5H10 1.0000e+14  
 0.000 67500.00  
 PLOG / 1.000000e-02 1.500000e+13 0.000000e+00 6.750000e+04  
 /  
 PLOG / 1.000000e-01 4.000000e+13 0.000000e+00 6.750000e+04  
 /  
 PLOG / 1.000000e+00 8.000000e+13 0.000000e+00 6.750000e+04  
 /  
 PLOG / 1.000000e+02 1.000000e+14 0.000000e+00 6.750000e+04  
 /

C5H11OH=H2+C4H9CHO 5.0000e+13  
 0.000 69500.00

H+RPENT1OHA=C5H11OH	5.0000e+13
0.000 0.00	
H+RPENT1OHB=C5H11OH	5.0000e+13
0.000 0.00	
O2+RPENT1OHA=HO2+C4H9CHO	5.1030e+11
0.302 -1068.66	
O2+RPENT1OHB=>HO2+0.33C5H9OH+0.67C4H9CHO	4.5000e+12
0.000 3500.00	
RPENT1OHB=>C2H4+CH2CH2CH2OH	6.0000e+12
0.000 31000.00	
RPENT1OHB=>PC2H4OH+C3H6	9.0000e+12
0.000 30000.00	
RPENT1OHB=>CH2OH+C4H8-1	1.0000e+13
0.000 31000.00	
RPENT1OHB=>H+0.3C5H9OH+0.7C4H9CHO	3.0000e+13
0.000 38000.00	
RPENT1OHB=>CH3+NC4H7OH	4.0000e+12
0.000 32000.00	
RPENT1OHB=>OH+NC5H10	9.0000e+12
0.000 34000.00	
RPENT1OHB=>C2H5+C3H5OH	1.2000e+13
0.000 31000.00	
RPENT1OHB=>H+C4H9CHO	6.0000e+12
0.000 38000.00	
RPENT1OHA=CH3CHO+NC3H7	3.0000e+13
0.000 31000.00	
C5H9OH=OH+NC5H9-3	1.0000e+16
0.000 70000.00	
C5H9OH=CH2OH+C4H71-4	2.5000e+16
0.000 79500.00	
C5H9OH=C4H9CHO	8.6000e+11
0.318 55900.00	
HO2+C5H9OH=HO2+C4H9CHO	1.5000e+05
1.670 6810.00	
HCOOH+C5H9OH=HCOOH+C4H9CHO	2.8000e-02
3.286 -4509.00	
HO2+C5H11OH=H2O2+RPENT1OHA	5.0000e+06
2.000 16000.00	

H+C5H11OH=>H2+0.1400000000000000CH2O+0.1400000000000000PC4H9+0.86RPENT1OHB  
 2.4000e+07 2.000 4000.00

CH3+C5H11OH=>CH4+0.1400000000000000CH2O+0.1400000000000000PC4H9+0.86RPENT1O  
 HB 2.4000e+05 2.000 5000.00

C2H3+C5H11OH=>0.1400000000000000CH2O+C2H4+0.1400000000000000PC4H9+0.86RPENT  
 1OHB 5.4240e+05 2.000 3900.00

C2H5+C5H11OH=>0.1400000000000000CH2O+C2H6+0.1400000000000000PC4H9+0.86RPENT  
 1OHB 1.6000e+05 2.000 6700.00

NC3H7+C5H11OH=>0.1400000000000000CH2O+C3H8+0.1400000000000000PC4H9+0.86RPEN  
 T1OHB 1.0800e+05 2.000 6700.00

IC3H7+C5H11OH=>0.1400000000000000CH2O+C3H8+0.1400000000000000PC4H9+0.86RPEN  
 T1OHB 1.0800e+05 2.000 9900.00

C3H5-  
 S+C5H11OH=>0.1400000000000000CH2O+C3H6+0.1400000000000000PC4H9+0.86RPENT1OH  
 B 2.1600e+05 2.000 4500.00

C3H5-  
 T+C5H11OH=>0.1400000000000000CH2O+C3H6+0.1400000000000000PC4H9+0.86RPENT1OH  
 B 2.1600e+05 2.000 4500.00

C3H5-  
 A+C5H11OH=>0.1400000000000000CH2O+C3H6+0.1400000000000000PC4H9+0.86RPENT1OH  
 B 4.3120e+05 2.000 12800.00

C4H5+C5H11OH=>0.1400000000000000CH2O+0.1400000000000000PC4H9+C4H6+0.86RPENT  
 1OHB 2.1600e+05 2.000 4500.00

C4H71-4+C5H11OH=>0.1400000000000000CH2O+0.1400000000000000PC4H9+C4H8-  
 1+0.86RPENT1OHB 1.0800e+05 2.000 6600.00

C4H71-3+C5H11OH=>0.1400000000000000CH2O+0.1400000000000000PC4H9+C4H8-  
 2+0.86RPENT1OHB 2.7200e+05 2.000 13700.00

IC4H7+C5H11OH=>0.1400000000000000CH2O+0.1400000000000000PC4H9+IC4H8+0.86RPE  
 NT1OHB 2.1600e+05 2.000 13700.00

C4H3+C5H11OH=>0.1400000000000000CH2O+0.1400000000000000PC4H9+C4H4+0.86RPENT  
 1OHB 3.2720e+05 2.000 5200.00

C6H5+C5H11OH=>0.1400000000000000CH2O+0.1400000000000000PC4H9+C6H6+0.86RPENT  
 1OHB 2.9600e+08 1.000 2000.00

O+C5H11OH=>OH+0.1400000000000000CH2O+0.1400000000000000PC4H9+0.86RPENT1OHB  
 1.8800e+07 2.000 2500.00

O2+C5H11OH=>HO2+0.1400000000000000CH2O+0.1400000000000000PC4H9+0.86RPENT1OH  
 B 1.3600e+07 2.000 44000.00

OH+C5H11OH=>H2O+0.1400000000000000CH2O+0.1400000000000000PC4H9+0.86RPENT1OH  
 B 1.2000e+10 1.000 50.00



HO2+C5H11OH=>H2O2+0.1400000000000000CH2O+0.1400000000000000PC4H9+0.86RPENT1  
OHB 6.4000e+06 2.000 16000.00

CH3O+C5H11OH=>CH3OH+0.1400000000000000CH2O+0.1400000000000000PC4H9+0.86RPEN  
T1OHB 3.4240e+05 2.000 1500.00

CH2OH+C5H11OH=>CH3OH+0.1400000000000000CH2O+0.1400000000000000PC4H9+0.86RPE  
NT1OHB 2.2640e+05 2.000 10200.00

HCO+C5H11OH=>1.1400000000000000CH2O+0.1400000000000000PC4H9+0.86RPENT1OHB  
1.0080e+06 2.000 12300.00

CH3CO+C5H11OH=>0.1400000000000000CH2O+CH3CHO+0.1400000000000000PC4H9+0.86RP  
ENT1OHB 1.0800e+06 2.000 14000.00

CH2CHO+C5H11OH=>0.1400000000000000CH2O+CH3CHO+0.1400000000000000PC4H9+0.86R  
PENT1OHB 1.8400e+05 2.000 11500.00

C3H3+C5H11OH=>0.1400000000000000CH2O+C3H4-  
A+0.1400000000000000PC4H9+0.86RPENT1OHB 2.1600e+05 2.000 14000.00

HCCO+C5H11OH=>0.1400000000000000CH2O+CH2CO+0.1400000000000000PC4H9+0.86RPEN  
T1OHB 3.4240e+05 2.000 5200.00

CH3O2+C5H11OH=>CH3O2H+0.1400000000000000CH2O+0.1400000000000000PC4H9+0.86RP  
ENT1OHB 6.0800e+05 2.000 12600.00

C2H5O2+C5H11OH=>0.1400000000000000CH2O+C2H5O2H+0.1400000000000000PC4H9+0.86  
RPENT1OHB 6.0800e+05 2.000 12600.00

NC3H7O2+C5H11OH=>0.1400000000000000CH2O+0.1400000000000000PC4H9+C3H7OOH+0.8  
6RPENT1OHB 6.0800e+05 2.000 12600.00

IC3H7O2+C5H11OH=>0.1400000000000000CH2O+0.1400000000000000PC4H9+C3H7OOH+0.8  
6RPENT1OHB 6.0800e+05 2.000 12600.00

HCO3+C5H11OH=>0.1400000000000000CH2O+0.1400000000000000PC4H9+HCO3H+0.86RPEN  
T1OHB 2.7200e+05 2.000 6500.00

CH3CO3+C5H11OH=>0.1400000000000000CH2O+CH3CO3H+0.1400000000000000PC4H9+0.86  
RPENT1OHB 2.7200e+05 2.000 6500.00

CH3COCH2+C5H11OH=>0.1400000000000000CH2O+CH3COCH3+0.1400000000000000PC4H9+0  
.86RPENT1OHB 1.8400e+05 2.000 8000.00

C5H11OH+C6H5O=>0.1400000000000000CH2O+0.1400000000000000PC4H9+0.86RPENT1OHB  
+C6H5OH 2.1600e+05 2.000 12500.00

C5H11OH+C5H7=>0.1400000000000000CH2O+0.1400000000000000PC4H9+0.86RPENT1OHB+  
LC5H8 2.1600e+05 2.000 15000.00

C5H11OH+C7H7=>0.1400000000000000CH2O+0.1400000000000000PC4H9+0.86RPENT1OHB+  
C7H8 1.0800e+05 2.000 16000.00

C5H11OH+CH3C6H4=>0.1400000000000000CH2O+0.1400000000000000PC4H9+0.86RPENT1O  
HB+C7H8 2.9600e+08 1.000 2000.00

C5H11OH+RCRESOLO=>0.1400000000000000CH2O+0.1400000000000000PC4H9+0.86RPENT1  
OHB+CRESOL 2.1600e+05 2.000 12800.00

C5H11OH+C10H7=>0.1400000000000000CH2O+0.1400000000000000PC4H9+C10H8+0.86RPE  
NT1OHB 2.9600e+08 1.000 2000.00

C5H11OH+INDENYL=>0.1400000000000000CH2O+0.1400000000000000PC4H9+0.86RPENT1O  
HB+INDENE 1.0400e+05 2.000 16000.00

C5H11OH+C10H6CH3=>0.1400000000000000CH2O+0.1400000000000000PC4H9+0.86RPENT1  
OHB+C10H7CH3 2.9600e+08 1.000 2000.00

H+C5H11OH=>H2+RPENT1OHA 9.0000e+06  
2.000 4000.00

CH3+C5H11OH=>CH4+RPENT1OHA 9.0000e+04  
2.000 5000.00

C2H3+C5H11OH=>C2H4+RPENT1OHA 2.0340e+05  
2.000 3900.00

C2H5+C5H11OH=>C2H6+RPENT1OHA 6.0000e+04  
2.000 6700.00

NC3H7+C5H11OH=>C3H8+RPENT1OHA 4.0500e+04  
2.000 6700.00

IC3H7+C5H11OH=>C3H8+RPENT1OHA 4.0500e+04  
2.000 9900.00

C3H5-S+C5H11OH=>C3H6+RPENT1OHA 8.1000e+04  
2.000 4500.00

C3H5-T+C5H11OH=>C3H6+RPENT1OHA 8.1000e+04  
2.000 4500.00

C3H5-A+C5H11OH=>C3H6+RPENT1OHA 1.6170e+05  
2.000 12800.00

C4H5+C5H11OH=>C4H6+RPENT1OHA 8.1000e+04  
2.000 4500.00

C4H71-4+C5H11OH=>C4H8-1+RPENT1OHA 4.0500e+04  
2.000 6600.00

C4H71-3+C5H11OH=>C4H8-2+RPENT1OHA 1.0200e+05  
2.000 13700.00

IC4H7+C5H11OH=>IC4H8+RPENT1OHA 8.1000e+04  
2.000 13700.00

C4H3+C5H11OH=>C4H4+RPENT1OHA 1.2270e+05  
2.000 5200.00

C6H5+C5H11OH=>C6H6+RPENT1OHA 1.1100e+08  
1.000 2000.00

O+C5H11OH=>OH+RPENT1OHA	7.0500e+06
2.000 2500.00	
O2+C5H11OH=>HO2+RPENT1OHA	5.1000e+06
2.000 44000.00	
OH+C5H11OH=>H2O+RPENT1OHA	4.5000e+09
1.000 50.00	
CH3O+C5H11OH=>CH3OH+RPENT1OHA	1.2840e+05
2.000 1500.00	
CH2OH+C5H11OH=>CH3OH+RPENT1OHA	8.4900e+04
2.000 10200.00	
HCO+C5H11OH=>CH2O+RPENT1OHA	3.7800e+05
2.000 12300.00	
CH3CO+C5H11OH=>CH3CHO+RPENT1OHA	4.0500e+05
2.000 14000.00	
CH2CHO+C5H11OH=>CH3CHO+RPENT1OHA	6.9000e+04
2.000 11500.00	
C3H3+C5H11OH=>C3H4-A+RPENT1OHA	8.1000e+04
2.000 14000.00	
HCCO+C5H11OH=>CH2CO+RPENT1OHA	1.2840e+05
2.000 5200.00	
CH3O2+C5H11OH=>CH3O2H+RPENT1OHA	2.2800e+05
2.000 12600.00	
C2H5O2+C5H11OH=>C2H5O2H+RPENT1OHA	2.2800e+05
2.000 12600.00	
NC3H7O2+C5H11OH=>C3H7OOH+RPENT1OHA	2.2800e+05
2.000 12600.00	
IC3H7O2+C5H11OH=>C3H7OOH+RPENT1OHA	2.2800e+05
2.000 12600.00	
HCO3+C5H11OH=>HCO3H+RPENT1OHA	1.0200e+05
2.000 6500.00	
CH3CO3+C5H11OH=>CH3CO3H+RPENT1OHA	1.0200e+05
2.000 6500.00	
CH3COCH2+C5H11OH=>CH3COCH3+RPENT1OHA	6.9000e+04
2.000 8000.00	
C5H11OH+C6H5O=>RPENT1OHA+C6H5OH	8.1000e+04
2.000 12500.00	
C5H11OH+C5H7=>RPENT1OHA+LC5H8	8.1000e+04
2.000 15000.00	

C5H11OH+C7H7=>RPENT1OHA+C7H8	4.0500e+04	
2.000 16000.00		
C5H11OH+CH3C6H4=>RPENT1OHA+C7H8	1.1100e+08	
1.000 2000.00		
C5H11OH+RCRESOLO=>RPENT1OHA+CRESOL	8.1000e+04	
2.000 12800.00		
C5H11OH+C10H7=>C10H8+RPENT1OHA	1.1100e+08	
1.000 2000.00		
C5H11OH+INDENYL=>RPENT1OHA+INDENE	3.9000e+04	
2.000 16000.00		
C5H11OH+C10H6CH3=>RPENT1OHA+C10H7CH3	1.1100e+08	
1.000 2000.00		
C4H9CHO=HCO+PC4H9	1.2000e+26	-
2.950 86380.00		
C4H9CHO=CH2CHO+NC3H7	1.7000e+27	-
3.310 84700.00		
C4H9CHO=>HCO+C2H5+C2H4	2.8000e+24	-
2.240 89000.00		
C4H9CHO=>CH3+C2H4+CH2CHO	1.2000e+22	-
1.610 90120.00		
C4H9CHO=>H+CO+PC4H9	1.6000e+17	-
0.500 89260.00		
C4H9CHO=CO+NC4H10	1.0000e+14	
0.000 75000.00		
C4H9CHO=CH2CO+C3H8	1.0000e+14	
0.000 75000.00		
OH+C4H9CHO=>H2O+CO+PC4H9	2.0000e+13	
0.000 630.00		
H+C4H9CHO=>H2+CO+PC4H9	1.6000e+14	
0.000 6360.00		
HO2+C4H9CHO=>H2O2+CO+PC4H9	5.0000e+12	
0.000 12460.00		
CH3+C4H9CHO=>CO+CH4+PC4H9	1.0000e+12	
0.000 7234.20		
OH+C4H9CHO=>H2O+RALD5X	2.7000e+13	
0.000 1700.00		
HO2+C4H9CHO=>H2O2+RALD5X	9.2000e+12	
0.000 15860.00		

RALD5X=>CO+PC4H9 0.000 17500.00	6.6000e+10
RALD5X=>C2H5+C2H3CHO 0.000 30000.00	9.0000e+13
RALD5X=>0.3CH3+0.7HCO+0.7C4H8-1+0.3C3H5CHO 0.000 30000.00	3.6000e+13
RALD5X=>0.6C2H4+0.4CH2CHO+0.4C3H6+0.6RALD3 0.000 30000.00	2.8000e+13
C2H3+C4H9CHO=>CO+C2H4+PC4H9 2.000 2479.60	4.8816e+05
C2H5+C4H9CHO=>CO+C2H6+PC4H9 2.000 5128.01	1.4400e+05
NC3H7+C4H9CHO=>CO+C3H8+PC4H9 2.000 5128.01	9.7200e+04
IC3H7+C4H9CHO=>CO+C3H8+PC4H9 2.000 8184.45	9.7200e+04
C3H5-S+C4H9CHO=>CO+C3H6+PC4H9 2.000 3044.41	1.9440e+05
C3H5-T+C4H9CHO=>CO+C3H6+PC4H9 2.000 3044.41	1.9440e+05
C3H5-A+C4H9CHO=>CO+C3H6+PC4H9 2.000 10972.41	3.8808e+05
C4H5+C4H9CHO=>CO+PC4H9+C4H6 2.000 3044.41	1.9440e+05
C4H71-4+C4H9CHO=>CO+PC4H9+C4H8-1 2.000 5032.93	9.7200e+04
C4H71-3+C4H9CHO=>CO+PC4H9+C4H8-2 2.000 11840.29	2.4480e+05
IC4H7+C4H9CHO=>CO+PC4H9+IC4H8 2.000 11840.29	1.9440e+05
C4H3+C4H9CHO=>CO+PC4H9+C4H4 2.000 3705.38	2.9448e+05
C6H5+C4H9CHO=>CO+PC4H9+C6H6 1.000 867.85	2.6640e+08
O+C4H9CHO=>OH+CO+PC4H9 2.000 1169.32	1.6920e+07
O2+C4H9CHO=>HO2+CO+PC4H9 2.000 41405.89	1.2240e+07

CH3O+C4H9CHO=>CO+CH3OH+PC4H9 2.000            241.70	3.0816e+05
CH2OH+C4H9CHO=>CO+CH3OH+PC4H9 2.000            8472.17	2.0376e+05
HCO+C4H9CHO=>CO+CH2O+PC4H9 2.000            10490.75	9.0720e+05
CH3CO+C4H9CHO=>CO+CH3CHO+PC4H9 2.000            12129.83	9.7200e+05
CH2CHO+C4H9CHO=>CO+CH3CHO+PC4H9 2.000            9720.89	1.6560e+05
C3H3+C4H9CHO=>CO+C3H4-A+PC4H9 2.000            12129.83	1.9440e+05
HCCO+C4H9CHO=>CO+CH2CO+PC4H9 2.000            3705.38	3.0816e+05
CH3O2+C4H9CHO=>CO+CH3O2H+PC4H9 2.000            10779.70	5.4720e+05
C2H5O2+C4H9CHO=>CO+C2H5O2H+PC4H9 2.000            10779.70	5.4720e+05
NC3H7O2+C4H9CHO=>CO+PC4H9+C3H7OOH 2.000            10779.70	5.4720e+05
IC3H7O2+C4H9CHO=>CO+PC4H9+C3H7OOH 2.000            10779.70	5.4720e+05
HCO3+C4H9CHO=>CO+PC4H9+HCO3H 2.000            4937.89	2.4480e+05
CH3CO3+C4H9CHO=>CO+CH3CO3H+PC4H9 2.000            4937.89	2.4480e+05
CH3COCH2+C4H9CHO=>CO+CH3COCH3+PC4H9 2.000            6366.63	1.6560e+05
C4H9CHO+C6H5O=>CO+PC4H9+C6H5OH 2.000            10683.36	1.9440e+05
C4H9CHO+C5H7=>CO+PC4H9+LC5H8 2.000            13095.77	1.9440e+05
C4H9CHO+C7H7=>CO+PC4H9+C7H8 2.000            14062.89	9.7200e+04
C4H9CHO+CH3C6H4=>CO+PC4H9+C7H8 1.000            867.85	2.6640e+08
C4H9CHO+RCRESOLO=>CO+PC4H9+CRESOL 2.000            10972.41	1.9440e+05

C4H9CHO+C10H7=>CO+PC4H9+C10H8	2.6640e+08
1.000 867.85	
C4H9CHO+INDENYL=>CO+PC4H9+INDENE	9.3600e+04
2.000 14062.89	
C4H9CHO+C10H6CH3=>CO+PC4H9+C10H7CH3	2.6640e+08
1.000 867.85	
H+C4H9CHO=>H2+RALD5X	2.2500e+07
2.000 4000.00	
CH3+C4H9CHO=>CH4+RALD5X	2.2500e+05
2.000 5000.00	
C2H3+C4H9CHO=>C2H4+RALD5X	5.0850e+05
2.000 3900.00	
C2H5+C4H9CHO=>C2H6+RALD5X	1.5000e+05
2.000 6700.00	
NC3H7+C4H9CHO=>C3H8+RALD5X	1.0125e+05
2.000 6700.00	
IC3H7+C4H9CHO=>C3H8+RALD5X	1.0125e+05
2.000 9900.00	
C3H5-S+C4H9CHO=>C3H6+RALD5X	2.0250e+05
2.000 4500.00	
C3H5-T+C4H9CHO=>C3H6+RALD5X	2.0250e+05
2.000 4500.00	
C3H5-A+C4H9CHO=>C3H6+RALD5X	4.0425e+05
2.000 12800.00	
C4H5+C4H9CHO=>C4H6+RALD5X	2.0250e+05
2.000 4500.00	
C4H71-4+C4H9CHO=>C4H8-1+RALD5X	1.0125e+05
2.000 6600.00	
C4H71-3+C4H9CHO=>C4H8-2+RALD5X	2.5500e+05
2.000 13700.00	
IC4H7+C4H9CHO=>IC4H8+RALD5X	2.0250e+05
2.000 13700.00	
C4H3+C4H9CHO=>C4H4+RALD5X	3.0675e+05
2.000 5200.00	
C6H5+C4H9CHO=>C6H6+RALD5X	2.7750e+08
1.000 2000.00	
O+C4H9CHO=>OH+RALD5X	1.7625e+07
2.000 2500.00	

O2+C4H9CHO=>HO2+RALD5X	1.2750e+07
2.000 44000.00	
CH3O+C4H9CHO=>CH3OH+RALD5X	3.2100e+05
2.000 1500.00	
CH2OH+C4H9CHO=>CH3OH+RALD5X	2.1225e+05
2.000 10200.00	
HCO+C4H9CHO=>CH2O+RALD5X	9.4500e+05
2.000 12300.00	
CH3CO+C4H9CHO=>CH3CHO+RALD5X	1.0125e+06
2.000 14000.00	
CH2CHO+C4H9CHO=>CH3CHO+RALD5X	1.7250e+05
2.000 11500.00	
C3H3+C4H9CHO=>C3H4-A+RALD5X	2.0250e+05
2.000 14000.00	
HCCO+C4H9CHO=>CH2CO+RALD5X	3.2100e+05
2.000 5200.00	
CH3O2+C4H9CHO=>CH3O2H+RALD5X	5.7000e+05
2.000 12600.00	
C2H5O2+C4H9CHO=>C2H5O2H+RALD5X	5.7000e+05
2.000 12600.00	
NC3H7O2+C4H9CHO=>C3H7OOH+RALD5X	5.7000e+05
2.000 12600.00	
IC3H7O2+C4H9CHO=>C3H7OOH+RALD5X	5.7000e+05
2.000 12600.00	
HCO3+C4H9CHO=>HCO3H+RALD5X	2.5500e+05
2.000 6500.00	
CH3CO3+C4H9CHO=>CH3CO3H+RALD5X	2.5500e+05
2.000 6500.00	
CH3COCH2+C4H9CHO=>CH3COCH3+RALD5X	1.7250e+05
2.000 8000.00	
C4H9CHO+C6H5O=>RALD5X+C6H5OH	2.0250e+05
2.000 12500.00	
C4H9CHO+C5H7=>RALD5X+LC5H8	2.0250e+05
2.000 15000.00	
C4H9CHO+C7H7=>RALD5X+C7H8	1.0125e+05
2.000 16000.00	
C4H9CHO+CH3C6H4=>RALD5X+C7H8	2.7750e+08
1.000 2000.00	



C4H9CHO+RCRESOLO=>RALD5X+CRESOL	2.0250e+05
2.000 12800.00	
C4H9CHO+C10H7=>C10H8+RALD5X	2.7750e+08
1.000 2000.00	
C4H9CHO+INDENYL=>RALD5X+INDENE	9.7500e+04
2.000 16000.00	
C4H9CHO+C10H6CH3=>RALD5X+C10H7CH3	2.7750e+08
1.000 2000.00	
H+C5H9OH=>H2+OH+LC5H8	4.5000e+06
2.000 2825.33	
CH3+C5H9OH=>OH+CH4+LC5H8	4.5000e+04
2.000 3778.15	
C2H3+C5H9OH=>OH+C2H4+LC5H8	1.0170e+05
2.000 2730.26	
C2H5+C5H9OH=>OH+C2H6+LC5H8	3.0000e+04
2.000 5405.42	
NC3H7+C5H9OH=>OH+C3H8+LC5H8	2.0250e+04
2.000 5405.42	
IC3H7+C5H9OH=>OH+C3H8+LC5H8	2.0250e+04
2.000 8487.19	
C3H5-S+C5H9OH=>OH+C3H6+LC5H8	4.0500e+04
2.000 3301.28	
C3H5-T+C5H9OH=>OH+C3H6+LC5H8	4.0500e+04
2.000 3301.28	
C3H5-A+C5H9OH=>OH+C3H6+LC5H8	8.0850e+04
2.000 11294.92	
C4H5+C5H9OH=>OH+C4H6+LC5H8	4.0500e+04
2.000 3301.28	
C4H71-4+C5H9OH=>OH+C4H8-1+LC5H8	2.0250e+04
2.000 5309.47	
C4H71-3+C5H9OH=>OH+C4H8-2+LC5H8	5.1000e+04
2.000 12168.47	
IC4H7+C5H9OH=>OH+IC4H8+LC5H8	4.0500e+04
2.000 12168.47	
C4H3+C5H9OH=>OH+C4H4+LC5H8	6.1350e+04
2.000 3969.14	
C6H5+C5H9OH=>OH+C6H6+LC5H8	5.5500e+07
1.000 1067.64	

O+C5H9OH=>2OH+LC5H8	3.5250e+06
2.000 1404.15	
O2+C5H9OH=>OH+HO2+LC5H8	2.5500e+06
2.000 41863.68	
OH+C5H9OH=>H2O+OH+LC5H8	2.2500e+09
1.000 -695.37	
HO2+C5H9OH=>OH+H2O2+LC5H8	1.2000e+06
2.000 14404.74	
CH3O+C5H9OH=>OH+CH3OH+LC5H8	6.4200e+04
2.000 463.75	
CH2OH+C5H9OH=>OH+CH3OH+LC5H8	4.2450e+04
2.000 8777.08	
HCO+C5H9OH=>OH+CH2O+LC5H8	1.8900e+05
2.000 10810.03	
CH3CO+C5H9OH=>OH+CH3CHO+LC5H8	2.0250e+05
2.000 12459.86	
CH2CHO+C5H9OH=>OH+CH3CHO+LC5H8	3.4500e+04
2.000 10034.85	
C3H3+C5H9OH=>OH+C3H4-A+LC5H8	4.0500e+04
2.000 12459.86	
HCCO+C5H9OH=>OH+CH2CO+LC5H8	6.4200e+04
2.000 3969.14	
CH3O2+C5H9OH=>OH+CH3O2H+LC5H8	1.1400e+05
2.000 11100.93	
C2H5O2+C5H9OH=>OH+C2H5O2H+LC5H8	1.1400e+05
2.000 11100.93	
NC3H7O2+C5H9OH=>OH+C3H7OOH+LC5H8	1.1400e+05
2.000 11100.93	
IC3H7O2+C5H9OH=>OH+C3H7OOH+LC5H8	1.1400e+05
2.000 11100.93	
HCO3+C5H9OH=>OH+HCO3H+LC5H8	5.1000e+04
2.000 5213.56	
CH3CO3+C5H9OH=>OH+CH3CO3H+LC5H8	5.1000e+04
2.000 5213.56	
CH3COCH2+C5H9OH=>OH+CH3COCH3+LC5H8	3.4500e+04
2.000 6654.87	
C5H9OH+C6H5O=>OH+LC5H8+C6H5OH	4.0500e+04
2.000 11003.95	

C5H9OH+C5H7=>OH+2LC5H8	4.0500e+04
2.000 13431.81	
C5H9OH+C7H7=>OH+LC5H8+C7H8	2.0250e+04
2.000 14404.74	
C5H9OH+CH3C6H4=>OH+LC5H8+C7H8	5.5500e+07
1.000 1067.64	
C5H9OH+RCRESOLO=>OH+LC5H8+CRESOL	4.0500e+04
2.000 11294.92	
C5H9OH+C10H7=>OH+C10H8+LC5H8	5.5500e+07
1.000 1067.64	
C5H9OH+INDENYL=>OH+LC5H8+INDENE	1.9500e+04
2.000 14404.74	
C5H9OH+C10H6CH3=>OH+LC5H8+C10H7CH3	5.5500e+07
1.000 1067.64	
H+C5H9OH=>H2+CH2OH+C4H6	2.2500e+06
2.000 2825.33	
CH3+C5H9OH=>CH4+CH2OH+C4H6	2.2500e+04
2.000 3778.15	
C2H3+C5H9OH=>CH2OH+C2H4+C4H6	5.0850e+04
2.000 2730.26	
C2H5+C5H9OH=>CH2OH+C2H6+C4H6	1.5000e+04
2.000 5405.42	
NC3H7+C5H9OH=>CH2OH+C3H8+C4H6	1.0125e+04
2.000 5405.42	
IC3H7+C5H9OH=>CH2OH+C3H8+C4H6	1.0125e+04
2.000 8487.19	
C3H5-S+C5H9OH=>CH2OH+C3H6+C4H6	2.0250e+04
2.000 3301.28	
C3H5-T+C5H9OH=>CH2OH+C3H6+C4H6	2.0250e+04
2.000 3301.28	
C3H5-A+C5H9OH=>CH2OH+C3H6+C4H6	4.0425e+04
2.000 11294.92	
C4H5+C5H9OH=>CH2OH+2C4H6	2.0250e+04
2.000 3301.28	
C4H71-4+C5H9OH=>CH2OH+C4H8-1+C4H6	1.0125e+04
2.000 5309.47	
C4H71-3+C5H9OH=>CH2OH+C4H8-2+C4H6	2.5500e+04
2.000 12168.47	

IC4H7+C5H9OH=>CH2OH+IC4H8+C4H6	2.0250e+04
2.000 12168.47	
C4H3+C5H9OH=>CH2OH+C4H6+C4H4	3.0675e+04
2.000 3969.14	
C6H5+C5H9OH=>CH2OH+C4H6+C6H6	2.7750e+07
1.000 1067.64	
O+C5H9OH=>OH+CH2OH+C4H6	1.7625e+06
2.000 1404.15	
O2+C5H9OH=>HO2+CH2OH+C4H6	1.2750e+06
2.000 41863.68	
OH+C5H9OH=>H2O+CH2OH+C4H6	1.1250e+09
1.000 -695.37	
HO2+C5H9OH=>H2O2+CH2OH+C4H6	6.0000e+05
2.000 14404.74	
CH3O+C5H9OH=>CH3OH+CH2OH+C4H6	3.2100e+04
2.000 463.75	
CH2OH+C5H9OH=>CH3OH+CH2OH+C4H6	2.1225e+04
2.000 8777.08	
HCO+C5H9OH=>CH2OH+CH2O+C4H6	9.4500e+04
2.000 10810.03	
CH3CO+C5H9OH=>CH2OH+CH3CHO+C4H6	1.0125e+05
2.000 12459.86	
CH2CHO+C5H9OH=>CH2OH+CH3CHO+C4H6	1.7250e+04
2.000 10034.85	
C3H3+C5H9OH=>CH2OH+C3H4-A+C4H6	2.0250e+04
2.000 12459.86	
HCCO+C5H9OH=>CH2OH+CH2CO+C4H6	3.2100e+04
2.000 3969.14	
CH3O2+C5H9OH=>CH3O2H+CH2OH+C4H6	5.7000e+04
2.000 11100.93	
C2H5O2+C5H9OH=>CH2OH+C2H5O2H+C4H6	5.7000e+04
2.000 11100.93	
NC3H7O2+C5H9OH=>CH2OH+C4H6+C3H7OOH	5.7000e+04
2.000 11100.93	
IC3H7O2+C5H9OH=>CH2OH+C4H6+C3H7OOH	5.7000e+04
2.000 11100.93	
HCO3+C5H9OH=>CH2OH+C4H6+HCO3H	2.5500e+04
2.000 5213.56	

CH3CO3+C5H9OH=>CH2OH+CH3CO3H+C4H6	2.5500e+04
2.000 5213.56	
CH3COCH2+C5H9OH=>CH2OH+CH3COCH3+C4H6	1.7250e+04
2.000 6654.87	
C5H9OH+C6H5O=>CH2OH+C4H6+C6H5OH	2.0250e+04
2.000 11003.95	
C5H9OH+C5H7=>CH2OH+C4H6+LC5H8	2.0250e+04
2.000 13431.81	
C5H9OH+C7H7=>CH2OH+C4H6+C7H8	1.0125e+04
2.000 14404.74	
C5H9OH+CH3C6H4=>CH2OH+C4H6+C7H8	2.7750e+07
1.000 1067.64	
C5H9OH+RCRESOLO=>CH2OH+C4H6+CRESOL	2.0250e+04
2.000 11294.92	
C5H9OH+C10H7=>CH2OH+C4H6+C10H8	2.7750e+07
1.000 1067.64	
C5H9OH+INDENYL=>CH2OH+C4H6+INDENE	9.7500e+03
2.000 14404.74	
C5H9OH+C10H6CH3=>CH2OH+C4H6+C10H7CH3	2.7750e+07
1.000 1067.64	
IC5H11OH=>OH+C2H4+IC3H7	1.5000e+16
0.000 93200.00	
IC5H11OH=CH2OH+IC4H9	2.0000e+16
0.000 85000.00	
IC5H11OH=PC2H4OH+IC3H7	3.0000e+16
0.000 85000.00	
IC5H11OH=CH3+CH3CHCH2CH2OH	7.0000e+16
0.000 88000.00	
H+RIPENTO=IC5H11OH	5.0000e+13
0.000 0.00	
H+RIPENTOHA=IC5H11OH	5.0000e+13
0.000 0.00	
H+RIPENTOHB=IC5H11OH	5.0000e+13
0.000 0.00	
H+RIPENTOHC=IC5H11OH	5.0000e+13
0.000 0.00	
H+RIPENTOHD=IC5H11OH	1.0000e+14
0.000 0.00	

IC5H11OH=H2O+B1M3	1.0000e+14
0.000 67600.00	
IC5H11OH=H2+IC4H9CHO	5.0000e+13
0.000 69500.00	
OH+IC5H11OH=H2O+RIPENTO	3.9940e+05
2.000 -474.40	
OH+IC5H11OH=H2O+RIPENTOHA	1.3770e+06
2.000 -2259.80	
OH+IC5H11OH=H2O+RIPENTOHB	7.2000e+05
2.000 -2259.80	
OH+IC5H11OH=H2O+RIPENTOHD	1.9000e+06
2.000 -474.40	
H+IC5H11OH=H2+RIPENTO	5.0000e+06
2.000 6525.60	
H+IC5H11OH=>H2+RIPENTOHA	1.6000e+07
2.000 3950.60	
H+IC5H11OH=>H2+RIPENTOHB	9.0000e+06
2.000 3950.60	
H+IC5H11OH=>H2+RIPENTOHD	2.2400e+07
2.000 6525.60	
HO2+IC5H11OH=>H2O2+RIPENTO	1.0700e+05
2.000 15025.60	
HO2+IC5H11OH=>H2O2+RIPENTOHA	7.4000e+05
2.000 11887.70	
HO2+IC5H11OH=>H2O2+RIPENTOHB	1.9400e+05
2.000 11887.70	
HO2+IC5H11OH=>H2O2+RIPENTOHD	5.2000e+05
2.000 15025.60	
RIPENTO=CH2O+IC4H9	6.0000e+13
0.000 15000.00	
RIPENTO=H+IC4H9CHO	3.0000e+13
0.000 26000.00	
RIPENTOHA=H+IC4H9CHO	3.0000e+13
0.000 37000.00	
RIPENTOHA=CH3CHO+IC3H7	3.0000e+13
0.000 31000.00	
RIPENTOHB=OH+B1M3	4.5000e+13
0.000 33000.00	

RIPENTOHB=CH3+IC4H7OH	4.0000e+13
0.000 32500.00	
CH2OH+IC4H8=RIPENTOHC	8.8000e+03
2.480 6130.00	
H+IC5H9OH=RIPENTOHC	4.2400e+11
0.510 1230.00	
PC2H4OH+C3H6=RIPENTOHD	8.8000e+03
2.480 6130.00	
CH3+IC4H7OH=RIPENTOHD	1.9000e+03
2.670 6850.00	
O2+RIPENTO=HO2+IC4H9CHO	2.0000e+12
0.000 3500.00	
O2+RIPENTOHA=HO2+IC4H9CHO	2.0000e+12
0.000 3500.00	
O2+RIPENTOHB=>HO2+0.33IC5H9OH+0.67IC4H9CHO	2.0000e+12
0.000 3500.00	
O2+RIPENTOHC=HO2+IC5H9OH	2.0000e+12
0.000 3500.00	
O2+RIPENTOHD=HO2+IC5H9OH	2.0000e+12
0.000 3000.00	
RIPENTOHD=RIPENTO	1.6000e+10
0.000 16000.00	
RIPENTOHC=RIPENTO	1.0000e+11
0.000 23600.00	
RIPENTOHD=RIPENTOHA	2.0000e+11
0.000 19600.00	
CH3+IC5H11OH=>CH4+RIPENTOHA	9.0000e+04
2.000 5000.00	
C2H3+IC5H11OH=>C2H4+RIPENTOHA	2.0340e+05
2.000 3900.00	
C2H5+IC5H11OH=>C2H6+RIPENTOHA	6.0000e+04
2.000 6700.00	
NC3H7+IC5H11OH=>C3H8+RIPENTOHA	4.0500e+04
2.000 6700.00	
IC3H7+IC5H11OH=>C3H8+RIPENTOHA	4.0500e+04
2.000 9900.00	
C3H5-S+IC5H11OH=>C3H6+RIPENTOHA	8.1000e+04
2.000 4500.00	

C3H5-T+IC5H11OH=>C3H6+RIPENTOHA	8.1000e+04
2.000 4500.00	
C3H5-A+IC5H11OH=>C3H6+RIPENTOHA	1.6170e+05
2.000 12800.00	
C4H5+IC5H11OH=>C4H6+RIPENTOHA	8.1000e+04
2.000 4500.00	
C4H71-4+IC5H11OH=>C4H8-1+RIPENTOHA	4.0500e+04
2.000 6600.00	
C4H71-3+IC5H11OH=>C4H8-2+RIPENTOHA	1.0200e+05
2.000 13700.00	
IC4H7+IC5H11OH=>IC4H8+RIPENTOHA	8.1000e+04
2.000 13700.00	
C4H3+IC5H11OH=>C4H4+RIPENTOHA	1.2270e+05
2.000 5200.00	
C6H5+IC5H11OH=>C6H6+RIPENTOHA	1.1100e+08
1.000 2000.00	
O+IC5H11OH=>OH+RIPENTOHA	7.0500e+06
2.000 2500.00	
O2+IC5H11OH=>HO2+RIPENTOHA	5.1000e+06
2.000 44000.00	
CH3O+IC5H11OH=>CH3OH+RIPENTOHA	1.2840e+05
2.000 1500.00	
CH2OH+IC5H11OH=>CH3OH+RIPENTOHA	8.4900e+04
2.000 10200.00	
HCO+IC5H11OH=>CH2O+RIPENTOHA	3.7800e+05
2.000 12300.00	
CH3CO+IC5H11OH=>CH3CHO+RIPENTOHA	4.0500e+05
2.000 14000.00	
CH2CHO+IC5H11OH=>CH3CHO+RIPENTOHA	6.9000e+04
2.000 11500.00	
C3H3+IC5H11OH=>C3H4-A+RIPENTOHA	8.1000e+04
2.000 14000.00	
HCCO+IC5H11OH=>CH2CO+RIPENTOHA	1.2840e+05
2.000 5200.00	
CH3O2+IC5H11OH=>CH3O2H+RIPENTOHA	2.2800e+05
2.000 12600.00	
C2H5O2+IC5H11OH=>C2H5O2H+RIPENTOHA	2.2800e+05
2.000 12600.00	



NC3H7O2+IC5H11OH=>C3H7OOH+RIPENTOHA 2.000        12600.00	2.2800e+05
IC3H7O2+IC5H11OH=>C3H7OOH+RIPENTOHA 2.000        12600.00	2.2800e+05
HCO3+IC5H11OH=>HCO3H+RIPENTOHA 2.000        6500.00	1.0200e+05
CH3CO3+IC5H11OH=>CH3CO3H+RIPENTOHA 2.000        6500.00	1.0200e+05
CH3COCH2+IC5H11OH=>CH3COCH3+RIPENTOHA 2.000        8000.00	6.9000e+04
IC5H11OH+C6H5O=>RIPENTOHA+C6H5OH 2.000        12500.00	8.1000e+04
IC5H11OH+C5H7=>RIPENTOHA+LC5H8 2.000        15000.00	8.1000e+04
IC5H11OH+C7H7=>RIPENTOHA+C7H8 2.000        16000.00	4.0500e+04
IC5H11OH+CH3C6H4=>RIPENTOHA+C7H8 1.000        2000.00	1.1100e+08
IC5H11OH+RCRESOLO=>RIPENTOHA+CRESOL 2.000        12800.00	8.1000e+04
IC5H11OH+C10H7=>C10H8+RIPENTOHA 1.000        2000.00	1.1100e+08
IC5H11OH+INDENYL=>RIPENTOHA+INDENE 2.000        16000.00	3.9000e+04
IC5H11OH+C10H6CH3=>RIPENTOHA+C10H7CH3 1.000        2000.00	1.1100e+08
CH3+IC5H11OH=>CH4+RIPENTOHB 2.000        3778.15	3.0000e+04
C2H3+IC5H11OH=>C2H4+RIPENTOHB 2.000        2730.26	6.7800e+04
C2H5+IC5H11OH=>C2H6+RIPENTOHB 2.000        5405.42	2.0000e+04
NC3H7+IC5H11OH=>C3H8+RIPENTOHB 2.000        5405.42	1.3500e+04
IC3H7+IC5H11OH=>C3H8+RIPENTOHB 2.000        8487.19	1.3500e+04
C3H5-S+IC5H11OH=>C3H6+RIPENTOHB 2.000        3301.28	2.7000e+04

C3H5-T+IC5H11OH=>C3H6+RIPENTOHB	2.7000e+04
2.000 3301.28	
C3H5-A+IC5H11OH=>C3H6+RIPENTOHB	5.3900e+04
2.000 11294.92	
C4H5+IC5H11OH=>C4H6+RIPENTOHB	2.7000e+04
2.000 3301.28	
C4H71-4+IC5H11OH=>C4H8-1+RIPENTOHB	1.3500e+04
2.000 5309.47	
C4H71-3+IC5H11OH=>C4H8-2+RIPENTOHB	3.4000e+04
2.000 12168.47	
IC4H7+IC5H11OH=>IC4H8+RIPENTOHB	2.7000e+04
2.000 12168.47	
C4H3+IC5H11OH=>C4H4+RIPENTOHB	4.0900e+04
2.000 3969.14	
C6H5+IC5H11OH=>C6H6+RIPENTOHB	3.7000e+07
1.000 1067.64	
O+IC5H11OH=>OH+RIPENTOHB	2.3500e+06
2.000 1404.15	
O2+IC5H11OH=>HO2+RIPENTOHB	1.7000e+06
2.000 41863.68	
CH3O+IC5H11OH=>CH3OH+RIPENTOHB	4.2800e+04
2.000 463.75	
CH2OH+IC5H11OH=>CH3OH+RIPENTOHB	2.8300e+04
2.000 8777.08	
HCO+IC5H11OH=>CH2O+RIPENTOHB	1.2600e+05
2.000 10810.03	
CH3CO+IC5H11OH=>CH3CHO+RIPENTOHB	1.3500e+05
2.000 12459.86	
CH2CHO+IC5H11OH=>CH3CHO+RIPENTOHB	2.3000e+04
2.000 10034.85	
C3H3+IC5H11OH=>C3H4-A+RIPENTOHB	2.7000e+04
2.000 12459.86	
HCCO+IC5H11OH=>CH2CO+RIPENTOHB	4.2800e+04
2.000 3969.14	
CH3O2+IC5H11OH=>CH3O2H+RIPENTOHB	7.6000e+04
2.000 11100.93	
C2H5O2+IC5H11OH=>C2H5O2H+RIPENTOHB	7.6000e+04
2.000 11100.93	

NC3H7O2+IC5H11OH=>C3H7OOH+RIPENTOHB	7.6000e+04
2.000 11100.93	
IC3H7O2+IC5H11OH=>C3H7OOH+RIPENTOHB	7.6000e+04
2.000 11100.93	
HCO3+IC5H11OH=>HCO3H+RIPENTOHB	3.4000e+04
2.000 5213.56	
CH3CO3+IC5H11OH=>CH3CO3H+RIPENTOHB	3.4000e+04
2.000 5213.56	
CH3COCH2+IC5H11OH=>CH3COCH3+RIPENTOHB	2.3000e+04
2.000 6654.87	
IC5H11OH+C6H5O=>RIPENTOHB+C6H5OH	2.7000e+04
2.000 11003.95	
IC5H11OH+C5H7=>RIPENTOHB+LC5H8	2.7000e+04
2.000 13431.81	
IC5H11OH+C7H7=>RIPENTOHB+C7H8	1.3500e+04
2.000 14404.74	
IC5H11OH+CH3C6H4=>RIPENTOHB+C7H8	3.7000e+07
1.000 1067.64	
IC5H11OH+RCRESOLO=>RIPENTOHB+CRESOL	2.7000e+04
2.000 11294.92	
IC5H11OH+C10H7=>C10H8+RIPENTOHB	3.7000e+07
1.000 1067.64	
IC5H11OH+INDENYL=>RIPENTOHB+INDENE	1.3000e+04
2.000 14404.74	
IC5H11OH+C10H6CH3=>RIPENTOHB+C10H7CH3	3.7000e+07
1.000 1067.64	
H+IC5H11OH=>H2+RIPENTOHC	6.0000e+06
2.000 4000.00	
CH3+IC5H11OH=>CH4+RIPENTOHC	6.0000e+04
2.000 5000.00	
C2H3+IC5H11OH=>C2H4+RIPENTOHC	1.3560e+05
2.000 3900.00	
C2H5+IC5H11OH=>C2H6+RIPENTOHC	4.0000e+04
2.000 6700.00	
NC3H7+IC5H11OH=>C3H8+RIPENTOHC	2.7000e+04
2.000 6700.00	
IC3H7+IC5H11OH=>C3H8+RIPENTOHC	2.7000e+04
2.000 9900.00	

C3H5-S+IC5H11OH=>C3H6+RIPENTOHC 2.000        4500.00	5.4000e+04
C3H5-T+IC5H11OH=>C3H6+RIPENTOHC 2.000        4500.00	5.4000e+04
C3H5-A+IC5H11OH=>C3H6+RIPENTOHC 2.000        12800.00	1.0780e+05
C4H5+IC5H11OH=>C4H6+RIPENTOHC 2.000        4500.00	5.4000e+04
C4H71-4+IC5H11OH=>C4H8-1+RIPENTOHC 2.000        6600.00	2.7000e+04
C4H71-3+IC5H11OH=>C4H8-2+RIPENTOHC 2.000        13700.00	6.8000e+04
IC4H7+IC5H11OH=>IC4H8+RIPENTOHC 2.000        13700.00	5.4000e+04
C4H3+IC5H11OH=>C4H4+RIPENTOHC 2.000        5200.00	8.1800e+04
C6H5+IC5H11OH=>C6H6+RIPENTOHC 1.000        2000.00	7.4000e+07
O+IC5H11OH=>OH+RIPENTOHC 2.000        2500.00	4.7000e+06
O2+IC5H11OH=>HO2+RIPENTOHC 2.000        44000.00	3.4000e+06
OH+IC5H11OH=>H2O+RIPENTOHC 1.000        50.00	3.0000e+09
HO2+IC5H11OH=>H2O2+RIPENTOHC 2.000        16000.00	1.6000e+06
CH3O+IC5H11OH=>CH3OH+RIPENTOHC 2.000        1500.00	8.5600e+04
CH2OH+IC5H11OH=>CH3OH+RIPENTOHC 2.000        10200.00	5.6600e+04
HCO+IC5H11OH=>CH2O+RIPENTOHC 2.000        12300.00	2.5200e+05
CH3CO+IC5H11OH=>CH3CHO+RIPENTOHC 2.000        14000.00	2.7000e+05
CH2CHO+IC5H11OH=>CH3CHO+RIPENTOHC 2.000        11500.00	4.6000e+04
C3H3+IC5H11OH=>C3H4-A+RIPENTOHC 2.000        14000.00	5.4000e+04

HCCO+IC5H11OH=>CH2CO+RIPENTOHC	8.5600e+04
2.000 5200.00	
CH3O2+IC5H11OH=>CH3O2H+RIPENTOHC	1.5200e+05
2.000 12600.00	
C2H5O2+IC5H11OH=>C2H5O2H+RIPENTOHC	1.5200e+05
2.000 12600.00	
NC3H7O2+IC5H11OH=>C3H7OOH+RIPENTOHC	1.5200e+05
2.000 12600.00	
IC3H7O2+IC5H11OH=>C3H7OOH+RIPENTOHC	1.5200e+05
2.000 12600.00	
HCO3+IC5H11OH=>HCO3H+RIPENTOHC	6.8000e+04
2.000 6500.00	
CH3CO3+IC5H11OH=>CH3CO3H+RIPENTOHC	6.8000e+04
2.000 6500.00	
CH3COCH2+IC5H11OH=>CH3COCH3+RIPENTOHC	4.6000e+04
2.000 8000.00	
IC5H11OH+C6H5O=>RIPENTOHC+C6H5OH	5.4000e+04
2.000 12500.00	
IC5H11OH+C5H7=>RIPENTOHC+LC5H8	5.4000e+04
2.000 15000.00	
IC5H11OH+C7H7=>RIPENTOHC+C7H8	2.7000e+04
2.000 16000.00	
IC5H11OH+CH3C6H4=>RIPENTOHC+C7H8	7.4000e+07
1.000 2000.00	
IC5H11OH+RCRESOLO=>RIPENTOHC+CRESOL	5.4000e+04
2.000 12800.00	
IC5H11OH+C10H7=>C10H8+RIPENTOHC	7.4000e+07
1.000 2000.00	
IC5H11OH+INDENYL=>RIPENTOHC+INDENE	2.6000e+04
2.000 16000.00	
IC5H11OH+C10H6CH3=>RIPENTOHC+C10H7CH3	7.4000e+07
1.000 2000.00	
CH3+IC5H11OH=>CH4+RIPENTOHD	1.8000e+05
2.000 7443.70	
C2H3+IC5H11OH=>C2H4+RIPENTOHD	4.0680e+05
2.000 6239.48	
C2H5+IC5H11OH=>C2H6+RIPENTOHD	1.2000e+05
2.000 9289.16	

NC3H7+IC5H11OH=>C3H8+RIPENTOHD	8.1000e+04
2.000 9289.16	
IC3H7+IC5H11OH=>C3H8+RIPENTOHD	8.1000e+04
2.000 12725.62	
C3H5-S+IC5H11OH=>C3H6+RIPENTOHD	1.6200e+05
2.000 6897.45	
C3H5-T+IC5H11OH=>C3H6+RIPENTOHD	1.6200e+05
2.000 6897.45	
C3H5-A+IC5H11OH=>C3H6+RIPENTOHD	3.2340e+05
2.000 15810.16	
C4H5+IC5H11OH=>C4H6+RIPENTOHD	1.6200e+05
2.000 6897.45	
C4H71-4+IC5H11OH=>C4H8-1+RIPENTOHD	8.1000e+04
2.000 9181.05	
C4H71-3+IC5H11OH=>C4H8-2+RIPENTOHD	2.0400e+05
2.000 16763.05	
IC4H7+IC5H11OH=>IC4H8+RIPENTOHD	1.6200e+05
2.000 16763.05	
C4H3+IC5H11OH=>C4H4+RIPENTOHD	2.4540e+05
2.000 7661.72	
C6H5+IC5H11OH=>C6H6+RIPENTOHD	2.2200e+08
1.000 3864.72	
O+IC5H11OH=>OH+RIPENTOHD	1.4100e+07
2.000 4691.70	
O2+IC5H11OH=>HO2+RIPENTOHD	1.0200e+07
2.000 48272.65	
CH3O+IC5H11OH=>CH3OH+RIPENTOHD	2.5680e+05
2.000 3572.50	
CH2OH+IC5H11OH=>CH3OH+RIPENTOHD	1.6980e+05
2.000 13045.84	
HCO+IC5H11OH=>CH2O+RIPENTOHD	7.5600e+05
2.000 15279.95	
CH3CO+IC5H11OH=>CH3CHO+RIPENTOHD	8.1000e+05
2.000 17080.28	
CH2CHO+IC5H11OH=>CH3CHO+RIPENTOHD	1.3800e+05
2.000 14430.30	
C3H3+IC5H11OH=>C3H4-A+RIPENTOHD	1.6200e+05
2.000 17080.28	

HCCO+IC5H11OH=>CH2CO+RIPENTOHD	2.5680e+05
2.000 7661.72	
CH3O2+IC5H11OH=>CH3O2H+RIPENTOHD	4.5600e+05
2.000 15598.15	
C2H5O2+IC5H11OH=>C2H5O2H+RIPENTOHD	4.5600e+05
2.000 15598.15	
NC3H7O2+IC5H11OH=>C3H7OOH+RIPENTOHD	4.5600e+05
2.000 15598.15	
IC3H7O2+IC5H11OH=>C3H7OOH+RIPENTOHD	4.5600e+05
2.000 15598.15	
HCO3+IC5H11OH=>HCO3H+RIPENTOHD	2.0400e+05
2.000 9072.89	
CH3CO3+IC5H11OH=>CH3CO3H+RIPENTOHD	2.0400e+05
2.000 9072.89	
CH3COCH2+IC5H11OH=>CH3COCH3+RIPENTOHD	1.3800e+05
2.000 10690.26	
IC5H11OH+C6H5O=>RIPENTOHD+C6H5OH	1.6200e+05
2.000 15492.11	
IC5H11OH+C5H7=>RIPENTOHD+LC5H8	1.6200e+05
2.000 18136.38	
IC5H11OH+C7H7=>RIPENTOHD+C7H8	8.1000e+04
2.000 19190.53	
IC5H11OH+CH3C6H4=>RIPENTOHD+C7H8	2.2200e+08
1.000 3864.72	
IC5H11OH+RCRESOLO=>RIPENTOHD+CRESOL	1.6200e+05
2.000 15810.16	
IC5H11OH+C10H7=>C10H8+RIPENTOHD	2.2200e+08
1.000 3864.72	
IC5H11OH+INDENYL=>RIPENTOHD+INDENE	7.8000e+04
2.000 19190.53	
IC5H11OH+C10H6CH3=>RIPENTOHD+C10H7CH3	2.2200e+08
1.000 3864.72	
CH3+IC5H11OH=>CH4+RIPENTO	3.0000e+04
2.000 7443.70	
C2H3+IC5H11OH=>C2H4+RIPENTO	6.7800e+04
2.000 6239.48	
C2H5+IC5H11OH=>C2H6+RIPENTO	2.0000e+04
2.000 9289.16	

NC3H7+IC5H11OH=>C3H8+RIPENTO	1.3500e+04
2.000 9289.16	
IC3H7+IC5H11OH=>C3H8+RIPENTO	1.3500e+04
2.000 12725.62	
C3H5-S+IC5H11OH=>C3H6+RIPENTO	2.7000e+04
2.000 6897.45	
C3H5-T+IC5H11OH=>C3H6+RIPENTO	2.7000e+04
2.000 6897.45	
C3H5-A+IC5H11OH=>C3H6+RIPENTO	5.3900e+04
2.000 15810.16	
C4H5+IC5H11OH=>C4H6+RIPENTO	2.7000e+04
2.000 6897.45	
C4H71-4+IC5H11OH=>C4H8-1+RIPENTO	1.3500e+04
2.000 9181.05	
C4H71-3+IC5H11OH=>C4H8-2+RIPENTO	3.4000e+04
2.000 16763.05	
IC4H7+IC5H11OH=>IC4H8+RIPENTO	2.7000e+04
2.000 16763.05	
C4H3+IC5H11OH=>C4H4+RIPENTO	4.0900e+04
2.000 7661.72	
C6H5+IC5H11OH=>C6H6+RIPENTO	3.7000e+07
1.000 3864.72	
O+IC5H11OH=>OH+RIPENTO	2.3500e+06
2.000 4691.70	
O2+IC5H11OH=>HO2+RIPENTO	1.7000e+06
2.000 48272.65	
CH3O+IC5H11OH=>CH3OH+RIPENTO	4.2800e+04
2.000 3572.50	
CH2OH+IC5H11OH=>CH3OH+RIPENTO	2.8300e+04
2.000 13045.84	
HCO+IC5H11OH=>CH2O+RIPENTO	1.2600e+05
2.000 15279.95	
CH3CO+IC5H11OH=>CH3CHO+RIPENTO	1.3500e+05
2.000 17080.28	
CH2CHO+IC5H11OH=>CH3CHO+RIPENTO	2.3000e+04
2.000 14430.30	
C3H3+IC5H11OH=>C3H4-A+RIPENTO	2.7000e+04
2.000 17080.28	



HCCO+IC5H11OH=>CH2CO+RIPENTO	4.2800e+04	
2.000 7661.72		
CH3O2+IC5H11OH=>CH3O2H+RIPENTO	7.6000e+04	
2.000 15598.15		
C2H5O2+IC5H11OH=>C2H5O2H+RIPENTO	7.6000e+04	
2.000 15598.15		
NC3H7O2+IC5H11OH=>C3H7OOH+RIPENTO	7.6000e+04	
2.000 15598.15		
IC3H7O2+IC5H11OH=>C3H7OOH+RIPENTO	7.6000e+04	
2.000 15598.15		
HCO3+IC5H11OH=>HCO3H+RIPENTO	3.4000e+04	
2.000 9072.89		
CH3CO3+IC5H11OH=>CH3CO3H+RIPENTO	3.4000e+04	
2.000 9072.89		
CH3COCH2+IC5H11OH=>CH3COCH3+RIPENTO	2.3000e+04	
2.000 10690.26		
IC5H11OH+C6H5O=>RIPENTO+C6H5OH	2.7000e+04	
2.000 15492.11		
IC5H11OH+C5H7=>RIPENTO+LC5H8	2.7000e+04	
2.000 18136.38		
IC5H11OH+C7H7=>RIPENTO+C7H8	1.3500e+04	
2.000 19190.53		
IC5H11OH+CH3C6H4=>RIPENTO+C7H8	3.7000e+07	
1.000 3864.72		
IC5H11OH+RCRESOLO=>RIPENTO+CRESOL	2.7000e+04	
2.000 15810.16		
IC5H11OH+C10H7=>C10H8+RIPENTO	3.7000e+07	
1.000 3864.72		
IC5H11OH+INDENYL=>RIPENTO+INDENE	1.3000e+04	
2.000 19190.53		
IC5H11OH+C10H6CH3=>RIPENTO+C10H7CH3	3.7000e+07	
1.000 3864.72		
IC4H9CHO=HCO+IC4H9	1.2000e+26	-
2.950 86380.00		
IC4H9CHO=CH2CHO+IC3H7	1.7000e+27	-
3.310 84700.00		
IC5H9OH=>H+OH+LC5H8	1.0000e+16	
0.000 70000.00		

IC5H9OH=CH2OH+IC4H7	2.5000e+16
0.000 74500.00	
IC5H9OH=IC4H9CHO	8.6000e+11
0.318 55900.00	
HO2+IC5H9OH=HO2+IC4H9CHO	1.5000e+05
1.670 6810.00	
H+IC4H9CHO=>H2+CO+IC4H9	2.1600e+07
2.000 2573.61	
CH3+IC4H9CHO=>CO+CH4+IC4H9	2.1600e+05
2.000 3516.32	
C2H3+IC4H9CHO=>CO+C2H4+IC4H9	4.8816e+05
2.000 2479.60	
C2H5+IC4H9CHO=>CO+C2H6+IC4H9	1.4400e+05
2.000 5128.01	
NC3H7+IC4H9CHO=>CO+C3H8+IC4H9	9.7200e+04
2.000 5128.01	
IC3H7+IC4H9CHO=>CO+C3H8+IC4H9	9.7200e+04
2.000 8184.45	
C3H5-S+IC4H9CHO=>CO+C3H6+IC4H9	1.9440e+05
2.000 3044.41	
C3H5-T+IC4H9CHO=>CO+C3H6+IC4H9	1.9440e+05
2.000 3044.41	
C3H5-A+IC4H9CHO=>CO+C3H6+IC4H9	3.8808e+05
2.000 10972.41	
C4H5+IC4H9CHO=>CO+IC4H9+C4H6	1.9440e+05
2.000 3044.41	
C4H71-4+IC4H9CHO=>CO+IC4H9+C4H8-1	9.7200e+04
2.000 5032.93	
C4H71-3+IC4H9CHO=>CO+IC4H9+C4H8-2	2.4480e+05
2.000 11840.29	
IC4H7+IC4H9CHO=>CO+IC4H9+IC4H8	1.9440e+05
2.000 11840.29	
C4H3+IC4H9CHO=>CO+IC4H9+C4H4	2.9448e+05
2.000 3705.38	
C6H5+IC4H9CHO=>CO+IC4H9+C6H6	2.6640e+08
1.000 867.85	
O+IC4H9CHO=>OH+CO+IC4H9	1.6920e+07
2.000 1169.32	

O2+IC4H9CHO=>HO2+CO+IC4H9	1.2240e+07
2.000 41405.89	
OH+IC4H9CHO=>H2O+CO+IC4H9	1.0800e+10
1.000 -855.10	
HO2+IC4H9CHO=>H2O2+CO+IC4H9	5.7600e+06
2.000 14062.89	
CH3O+IC4H9CHO=>CO+CH3OH+IC4H9	3.0816e+05
2.000 241.70	
CH2OH+IC4H9CHO=>CO+CH3OH+IC4H9	2.0376e+05
2.000 8472.17	
HCO+IC4H9CHO=>CO+CH2O+IC4H9	9.0720e+05
2.000 10490.75	
CH3CO+IC4H9CHO=>CO+CH3CHO+IC4H9	9.7200e+05
2.000 12129.83	
CH2CHO+IC4H9CHO=>CO+CH3CHO+IC4H9	1.6560e+05
2.000 9720.89	
C3H3+IC4H9CHO=>CO+C3H4-A+IC4H9	1.9440e+05
2.000 12129.83	
HCCO+IC4H9CHO=>CO+CH2CO+IC4H9	3.0816e+05
2.000 3705.38	
CH3O2+IC4H9CHO=>CO+CH3O2H+IC4H9	5.4720e+05
2.000 10779.70	
C2H5O2+IC4H9CHO=>CO+C2H5O2H+IC4H9	5.4720e+05
2.000 10779.70	
NC3H7O2+IC4H9CHO=>CO+IC4H9+C3H7OOH	5.4720e+05
2.000 10779.70	
IC3H7O2+IC4H9CHO=>CO+IC4H9+C3H7OOH	5.4720e+05
2.000 10779.70	
HCO3+IC4H9CHO=>CO+IC4H9+HCO3H	2.4480e+05
2.000 4937.89	
CH3CO3+IC4H9CHO=>CO+CH3CO3H+IC4H9	2.4480e+05
2.000 4937.89	
CH3COCH2+IC4H9CHO=>CO+CH3COCH3+IC4H9	1.6560e+05
2.000 6366.63	
IC4H9CHO+C6H5O=>CO+IC4H9+C6H5OH	1.9440e+05
2.000 10683.36	
IC4H9CHO+C5H7=>CO+IC4H9+LC5H8	1.9440e+05
2.000 13095.77	

IC4H9CHO+C7H7=>CO+IC4H9+C7H8	9.7200e+04
2.000 14062.89	
IC4H9CHO+CH3C6H4=>CO+IC4H9+C7H8	2.6640e+08
1.000 867.85	
IC4H9CHO+RCRESOLO=>CO+IC4H9+CRESOL	1.9440e+05
2.000 10972.41	
IC4H9CHO+C10H7=>CO+IC4H9+C10H8	2.6640e+08
1.000 867.85	
IC4H9CHO+INDENYL=>CO+IC4H9+INDENE	9.3600e+04
2.000 14062.89	
IC4H9CHO+C10H6CH3=>CO+IC4H9+C10H7CH3	2.6640e+08
1.000 867.85	
H+IC4H9CHO=>H2+HCO+IC4H8	3.0000e+06
2.000 2825.33	
CH3+IC4H9CHO=>CH4+HCO+IC4H8	3.0000e+04
2.000 3778.15	
C2H3+IC4H9CHO=>HCO+C2H4+IC4H8	6.7800e+04
2.000 2730.26	
C2H5+IC4H9CHO=>HCO+C2H6+IC4H8	2.0000e+04
2.000 5405.42	
NC3H7+IC4H9CHO=>HCO+C3H8+IC4H8	1.3500e+04
2.000 5405.42	
IC3H7+IC4H9CHO=>HCO+C3H8+IC4H8	1.3500e+04
2.000 8487.19	
C3H5-S+IC4H9CHO=>HCO+C3H6+IC4H8	2.7000e+04
2.000 3301.28	
C3H5-T+IC4H9CHO=>HCO+C3H6+IC4H8	2.7000e+04
2.000 3301.28	
C3H5-A+IC4H9CHO=>HCO+C3H6+IC4H8	5.3900e+04
2.000 11294.92	
C4H5+IC4H9CHO=>HCO+IC4H8+C4H6	2.7000e+04
2.000 3301.28	
C4H71-4+IC4H9CHO=>HCO+IC4H8+C4H8-1	1.3500e+04
2.000 5309.47	
C4H71-3+IC4H9CHO=>HCO+IC4H8+C4H8-2	3.4000e+04
2.000 12168.47	
IC4H7+IC4H9CHO=>HCO+2IC4H8	2.7000e+04
2.000 12168.47	

C4H3+IC4H9CHO=>HCO+IC4H8+C4H4	4.0900e+04
2.000        3969.14	
C6H5+IC4H9CHO=>HCO+IC4H8+C6H6	3.7000e+07
1.000        1067.64	
O+IC4H9CHO=>OH+HCO+IC4H8	2.3500e+06
2.000        1404.15	
O2+IC4H9CHO=>HO2+HCO+IC4H8	1.7000e+06
2.000        41863.68	
OH+IC4H9CHO=>H2O+HCO+IC4H8	1.5000e+09
1.000        -695.37	
HO2+IC4H9CHO=>H2O2+HCO+IC4H8	8.0000e+05
2.000        14404.74	
CH3O+IC4H9CHO=>CH3OH+HCO+IC4H8	4.2800e+04
2.000        463.75	
CH2OH+IC4H9CHO=>CH3OH+HCO+IC4H8	2.8300e+04
2.000        8777.08	
HCO+IC4H9CHO=>CH2O+HCO+IC4H8	1.2600e+05
2.000        10810.03	
CH3CO+IC4H9CHO=>HCO+CH3CHO+IC4H8	1.3500e+05
2.000        12459.86	
CH2CHO+IC4H9CHO=>HCO+CH3CHO+IC4H8	2.3000e+04
2.000        10034.85	
C3H3+IC4H9CHO=>HCO+C3H4-A+IC4H8	2.7000e+04
2.000        12459.86	
HCCO+IC4H9CHO=>HCO+CH2CO+IC4H8	4.2800e+04
2.000        3969.14	
CH3O2+IC4H9CHO=>CH3O2H+HCO+IC4H8	7.6000e+04
2.000        11100.93	
C2H5O2+IC4H9CHO=>HCO+C2H5O2H+IC4H8	7.6000e+04
2.000        11100.93	
NC3H7O2+IC4H9CHO=>HCO+IC4H8+C3H7OOH	7.6000e+04
2.000        11100.93	
IC3H7O2+IC4H9CHO=>HCO+IC4H8+C3H7OOH	7.6000e+04
2.000        11100.93	
HCO3+IC4H9CHO=>HCO+IC4H8+HCO3H	3.4000e+04
2.000        5213.56	
CH3CO3+IC4H9CHO=>HCO+CH3CO3H+IC4H8	3.4000e+04
2.000        5213.56	

CH3COCH2+IC4H9CHO=>HCO+CH3COCH3+IC4H8 2.000            6654.87	2.3000e+04
IC4H9CHO+C6H5O=>HCO+IC4H8+C6H5OH 2.000            11003.95	2.7000e+04
IC4H9CHO+C5H7=>HCO+IC4H8+LC5H8 2.000            13431.81	2.7000e+04
IC4H9CHO+C7H7=>HCO+IC4H8+C7H8 2.000            14404.74	1.3500e+04
IC4H9CHO+CH3C6H4=>HCO+IC4H8+C7H8 1.000            1067.64	3.7000e+07
IC4H9CHO+RCRESOLO=>HCO+IC4H8+CRESOL 2.000            11294.92	2.7000e+04
IC4H9CHO+C10H7=>HCO+IC4H8+C10H8 1.000            1067.64	3.7000e+07
IC4H9CHO+INDENYL=>HCO+IC4H8+INDENE 2.000            14404.74	1.3000e+04
IC4H9CHO+C10H6CH3=>HCO+IC4H8+C10H7CH3 1.000            1067.64	3.7000e+07
H+IC4H9CHO=>H2+CH2CHO+C3H6 2.000            6349.34	1.8000e+07
CH3+IC4H9CHO=>CH4+CH2CHO+C3H6 2.000            7443.70	1.8000e+05
C2H3+IC4H9CHO=>C2H4+CH2CHO+C3H6 2.000            6239.48	4.0680e+05
C2H5+IC4H9CHO=>C2H6+CH2CHO+C3H6 2.000            9289.16	1.2000e+05
NC3H7+IC4H9CHO=>CH2CHO+C3H8+C3H6 2.000            9289.16	8.1000e+04
IC3H7+IC4H9CHO=>CH2CHO+C3H8+C3H6 2.000            12725.62	8.1000e+04
C3H5-S+IC4H9CHO=>CH2CHO+2C3H6 2.000            6897.45	1.6200e+05
C3H5-T+IC4H9CHO=>CH2CHO+2C3H6 2.000            6897.45	1.6200e+05
C3H5-A+IC4H9CHO=>CH2CHO+2C3H6 2.000            15810.16	3.2340e+05
C4H5+IC4H9CHO=>CH2CHO+C3H6+C4H6 2.000            6897.45	1.6200e+05

C4H71-4+IC4H9CHO=>CH2CHO+C3H6+C4H8-1 2.000            9181.05	8.1000e+04
C4H71-3+IC4H9CHO=>CH2CHO+C3H6+C4H8-2 2.000            16763.05	2.0400e+05
IC4H7+IC4H9CHO=>CH2CHO+C3H6+IC4H8 2.000            16763.05	1.6200e+05
C4H3+IC4H9CHO=>CH2CHO+C3H6+C4H4 2.000            7661.72	2.4540e+05
C6H5+IC4H9CHO=>CH2CHO+C3H6+C6H6 1.000            3864.72	2.2200e+08
O+IC4H9CHO=>OH+CH2CHO+C3H6 2.000            4691.70	1.4100e+07
O2+IC4H9CHO=>HO2+CH2CHO+C3H6 2.000            48272.65	1.0200e+07
OH+IC4H9CHO=>H2O+CH2CHO+C3H6 1.000            1540.75	9.0000e+09
HO2+IC4H9CHO=>H2O2+CH2CHO+C3H6 2.000            19190.53	4.8000e+06
CH3O+IC4H9CHO=>CH3OH+CH2CHO+C3H6 2.000            3572.50	2.5680e+05
CH2OH+IC4H9CHO=>CH3OH+CH2CHO+C3H6 2.000            13045.84	1.6980e+05
HCO+IC4H9CHO=>CH2O+CH2CHO+C3H6 2.000            15279.95	7.5600e+05
CH3CO+IC4H9CHO=>CH3CHO+CH2CHO+C3H6 2.000            17080.28	8.1000e+05
CH2CHO+IC4H9CHO=>CH3CHO+CH2CHO+C3H6 2.000            14430.30	1.3800e+05
C3H3+IC4H9CHO=>CH2CHO+C3H6+C3H4-A 2.000            17080.28	1.6200e+05
HCCO+IC4H9CHO=>CH2CHO+CH2CO+C3H6 2.000            7661.72	2.5680e+05
CH3O2+IC4H9CHO=>CH3O2H+CH2CHO+C3H6 2.000            15598.15	4.5600e+05
C2H5O2+IC4H9CHO=>C2H5O2H+CH2CHO+C3H6 2.000            15598.15	4.5600e+05
NC3H7O2+IC4H9CHO=>CH2CHO+C3H6+C3H7OOH 2.000            15598.15	4.5600e+05

IC3H7O2+IC4H9CHO=>CH2CHO+C3H6+C3H7OOH 2.000        15598.15	4.5600e+05
HCO3+IC4H9CHO=>CH2CHO+C3H6+HCO3H 2.000        9072.89	2.0400e+05
CH3CO3+IC4H9CHO=>CH2CHO+CH3CO3H+C3H6 2.000        9072.89	2.0400e+05
CH3COCH2+IC4H9CHO=>CH2CHO+C3H6+CH3COCH3 2.000        10690.26	1.3800e+05
IC4H9CHO+C6H5O=>CH2CHO+C3H6+C6H5OH 2.000        15492.11	1.6200e+05
IC4H9CHO+C5H7=>CH2CHO+C3H6+LC5H8 2.000        18136.38	1.6200e+05
IC4H9CHO+C7H7=>CH2CHO+C3H6+C7H8 2.000        19190.53	8.1000e+04
IC4H9CHO+CH3C6H4=>CH2CHO+C3H6+C7H8 1.000        3864.72	2.2200e+08
IC4H9CHO+RCRESOLO=>CH2CHO+C3H6+CRESOL 2.000        15810.16	1.6200e+05
IC4H9CHO+C10H7=>CH2CHO+C3H6+C10H8 1.000        3864.72	2.2200e+08
IC4H9CHO+INDENYL=>CH2CHO+C3H6+INDENE 2.000        19190.53	7.8000e+04
IC4H9CHO+C10H6CH3=>CH2CHO+C3H6+C10H7CH3 1.000        3864.72	2.2200e+08
H+IC5H9OH=>H2+OH+LC5H8 2.000        4000.00	1.8000e+07
CH3+IC5H9OH=>OH+CH4+LC5H8 2.000        5000.00	1.8000e+05
C2H3+IC5H9OH=>OH+C2H4+LC5H8 2.000        3900.00	4.0680e+05
C2H5+IC5H9OH=>OH+C2H6+LC5H8 2.000        6700.00	1.2000e+05
NC3H7+IC5H9OH=>OH+C3H8+LC5H8 2.000        6700.00	8.1000e+04
IC3H7+IC5H9OH=>OH+C3H8+LC5H8 2.000        9900.00	8.1000e+04
C3H5-S+IC5H9OH=>OH+C3H6+LC5H8 2.000        4500.00	1.6200e+05



C3H5-T+IC5H9OH=>OH+C3H6+LC5H8 2.000 4500.00	1.6200e+05
C3H5-A+IC5H9OH=>OH+C3H6+LC5H8 2.000 12800.00	3.2340e+05
C4H5+IC5H9OH=>OH+C4H6+LC5H8 2.000 4500.00	1.6200e+05
C4H71-4+IC5H9OH=>OH+C4H8-1+LC5H8 2.000 6600.00	8.1000e+04
C4H71-3+IC5H9OH=>OH+C4H8-2+LC5H8 2.000 13700.00	2.0400e+05
IC4H7+IC5H9OH=>OH+IC4H8+LC5H8 2.000 13700.00	1.6200e+05
C4H3+IC5H9OH=>OH+C4H4+LC5H8 2.000 5200.00	2.4540e+05
C6H5+IC5H9OH=>OH+C6H6+LC5H8 1.000 2000.00	2.2200e+08
O+IC5H9OH=>2OH+LC5H8 2.000 2500.00	1.4100e+07
O2+IC5H9OH=>OH+HO2+LC5H8 2.000 44000.00	1.0200e+07
OH+IC5H9OH=>H2O+OH+LC5H8 1.000 50.00	9.0000e+09
HO2+IC5H9OH=>OH+H2O2+LC5H8 2.000 16000.00	4.8000e+06
CH3O+IC5H9OH=>OH+CH3OH+LC5H8 2.000 1500.00	2.5680e+05
CH2OH+IC5H9OH=>OH+CH3OH+LC5H8 2.000 10200.00	1.6980e+05
HCO+IC5H9OH=>OH+CH2O+LC5H8 2.000 12300.00	7.5600e+05
CH3CO+IC5H9OH=>OH+CH3CHO+LC5H8 2.000 14000.00	8.1000e+05
CH2CHO+IC5H9OH=>OH+CH3CHO+LC5H8 2.000 11500.00	1.3800e+05
C3H3+IC5H9OH=>OH+C3H4-A+LC5H8 2.000 14000.00	1.6200e+05
HCCO+IC5H9OH=>OH+CH2CO+LC5H8 2.000 5200.00	2.5680e+05

CH3O2+IC5H9OH=>OH+CH3O2H+LC5H8 2.000 12600.00	4.5600e+05
C2H5O2+IC5H9OH=>OH+C2H5O2H+LC5H8 2.000 12600.00	4.5600e+05
NC3H7O2+IC5H9OH=>OH+C3H7OOH+LC5H8 2.000 12600.00	4.5600e+05
IC3H7O2+IC5H9OH=>OH+C3H7OOH+LC5H8 2.000 12600.00	4.5600e+05
HCO3+IC5H9OH=>OH+HCO3H+LC5H8 2.000 6500.00	2.0400e+05
CH3CO3+IC5H9OH=>OH+CH3CO3H+LC5H8 2.000 6500.00	2.0400e+05
CH3COCH2+IC5H9OH=>OH+CH3COCH3+LC5H8 2.000 8000.00	1.3800e+05
IC5H9OH+C6H5O=>OH+LC5H8+C6H5OH 2.000 12500.00	1.6200e+05
IC5H9OH+C5H7=>OH+2LC5H8 2.000 15000.00	1.6200e+05
IC5H9OH+C7H7=>OH+LC5H8+C7H8 2.000 16000.00	8.1000e+04
IC5H9OH+CH3C6H4=>OH+LC5H8+C7H8 1.000 2000.00	2.2200e+08
IC5H9OH+RCRESOLO=>OH+LC5H8+CRESOL 2.000 12800.00	1.6200e+05
IC5H9OH+C10H7=>OH+C10H8+LC5H8 1.000 2000.00	2.2200e+08
IC5H9OH+INDENYL=>OH+LC5H8+INDENE 2.000 16000.00	7.8000e+04
IC5H9OH+C10H6CH3=>OH+LC5H8+C10H7CH3 1.000 2000.00	2.2200e+08
ESAN1OH=>OH+0.5NC5H11+0.5NC7H15 0.000 93200.00	1.5000e+16
ESAN1OH=CH2OH+NC5H11 0.000 85000.00	2.0000e+16
ESAN1OH=PC2H4OH+PC4H9 0.000 85000.00	6.0000e+16
ESAN1OH=NC3H7+CH2CH2CH2OH 0.000 85000.00	8.0000e+16

ESAN1OH=C2H5+CH2CH2CH2CH2OH	8.0000e+16
0.000 85000.00	
ESAN1OH=CH3+RPENT1OHB	6.0000e+16
0.000 86000.00	
H+RESAN1OHA=ESAN1OH	5.0000e+13
0.000 0.00	
H+RESAN1OHB=ESAN1OH	5.0000e+13
0.000 0.00	
ESAN1OH=H2O+NC6H12	1.0000e+14
0.000 67600.00	
PLOG / 1.000000e-02	1.500000e+13
/	0.000000e+00
PLOG / 1.000000e-01	4.000000e+13
/	0.000000e+00
PLOG / 1.000000e+00	8.000000e+13
/	0.000000e+00
PLOG / 1.000000e+02	1.000000e+14
/	0.000000e+00
ESAN1OH=H2+ALDC6	5.1000e+08
1.356 69680.00	
PLOG / 1.000000e-02	1.120000e+80
/	-1.949100e+01
PLOG / 3.900000e-02	1.310000e+70
/	-1.653000e+01
PLOG / 1.000000e+00	2.650000e+43
/	-8.694000e+00
PLOG / 1.000000e+01	1.710000e+26
/	-3.704000e+00
PLOG / 1.000000e+02	3.990000e+19
/	-1.740000e+00
PLOG / 1.000000e+03	5.100000e+08
/	1.356000e+00
RESAN1OHA=H+ALDC6	3.0000e+13
0.000 37000.00	
RESAN1OHA=CH3CHO+PC4H9	3.0000e+13
0.000 31000.00	
RESAN1OHB=RESAN1OHA	1.0000e+10
0.000 17000.00	
RESAN1OHB=>C2H4+CH2CH2CH2CH2OH	5.0000e+12
0.000 30000.00	
RESAN1OHB=>NC3H7+C3H5OH	6.0000e+12
0.000 30000.00	
RESAN1OHB=>0.45PC2H4OH+0.55C3H6+0.45C4H8-1+0.55CH2CH2CH2OH	1.7000e+13
0.000 31500.00	
RESAN1OHB=>0.25OH+0.75CH2OH+0.75NC5H10+0.25NC6H12	1.8000e+13
0.000 33000.00	

RESAN1OHB=>H+ALDC6	2.4000e+13
0.000 37000.00	
RESAN1OHB=>CH3+C5H9OH	1.1000e+12
0.000 37000.00	
O2+RESAN1OHA=HO2+ALDC6	5.1030e+11
0.302 -1068.66	
O2+RESAN1OHB=>HO2+0.15CH2O+0.85ALDC6+0.15NC5H10	4.5000e+12
0.000 3500.00	
H+ESAN1OH=>H2+0.12CH2O+0.88RESAN1OHB+0.12NC5H11	3.0000e+07
2.000 4000.00	
CH3+ESAN1OH=>CH4+0.12CH2O+0.88RESAN1OHB+0.12NC5H11	3.0000e+05
2.000 5000.00	
C2H3+ESAN1OH=>0.12CH2O+C2H4+0.88RESAN1OHB+0.12NC5H11	6.7800e+05
2.000 3900.00	
C2H5+ESAN1OH=>0.12CH2O+C2H6+0.88RESAN1OHB+0.12NC5H11	2.0000e+05
2.000 6700.00	
NC3H7+ESAN1OH=>0.12CH2O+C3H8+0.88RESAN1OHB+0.12NC5H11	1.3500e+05
2.000 6700.00	
IC3H7+ESAN1OH=>0.12CH2O+C3H8+0.88RESAN1OHB+0.12NC5H11	1.3500e+05
2.000 9900.00	
C3H5-S+ESAN1OH=>0.12CH2O+C3H6+0.88RESAN1OHB+0.12NC5H11	2.7000e+05
2.000 4500.00	
C3H5-T+ESAN1OH=>0.12CH2O+C3H6+0.88RESAN1OHB+0.12NC5H11	2.7000e+05
2.000 4500.00	
C3H5-A+ESAN1OH=>0.12CH2O+C3H6+0.88RESAN1OHB+0.12NC5H11	5.3900e+05
2.000 12800.00	
C4H5+ESAN1OH=>0.12CH2O+C4H6+0.88RESAN1OHB+0.12NC5H11	2.7000e+05
2.000 4500.00	
C4H71-4+ESAN1OH=>0.12CH2O+C4H8-1+0.88RESAN1OHB+0.12NC5H11	1.3500e+05
2.000 6600.00	
C4H71-3+ESAN1OH=>0.12CH2O+C4H8-2+0.88RESAN1OHB+0.12NC5H11	3.4000e+05
2.000 13700.00	
IC4H7+ESAN1OH=>0.12CH2O+IC4H8+0.88RESAN1OHB+0.12NC5H11	2.7000e+05
2.000 13700.00	
C4H3+ESAN1OH=>0.12CH2O+C4H4+0.88RESAN1OHB+0.12NC5H11	4.0900e+05
2.000 5200.00	
C6H5+ESAN1OH=>0.12CH2O+C6H6+0.88RESAN1OHB+0.12NC5H11	3.7000e+08
1.000 2000.00	

O+ESAN1OH=>OH+0.12CH2O+0.88RESAN1OHB+0.12NC5H11	2.3500e+07
2.000 2500.00	
O2+ESAN1OH=>HO2+0.12CH2O+0.88RESAN1OHB+0.12NC5H11	1.7000e+07
2.000 44000.00	
OH+ESAN1OH=>H2O+0.12CH2O+0.88RESAN1OHB+0.12NC5H11	1.5000e+10
1.000 50.00	
HO2+ESAN1OH=>H2O2+0.12CH2O+0.88RESAN1OHB+0.12NC5H11	8.0000e+06
2.000 16000.00	
CH3O+ESAN1OH=>CH3OH+0.12CH2O+0.88RESAN1OHB+0.12NC5H11	4.2800e+05
2.000 1500.00	
CH2OH+ESAN1OH=>CH3OH+0.12CH2O+0.88RESAN1OHB+0.12NC5H11	2.8300e+05
2.000 10200.00	
HCO+ESAN1OH=>1.1200000000000000CH2O+0.88RESAN1OHB+0.12NC5H11	1.2600e+06
2.000 12300.00	
CH3CO+ESAN1OH=>0.12CH2O+CH3CHO+0.88RESAN1OHB+0.12NC5H11	1.3500e+06
2.000 14000.00	
CH2CHO+ESAN1OH=>0.12CH2O+CH3CHO+0.88RESAN1OHB+0.12NC5H11	2.3000e+05
2.000 11500.00	
C3H3+ESAN1OH=>0.12CH2O+C3H4-A+0.88RESAN1OHB+0.12NC5H11	2.7000e+05
2.000 14000.00	
HCCO+ESAN1OH=>0.12CH2O+CH2CO+0.88RESAN1OHB+0.12NC5H11	4.2800e+05
2.000 5200.00	
CH3O2+ESAN1OH=>CH3O2H+0.12CH2O+0.88RESAN1OHB+0.12NC5H11	7.6000e+05
2.000 12600.00	
C2H5O2+ESAN1OH=>0.12CH2O+C2H5O2H+0.88RESAN1OHB+0.12NC5H11	7.6000e+05
2.000 12600.00	
NC3H7O2+ESAN1OH=>0.12CH2O+C3H7OOH+0.88RESAN1OHB+0.12NC5H11	7.6000e+05
2.000 12600.00	
IC3H7O2+ESAN1OH=>0.12CH2O+C3H7OOH+0.88RESAN1OHB+0.12NC5H11	7.6000e+05
2.000 12600.00	
HCO3+ESAN1OH=>0.12CH2O+HCO3H+0.88RESAN1OHB+0.12NC5H11	3.4000e+05
2.000 6500.00	
CH3CO3+ESAN1OH=>0.12CH2O+CH3CO3H+0.88RESAN1OHB+0.12NC5H11	3.4000e+05
2.000 6500.00	
CH3COCH2+ESAN1OH=>0.12CH2O+CH3COCH3+0.88RESAN1OHB+0.12NC5H11	2.3000e+05
2.000 8000.00	
ESAN1OH+C6H5O=>0.12CH2O+0.88RESAN1OHB+0.12NC5H11+C6H5OH	2.7000e+05
2.000 12500.00	

ESAN1OH+C5H7=>0.12CH2O+0.88RESAN1OHB+0.12NC5H11+LC5H8	2.7000e+05
2.000 15000.00	
ESAN1OH+C7H7=>0.12CH2O+0.88RESAN1OHB+0.12NC5H11+C7H8	1.3500e+05
2.000 16000.00	
ESAN1OH+CH3C6H4=>0.12CH2O+0.88RESAN1OHB+0.12NC5H11+C7H8	3.7000e+08
1.000 2000.00	
ESAN1OH+RCRESOLO=>0.12CH2O+0.88RESAN1OHB+0.12NC5H11+CRESOL	2.7000e+05
2.000 12800.00	
ESAN1OH+C10H7=>0.12CH2O+C10H8+0.88RESAN1OHB+0.12NC5H11	3.7000e+08
1.000 2000.00	
ESAN1OH+INDENYL=>0.12CH2O+0.88RESAN1OHB+0.12NC5H11+INDENE	1.3000e+05
2.000 16000.00	
ESAN1OH+C10H6CH3=>0.12CH2O+0.88RESAN1OHB+0.12NC5H11+C10H7CH3	3.7000e+08
1.000 2000.00	
H+ESAN1OH=>H2+RESAN1OHA	1.0500e+07
2.000 4000.00	
CH3+ESAN1OH=>CH4+RESAN1OHA	1.0500e+05
2.000 5000.00	
C2H3+ESAN1OH=>C2H4+RESAN1OHA	2.3730e+05
2.000 3900.00	
C2H5+ESAN1OH=>C2H6+RESAN1OHA	7.0000e+04
2.000 6700.00	
NC3H7+ESAN1OH=>C3H8+RESAN1OHA	4.7250e+04
2.000 6700.00	
IC3H7+ESAN1OH=>C3H8+RESAN1OHA	4.7250e+04
2.000 9900.00	
C3H5-S+ESAN1OH=>C3H6+RESAN1OHA	9.4500e+04
2.000 4500.00	
C3H5-T+ESAN1OH=>C3H6+RESAN1OHA	9.4500e+04
2.000 4500.00	
C3H5-A+ESAN1OH=>C3H6+RESAN1OHA	1.8865e+05
2.000 12800.00	
C4H5+ESAN1OH=>C4H6+RESAN1OHA	9.4500e+04
2.000 4500.00	
C4H71-4+ESAN1OH=>C4H8-1+RESAN1OHA	4.7250e+04
2.000 6600.00	
C4H71-3+ESAN1OH=>C4H8-2+RESAN1OHA	1.1900e+05
2.000 13700.00	

IC4H7+ESAN1OH=>IC4H8+RESAN1OHA	9.4500e+04
2.000 13700.00	
C4H3+ESAN1OH=>C4H4+RESAN1OHA	1.4315e+05
2.000 5200.00	
C6H5+ESAN1OH=>C6H6+RESAN1OHA	1.2950e+08
1.000 2000.00	
O+ESAN1OH=>OH+RESAN1OHA	8.2250e+06
2.000 2500.00	
O2+ESAN1OH=>HO2+RESAN1OHA	5.9500e+06
2.000 44000.00	
OH+ESAN1OH=>H2O+RESAN1OHA	5.2500e+09
1.000 50.00	
HO2+ESAN1OH=>H2O2+RESAN1OHA	2.8000e+06
2.000 16000.00	
CH3O+ESAN1OH=>CH3OH+RESAN1OHA	1.4980e+05
2.000 1500.00	
CH2OH+ESAN1OH=>CH3OH+RESAN1OHA	9.9050e+04
2.000 10200.00	
HCO+ESAN1OH=>CH2O+RESAN1OHA	4.4100e+05
2.000 12300.00	
CH3CO+ESAN1OH=>CH3CHO+RESAN1OHA	4.7250e+05
2.000 14000.00	
CH2CHO+ESAN1OH=>CH3CHO+RESAN1OHA	8.0500e+04
2.000 11500.00	
C3H3+ESAN1OH=>C3H4-A+RESAN1OHA	9.4500e+04
2.000 14000.00	
HCCO+ESAN1OH=>CH2CO+RESAN1OHA	1.4980e+05
2.000 5200.00	
CH3O2+ESAN1OH=>CH3O2H+RESAN1OHA	2.6600e+05
2.000 12600.00	
C2H5O2+ESAN1OH=>C2H5O2H+RESAN1OHA	2.6600e+05
2.000 12600.00	
NC3H7O2+ESAN1OH=>C3H7OOH+RESAN1OHA	2.6600e+05
2.000 12600.00	
IC3H7O2+ESAN1OH=>C3H7OOH+RESAN1OHA	2.6600e+05
2.000 12600.00	
HCO3+ESAN1OH=>HCO3H+RESAN1OHA	1.1900e+05
2.000 6500.00	

CH3CO3+ESAN1OH=>CH3CO3H+RESAN1OHA 2.000        6500.00	1.1900e+05	
CH3COCH2+ESAN1OH=>CH3COCH3+RESAN1OHA 2.000        8000.00	8.0500e+04	
ESAN1OH+C6H5O=>RESAN1OHA+C6H5OH 2.000        12500.00	9.4500e+04	
ESAN1OH+C5H7=>RESAN1OHA+LC5H8 2.000        15000.00	9.4500e+04	
ESAN1OH+C7H7=>RESAN1OHA+C7H8 2.000        16000.00	4.7250e+04	
ESAN1OH+CH3C6H4=>RESAN1OHA+C7H8 1.000        2000.00	1.2950e+08	
ESAN1OH+RCRESOLO=>RESAN1OHA+CRESOL 2.000        12800.00	9.4500e+04	
ESAN1OH+C10H7=>C10H8+RESAN1OHA 1.000        2000.00	1.2950e+08	
ESAN1OH+INDENYL=>RESAN1OHA+INDENE 2.000        16000.00	4.5500e+04	
ESAN1OH+C10H6CH3=>RESAN1OHA+C10H7CH3 1.000        2000.00	1.2950e+08	
ALDC6=HCO+NC5H11 2.950        86380.00	1.2000e+26	-
ALDC6=CH2CHO+PC4H9 3.310        84700.00	1.7000e+27	-
ALDC6=NC3H7+RALD3 2.240        89000.00	2.8000e+24	-
ALDC6=C2H5+RALD4X 2.240        89000.00	2.8000e+24	-
ALDC6=CH3+RALD5X 1.610        90120.00	1.2000e+22	-
ALDC6=>H+CO+NC5H11 0.500        89260.00	1.6000e+17	-
ALDC6=CO+NC5H12 0.000        75000.00	1.0000e+14	
OH+ALDC6=>H2O+CO+NC5H11 0.000        630.00	2.0000e+13	
HO2+ALDC6=>H2O2+CO+NC5H11 0.000        12460.00	5.0000e+12	



H+ALDC6=>H2+CO+NC5H11	1.6000e+14
0.000 6360.00	
CH3+ALDC6=>CO+CH4+NC5H11	1.0000e+12
0.000 7234.20	
C2H3+ALDC6=>CO+C2H4+NC5H11	3.5256e+05
2.000 2479.60	
C2H5+ALDC6=>CO+C2H6+NC5H11	1.0400e+05
2.000 5128.01	
NC3H7+ALDC6=>CO+C3H8+NC5H11	7.0200e+04
2.000 5128.01	
IC3H7+ALDC6=>CO+C3H8+NC5H11	7.0200e+04
2.000 8184.45	
C3H5-S+ALDC6=>CO+C3H6+NC5H11	1.4040e+05
2.000 3044.41	
C3H5-T+ALDC6=>CO+C3H6+NC5H11	1.4040e+05
2.000 3044.41	
C3H5-A+ALDC6=>CO+C3H6+NC5H11	2.8028e+05
2.000 10972.41	
C4H5+ALDC6=>CO+C4H6+NC5H11	1.4040e+05
2.000 3044.41	
C4H71-4+ALDC6=>CO+C4H8-1+NC5H11	7.0200e+04
2.000 5032.93	
C4H71-3+ALDC6=>CO+C4H8-2+NC5H11	1.7680e+05
2.000 11840.29	
IC4H7+ALDC6=>CO+IC4H8+NC5H11	1.4040e+05
2.000 11840.29	
C4H3+ALDC6=>CO+C4H4+NC5H11	2.1268e+05
2.000 3705.38	
C6H5+ALDC6=>CO+C6H6+NC5H11	1.9240e+08
1.000 867.85	
O+ALDC6=>OH+CO+NC5H11	1.2220e+07
2.000 1169.32	
O2+ALDC6=>HO2+CO+NC5H11	8.8400e+06
2.000 41405.89	
CH3O+ALDC6=>CO+CH3OH+NC5H11	2.2256e+05
2.000 241.70	
CH2OH+ALDC6=>CO+CH3OH+NC5H11	1.4716e+05
2.000 8472.17	

HCO+ALDC6=>CO+CH2O+NC5H11 2.000        10490.75	6.5520e+05
CH3CO+ALDC6=>CO+CH3CHO+NC5H11 2.000        12129.83	7.0200e+05
CH2CHO+ALDC6=>CO+CH3CHO+NC5H11 2.000        9720.89	1.1960e+05
C3H3+ALDC6=>CO+C3H4-A+NC5H11 2.000        12129.83	1.4040e+05
HCCO+ALDC6=>CO+CH2CO+NC5H11 2.000        3705.38	2.2256e+05
CH3O2+ALDC6=>CO+CH3O2H+NC5H11 2.000        10779.70	3.9520e+05
C2H5O2+ALDC6=>CO+C2H5O2H+NC5H11 2.000        10779.70	3.9520e+05
NC3H7O2+ALDC6=>CO+C3H7OOH+NC5H11 2.000        10779.70	3.9520e+05
IC3H7O2+ALDC6=>CO+C3H7OOH+NC5H11 2.000        10779.70	3.9520e+05
HCO3+ALDC6=>CO+HCO3H+NC5H11 2.000        4937.89	1.7680e+05
CH3CO3+ALDC6=>CO+CH3CO3H+NC5H11 2.000        4937.89	1.7680e+05
CH3COCH2+ALDC6=>CO+CH3COCH3+NC5H11 2.000        6366.63	1.1960e+05
ALDC6+C6H5O=>CO+NC5H11+C6H5OH 2.000        10683.36	1.4040e+05
ALDC6+C5H7=>CO+NC5H11+LC5H8 2.000        13095.77	1.4040e+05
ALDC6+C7H7=>CO+NC5H11+C7H8 2.000        14062.89	7.0200e+04
ALDC6+CH3C6H4=>CO+NC5H11+C7H8 1.000        867.85	1.9240e+08
ALDC6+RCRESOLO=>CO+NC5H11+CRESOL 2.000        10972.41	1.4040e+05
ALDC6+C10H7=>CO+C10H8+NC5H11 1.000        867.85	1.9240e+08
ALDC6+INDENYL=>CO+NC5H11+INDENE 2.000        14062.89	6.7600e+04

ALDC6+C10H6CH3=>CO+NC5H11+C10H7CH3	1.9240e+08
1.000 867.85	
H+ALDC6=>H2+RALD6X	1.9500e+07
2.000 4000.00	
CH3+ALDC6=>CH4+RALD6X	1.9500e+05
2.000 5000.00	
C2H3+ALDC6=>C2H4+RALD6X	4.4070e+05
2.000 3900.00	
C2H5+ALDC6=>C2H6+RALD6X	1.3000e+05
2.000 6700.00	
NC3H7+ALDC6=>C3H8+RALD6X	8.7750e+04
2.000 6700.00	
IC3H7+ALDC6=>C3H8+RALD6X	8.7750e+04
2.000 9900.00	
C3H5-S+ALDC6=>C3H6+RALD6X	1.7550e+05
2.000 4500.00	
C3H5-T+ALDC6=>C3H6+RALD6X	1.7550e+05
2.000 4500.00	
C3H5-A+ALDC6=>C3H6+RALD6X	3.5035e+05
2.000 12800.00	
C4H5+ALDC6=>C4H6+RALD6X	1.7550e+05
2.000 4500.00	
C4H71-4+ALDC6=>C4H8-1+RALD6X	8.7750e+04
2.000 6600.00	
C4H71-3+ALDC6=>C4H8-2+RALD6X	2.2100e+05
2.000 13700.00	
IC4H7+ALDC6=>IC4H8+RALD6X	1.7550e+05
2.000 13700.00	
C4H3+ALDC6=>C4H4+RALD6X	2.6585e+05
2.000 5200.00	
C6H5+ALDC6=>C6H6+RALD6X	2.4050e+08
1.000 2000.00	
O+ALDC6=>OH+RALD6X	1.5275e+07
2.000 2500.00	
O2+ALDC6=>HO2+RALD6X	1.1050e+07
2.000 44000.00	
CH3O+ALDC6=>CH3OH+RALD6X	2.7820e+05
2.000 1500.00	

CH2OH+ALDC6=>CH3OH+RALD6X 2.000 10200.00	1.8395e+05
HCO+ALDC6=>CH2O+RALD6X 2.000 12300.00	8.1900e+05
CH3CO+ALDC6=>CH3CHO+RALD6X 2.000 14000.00	8.7750e+05
CH2CHO+ALDC6=>CH3CHO+RALD6X 2.000 11500.00	1.4950e+05
C3H3+ALDC6=>C3H4-A+RALD6X 2.000 14000.00	1.7550e+05
HCCO+ALDC6=>CH2CO+RALD6X 2.000 5200.00	2.7820e+05
CH3O2+ALDC6=>CH3O2H+RALD6X 2.000 12600.00	4.9400e+05
C2H5O2+ALDC6=>C2H5O2H+RALD6X 2.000 12600.00	4.9400e+05
NC3H7O2+ALDC6=>C3H7OOH+RALD6X 2.000 12600.00	4.9400e+05
IC3H7O2+ALDC6=>C3H7OOH+RALD6X 2.000 12600.00	4.9400e+05
HCO3+ALDC6=>HCO3H+RALD6X 2.000 6500.00	2.2100e+05
CH3CO3+ALDC6=>CH3CO3H+RALD6X 2.000 6500.00	2.2100e+05
CH3COCH2+ALDC6=>CH3COCH3+RALD6X 2.000 8000.00	1.4950e+05
ALDC6+C6H5O=>RALD6X+C6H5OH 2.000 12500.00	1.7550e+05
ALDC6+C5H7=>RALD6X+LC5H8 2.000 15000.00	1.7550e+05
ALDC6+C7H7=>RALD6X+C7H8 2.000 16000.00	8.7750e+04
ALDC6+CH3C6H4=>RALD6X+C7H8 1.000 2000.00	2.4050e+08
ALDC6+RCRESOLO=>RALD6X+CRESOL 2.000 12800.00	1.7550e+05
ALDC6+C10H7=>C10H8+RALD6X 1.000 2000.00	2.4050e+08

ALDC6+INDENYL=>RALD6X+INDENE	8.4500e+04
2.000 16000.00	
ALDC6+C10H6CH3=>RALD6X+C10H7CH3	2.4050e+08
1.000 2000.00	
H+ALDC6=>H2+0.75OH+0.25CH2OH+0.25LC5H8+0.75CYC6H10	3.0000e+06
2.000 2825.33	
CH3+ALDC6=>0.75OH+CH4+0.25CH2OH+0.25LC5H8+0.75CYC6H10	3.0000e+04
2.000 3778.15	
C2H3+ALDC6=>0.75OH+0.25CH2OH+C2H4+0.25LC5H8+0.75CYC6H10	6.7800e+04
2.000 2730.26	
C2H5+ALDC6=>0.75OH+0.25CH2OH+C2H6+0.25LC5H8+0.75CYC6H10	2.0000e+04
2.000 5405.42	
NC3H7+ALDC6=>0.75OH+0.25CH2OH+C3H8+0.25LC5H8+0.75CYC6H10	1.3500e+04
2.000 5405.42	
IC3H7+ALDC6=>0.75OH+0.25CH2OH+C3H8+0.25LC5H8+0.75CYC6H10	1.3500e+04
2.000 8487.19	
C3H5-S+ALDC6=>0.75OH+0.25CH2OH+C3H6+0.25LC5H8+0.75CYC6H10	2.7000e+04
2.000 3301.28	
C3H5-T+ALDC6=>0.75OH+0.25CH2OH+C3H6+0.25LC5H8+0.75CYC6H10	2.7000e+04
2.000 3301.28	
C3H5-A+ALDC6=>0.75OH+0.25CH2OH+C3H6+0.25LC5H8+0.75CYC6H10	5.3900e+04
2.000 11294.92	
C4H5+ALDC6=>0.75OH+0.25CH2OH+C4H6+0.25LC5H8+0.75CYC6H10	2.7000e+04
2.000 3301.28	
C4H71-4+ALDC6=>0.75OH+0.25CH2OH+C4H8-1+0.25LC5H8+0.75CYC6H10	1.3500e+04
2.000 5309.47	
C4H71-3+ALDC6=>0.75OH+0.25CH2OH+C4H8-2+0.25LC5H8+0.75CYC6H10	3.4000e+04
2.000 12168.47	
IC4H7+ALDC6=>0.75OH+0.25CH2OH+IC4H8+0.25LC5H8+0.75CYC6H10	2.7000e+04
2.000 12168.47	
C4H3+ALDC6=>0.75OH+0.25CH2OH+C4H4+0.25LC5H8+0.75CYC6H10	4.0900e+04
2.000 3969.14	
C6H5+ALDC6=>0.75OH+0.25CH2OH+C6H6+0.25LC5H8+0.75CYC6H10	3.7000e+07
1.000 1067.64	
O+ALDC6=>1.75OH+0.25CH2OH+0.25LC5H8+0.75CYC6H10	2.3500e+06
2.000 1404.15	
O2+ALDC6=>0.75OH+HO2+0.25CH2OH+0.25LC5H8+0.75CYC6H10	1.7000e+06
2.000 41863.68	

OH+ALDC6=>H2O+0.75OH+0.25CH2OH+0.25LC5H8+0.75CYC6H10 1.5000e+09  
 1.000 -695.37

HO2+ALDC6=>0.75OH+H2O2+0.25CH2OH+0.25LC5H8+0.75CYC6H10 8.0000e+05  
 2.000 14404.74

CH3O+ALDC6=>0.75OH+CH3OH+0.25CH2OH+0.25LC5H8+0.75CYC6H10 4.2800e+04  
 2.000 463.75

CH2OH+ALDC6=>0.75OH+CH3OH+0.25CH2OH+0.25LC5H8+0.75CYC6H10 2.8300e+04  
 2.000 8777.08

HCO+ALDC6=>0.75OH+0.25CH2OH+CH2O+0.25LC5H8+0.75CYC6H10 1.2600e+05  
 2.000 10810.03

CH3CO+ALDC6=>0.75OH+0.25CH2OH+CH3CHO+0.25LC5H8+0.75CYC6H10 1.3500e+05  
 2.000 12459.86

CH2CHO+ALDC6=>0.75OH+0.25CH2OH+CH3CHO+0.25LC5H8+0.75CYC6H10 2.3000e+04  
 2.000 10034.85

C3H3+ALDC6=>0.75OH+0.25CH2OH+C3H4-A+0.25LC5H8+0.75CYC6H10 2.7000e+04  
 2.000 12459.86

HCCO+ALDC6=>0.75OH+0.25CH2OH+CH2CO+0.25LC5H8+0.75CYC6H10 4.2800e+04  
 2.000 3969.14

CH3O2+ALDC6=>0.75OH+CH3O2H+0.25CH2OH+0.25LC5H8+0.75CYC6H10 7.6000e+04  
 2.000 11100.93

C2H5O2+ALDC6=>0.75OH+0.25CH2OH+C2H5O2H+0.25LC5H8+0.75CYC6H10 7.6000e+04  
 2.000 11100.93

NC3H7O2+ALDC6=>0.75OH+0.25CH2OH+C3H7OOH+0.25LC5H8+0.75CYC6H10 7.6000e+04  
 2.000 11100.93

IC3H7O2+ALDC6=>0.75OH+0.25CH2OH+C3H7OOH+0.25LC5H8+0.75CYC6H10 7.6000e+04  
 2.000 11100.93

HCO3+ALDC6=>0.75OH+0.25CH2OH+HCO3H+0.25LC5H8+0.75CYC6H10 3.4000e+04  
 2.000 5213.56

CH3CO3+ALDC6=>0.75OH+0.25CH2OH+CH3CO3H+0.25LC5H8+0.75CYC6H10 3.4000e+04  
 2.000 5213.56

CH3COCH2+ALDC6=>0.75OH+0.25CH2OH+CH3COCH3+0.25LC5H8+0.75CYC6H10  
 2.3000e+04 2.000 6654.87

ALDC6+C6H5O=>0.75OH+0.25CH2OH+0.25LC5H8+0.75CYC6H10+C6H5OH 2.7000e+04  
 2.000 11003.95

ALDC6+C5H7=>0.75OH+0.25CH2OH+1.25LC5H8+0.75CYC6H10 2.7000e+04  
 2.000 13431.81

ALDC6+C7H7=>0.75OH+0.25CH2OH+0.25LC5H8+0.75CYC6H10+C7H8 1.3500e+04  
 2.000 14404.74

ALDC6+CH3C6H4=>0.75OH+0.25CH2OH+0.25LC5H8+0.75CYC6H10+C7H8	3.7000e+07
1.000	1067.64
ALDC6+RCRESOLO=>0.75OH+0.25CH2OH+0.25LC5H8+0.75CYC6H10+CRESOL	2.7000e+04
2.000	11294.92
ALDC6+C10H7=>0.75OH+0.25CH2OH+C10H8+0.25LC5H8+0.75CYC6H10	3.7000e+07
1.000	1067.64
ALDC6+INDENYL=>0.75OH+0.25CH2OH+0.25LC5H8+0.75CYC6H10+INDENE	1.3000e+04
2.000	14404.74
ALDC6+C10H6CH3=>0.75OH+0.25CH2OH+0.25LC5H8+0.75CYC6H10+C10H7CH3	
3.7000e+07	1.000 1067.64
OH+ALDC6=>H2O+RALD6X	3.4000e+13
0.000	1700.00
HO2+ALDC6=>H2O2+RALD6X	1.0800e+13
0.000	15860.00
RALD6X=>CO+NC5H11	7.2000e+10
0.000	17500.00
RALD6X=>NC3H7+C2H3CHO	9.0000e+13
0.000	30000.00
RALD6X=>0.7HCO+0.3C2H5+0.3C3H5CHO+0.7NC5H10	3.6000e+13
0.000	30000.00
RALD6X=>0.6C2H4+0.4CH2CHO+0.4C4H8-1+0.6RALD4X	2.8000e+13
0.000	30000.00
RALD6X=>C3H6+RALD3	1.6000e+13
0.000	30000.00
NC5H12=C2H5+NC3H7	1.0000e+17
0.000	84000.00
NC5H12=CH3+PC4H9	1.0000e+17
0.000	85500.00
NC5H11=>0.2CH3+0.55C2H5+0.25C2H4+0.25NC3H7+0.55C3H6+0.2C4H8-1	3.3000e+13
0.000	30000.00
O2+NC5H12=>HO2+NC5H11	1.2000e+14
0.000	45000.00
NC5H10=C2H5+C3H5-A	2.0000e+16
0.000	74500.00
NC5H10=CH3+C4H71-3	5.0000e+16
0.000	80000.00
NC5H10=C2H3+NC3H7	1.0000e+17
0.000	99000.00

NC5H9-3=>0.35H+0.65CH3+0.65C4H6+0.35LC5H8 0.000 37000.00	3.0000e+13
O2+NC5H9-3=>HO2+LC5H8 0.000 5000.00	1.5000e+11
O+NC5H9-3=>0.5OH+0.5CH3CHO+0.5C3H5-S+0.5LC5H8 0.000 3000.00	1.0000e+13
OH+NC5H9-3=>CH3CHO+C3H6 0.000 0.00	3.0000e+12
O2+NC5H10=>CH3CHO+C2H5CHO 0.000 39000.00	1.0000e+14
H+NC5H10=NC5H11 0.000 2500.00	2.0000e+13
O2+NC5H11=>HO2+NC5H10 0.000 3000.00	7.5000e+11
NEOC5H12=CH3+TC4H9 0.000 83000.00	2.0000e+17
HO2+NEOC5H11=O2+NEOC5H12 0.000 0.00	2.0000e+12
NEOC5H11=CH3+IC4H8 0.000 30800.00	4.0000e+13
CH3+NC5H12=>CH4+NC5H11 2.000 5000.00	2.4000e+05
C2H3+NC5H12=>C2H4+NC5H11 2.000 3900.00	5.4240e+05
C2H5+NC5H12=>C2H6+NC5H11 2.000 6700.00	1.6000e+05
NC3H7+NC5H12=>C3H8+NC5H11 2.000 6700.00	1.0800e+05
IC3H7+NC5H12=>C3H8+NC5H11 2.000 9900.00	1.0800e+05
C3H5-S+NC5H12=>C3H6+NC5H11 2.000 4500.00	2.1600e+05
C3H5-T+NC5H12=>C3H6+NC5H11 2.000 4500.00	2.1600e+05
C3H5-A+NC5H12=>C3H6+NC5H11 2.000 12800.00	4.3120e+05
C4H5+NC5H12=>C4H6+NC5H11 2.000 4500.00	2.1600e+05



C4H71-4+NC5H12=>C4H8-1+NC5H11	1.0800e+05
2.000        6600.00	
C4H71-3+NC5H12=>C4H8-2+NC5H11	2.7200e+05
2.000        13700.00	
IC4H7+NC5H12=>IC4H8+NC5H11	2.1600e+05
2.000        13700.00	
C4H3+NC5H12=>C4H4+NC5H11	3.2720e+05
2.000        5200.00	
C6H5+NC5H12=>C6H6+NC5H11	2.9600e+08
1.000        2000.00	
O+NC5H12=>OH+NC5H11	1.8800e+07
2.000        2500.00	
OH+NC5H12=>H2O+NC5H11	1.2000e+10
1.000        50.00	
HO2+NC5H12=>H2O2+NC5H11	6.4000e+06
2.000        16000.00	
CH3O+NC5H12=>CH3OH+NC5H11	3.4240e+05
2.000        1500.00	
CH2OH+NC5H12=>CH3OH+NC5H11	2.2640e+05
2.000        10200.00	
HCO+NC5H12=>CH2O+NC5H11	1.0080e+06
2.000        12300.00	
CH3CO+NC5H12=>CH3CHO+NC5H11	1.0800e+06
2.000        14000.00	
CH2CHO+NC5H12=>CH3CHO+NC5H11	1.8400e+05
2.000        11500.00	
C3H3+NC5H12=>C3H4-A+NC5H11	2.1600e+05
2.000        14000.00	
HCCO+NC5H12=>CH2CO+NC5H11	3.4240e+05
2.000        5200.00	
CH3O2+NC5H12=>CH3O2H+NC5H11	6.0800e+05
2.000        12600.00	
C2H5O2+NC5H12=>C2H5O2H+NC5H11	6.0800e+05
2.000        12600.00	
NC3H7O2+NC5H12=>C3H7OOH+NC5H11	6.0800e+05
2.000        12600.00	
IC3H7O2+NC5H12=>C3H7OOH+NC5H11	6.0800e+05
2.000        12600.00	

HCO3+NC5H12=>HCO3H+NC5H11 2.000        6500.00	2.7200e+05
CH3CO3+NC5H12=>CH3CO3H+NC5H11 2.000        6500.00	2.7200e+05
CH3COCH2+NC5H12=>CH3COCH3+NC5H11 2.000        8000.00	1.8400e+05
NC5H12+C6H5O=>NC5H11+C6H5OH 2.000        12500.00	2.1600e+05
NC5H12+C5H7=>NC5H11+LC5H8 2.000        15000.00	2.1600e+05
NC5H12+C7H7=>NC5H11+C7H8 2.000        16000.00	1.0800e+05
NC5H12+CH3C6H4=>NC5H11+C7H8 1.000        2000.00	2.9600e+08
NC5H12+RCRESOLO=>NC5H11+CRESOL 2.000        12800.00	2.1600e+05
NC5H12+C10H7=>C10H8+NC5H11 1.000        2000.00	2.9600e+08
NC5H12+INDENYL=>NC5H11+INDENE 2.000        16000.00	1.0400e+05
NC5H12+C10H6CH3=>NC5H11+C10H7CH3 1.000        2000.00	2.9600e+08
H+NC5H12=>H2+NC5H11 2.000        3950.57	2.6000e+07
H+NC5H10=>H2+NC5H9-3 2.000        4000.00	2.4000e+07
CH3+NC5H10=>CH4+NC5H9-3 2.000        5000.00	2.4000e+05
C2H3+NC5H10=>C2H4+NC5H9-3 2.000        3900.00	5.4240e+05
C2H5+NC5H10=>C2H6+NC5H9-3 2.000        6700.00	1.6000e+05
NC3H7+NC5H10=>C3H8+NC5H9-3 2.000        6700.00	1.0800e+05
IC3H7+NC5H10=>C3H8+NC5H9-3 2.000        9900.00	1.0800e+05
C3H5-S+NC5H10=>C3H6+NC5H9-3 2.000        4500.00	2.1600e+05

C3H5-T+NC5H10=>C3H6+NC5H9-3 2.000        4500.00	2.1600e+05
C3H5-A+NC5H10=>C3H6+NC5H9-3 2.000        12800.00	4.3120e+05
C4H5+NC5H10=>C4H6+NC5H9-3 2.000        4500.00	2.1600e+05
C4H71-4+NC5H10=>C4H8-1+NC5H9-3 2.000        6600.00	1.0800e+05
C4H71-3+NC5H10=>C4H8-2+NC5H9-3 2.000        13700.00	2.7200e+05
IC4H7+NC5H10=>IC4H8+NC5H9-3 2.000        13700.00	2.1600e+05
C4H3+NC5H10=>C4H4+NC5H9-3 2.000        5200.00	3.2720e+05
C6H5+NC5H10=>C6H6+NC5H9-3 1.000        2000.00	2.9600e+08
O+NC5H10=>OH+NC5H9-3 2.000        2500.00	1.8800e+07
O2+NC5H10=>HO2+NC5H9-3 2.000        44000.00	1.3600e+07
OH+NC5H10=>H2O+NC5H9-3 1.000        50.00	1.2000e+10
HO2+NC5H10=>H2O2+NC5H9-3 2.000        16000.00	6.4000e+06
CH3O+NC5H10=>CH3OH+NC5H9-3 2.000        1500.00	3.4240e+05
CH2OH+NC5H10=>CH3OH+NC5H9-3 2.000        10200.00	2.2640e+05
HCO+NC5H10=>CH2O+NC5H9-3 2.000        12300.00	1.0080e+06
CH3CO+NC5H10=>CH3CHO+NC5H9-3 2.000        14000.00	1.0800e+06
CH2CHO+NC5H10=>CH3CHO+NC5H9-3 2.000        11500.00	1.8400e+05
C3H3+NC5H10=>C3H4-A+NC5H9-3 2.000        14000.00	2.1600e+05
HCCO+NC5H10=>CH2CO+NC5H9-3 2.000        5200.00	3.4240e+05

CH3O2+NC5H10=>CH3O2H+NC5H9-3	6.0800e+05
2.000 12600.00	
C2H5O2+NC5H10=>C2H5O2H+NC5H9-3	6.0800e+05
2.000 12600.00	
NC3H7O2+NC5H10=>C3H7OOH+NC5H9-3	6.0800e+05
2.000 12600.00	
IC3H7O2+NC5H10=>C3H7OOH+NC5H9-3	6.0800e+05
2.000 12600.00	
HCO3+NC5H10=>HCO3H+NC5H9-3	2.7200e+05
2.000 6500.00	
CH3CO3+NC5H10=>CH3CO3H+NC5H9-3	2.7200e+05
2.000 6500.00	
CH3COCH2+NC5H10=>CH3COCH3+NC5H9-3	1.8400e+05
2.000 8000.00	
NC5H10+C6H5O=>NC5H9-3+C6H5OH	2.1600e+05
2.000 12500.00	
NC5H10+C5H7=>NC5H9-3+LC5H8	2.1600e+05
2.000 15000.00	
NC5H10+C7H7=>NC5H9-3+C7H8	1.0800e+05
2.000 16000.00	
NC5H10+CH3C6H4=>NC5H9-3+C7H8	2.9600e+08
1.000 2000.00	
NC5H10+RCRESOLO=>NC5H9-3+CRESOL	2.1600e+05
2.000 12800.00	
NC5H10+C10H7=>C10H8+NC5H9-3	2.9600e+08
1.000 2000.00	
NC5H10+INDENYL=>NC5H9-3+INDENE	1.0400e+05
2.000 16000.00	
NC5H10+C10H6CH3=>NC5H9-3+C10H7CH3	2.9600e+08
1.000 2000.00	
H+NEOC5H12=>H2+NEOC5H11	3.6000e+07
2.000 6349.34	
CH3+NEOC5H12=>CH4+NEOC5H11	3.6000e+05
2.000 7443.70	
C2H3+NEOC5H12=>C2H4+NEOC5H11	8.1360e+05
2.000 6239.48	
C2H5+NEOC5H12=>C2H6+NEOC5H11	2.4000e+05
2.000 9289.16	

NC3H7+NEOC5H12=>C3H8+NEOC5H11	1.6200e+05
2.000 9289.16	
IC3H7+NEOC5H12=>C3H8+NEOC5H11	1.6200e+05
2.000 12725.62	
C3H5-S+NEOC5H12=>C3H6+NEOC5H11	3.2400e+05
2.000 6897.45	
C3H5-T+NEOC5H12=>C3H6+NEOC5H11	3.2400e+05
2.000 6897.45	
C3H5-A+NEOC5H12=>C3H6+NEOC5H11	6.4680e+05
2.000 15810.16	
C4H5+NEOC5H12=>C4H6+NEOC5H11	3.2400e+05
2.000 6897.45	
C4H71-4+NEOC5H12=>C4H8-1+NEOC5H11	1.6200e+05
2.000 9181.05	
C4H71-3+NEOC5H12=>C4H8-2+NEOC5H11	4.0800e+05
2.000 16763.05	
IC4H7+NEOC5H12=>IC4H8+NEOC5H11	3.2400e+05
2.000 16763.05	
C4H3+NEOC5H12=>C4H4+NEOC5H11	4.9080e+05
2.000 7661.72	
C6H5+NEOC5H12=>C6H6+NEOC5H11	4.4400e+08
1.000 3864.72	
O+NEOC5H12=>OH+NEOC5H11	2.8200e+07
2.000 4691.70	
OH+NEOC5H12=>H2O+NEOC5H11	1.8000e+10
1.000 1540.75	
HO2+NEOC5H12=>H2O2+NEOC5H11	9.6000e+06
2.000 19190.53	
CH3O+NEOC5H12=>CH3OH+NEOC5H11	5.1360e+05
2.000 3572.50	
CH2OH+NEOC5H12=>CH3OH+NEOC5H11	3.3960e+05
2.000 13045.84	
HCO+NEOC5H12=>CH2O+NEOC5H11	1.5120e+06
2.000 15279.95	
CH3CO+NEOC5H12=>CH3CHO+NEOC5H11	1.6200e+06
2.000 17080.28	
CH2CHO+NEOC5H12=>CH3CHO+NEOC5H11	2.7600e+05
2.000 14430.30	

C3H3+NEOC5H12=>C3H4-A+NEOC5H11 2.000        17080.28	3.2400e+05
HCCO+NEOC5H12=>CH2CO+NEOC5H11 2.000        7661.72	5.1360e+05
CH3O2+NEOC5H12=>CH3O2H+NEOC5H11 2.000        15598.15	9.1200e+05
C2H5O2+NEOC5H12=>C2H5O2H+NEOC5H11 2.000        15598.15	9.1200e+05
NC3H7O2+NEOC5H12=>C3H7OOH+NEOC5H11 2.000        15598.15	9.1200e+05
IC3H7O2+NEOC5H12=>C3H7OOH+NEOC5H11 2.000        15598.15	9.1200e+05
HCO3+NEOC5H12=>HCO3H+NEOC5H11 2.000        9072.89	4.0800e+05
CH3CO3+NEOC5H12=>CH3CO3H+NEOC5H11 2.000        9072.89	4.0800e+05
CH3COCH2+NEOC5H12=>CH3COCH3+NEOC5H11 2.000        10690.26	2.7600e+05
NEOC5H12+C6H5O=>NEOC5H11+C6H5OH 2.000        15492.11	3.2400e+05
NEOC5H12+C5H7=>NEOC5H11+LC5H8 2.000        18136.38	3.2400e+05
NEOC5H12+C7H7=>NEOC5H11+C7H8 2.000        19190.53	1.6200e+05
NEOC5H12+CH3C6H4=>NEOC5H11+C7H8 1.000        3864.72	4.4400e+08
NEOC5H12+RCRESOLO=>NEOC5H11+CRESOL 2.000        15810.16	3.2400e+05
NEOC5H12+C10H7=>C10H8+NEOC5H11 1.000        3864.72	4.4400e+08
NEOC5H12+INDENYL=>NEOC5H11+INDENE 2.000        19190.53	1.5600e+05
NEOC5H12+C10H6CH3=>NEOC5H11+C10H7CH3 1.000        3864.72	4.4400e+08
C3H6+C3H3=>CH3+C5H6 0.000        15000.00	2.0000e+11
C3H3+IC4H8=>CH3+MCPTD 0.000        15000.00	2.0000e+11

2IC4H8=2C4H8-2 0.000 65000.00	3.0000e+16
2IC4H8=C3H6+B1M2 0.000 65000.00	3.0000e+16
H+B2M2=CH3+IC4H8 0.000 1000.00	2.5000e+13
H+B1M2=CH3+IC4H8 0.000 1000.00	5.0000e+13
IC4H8+IC4H7=>2H2+CH3+C7H8 0.000 19000.00	1.0000e+10
IC4H8+IC4H7=>C2H4+IC3H7+C3H4-A 0.000 19000.00	5.0000e+09
IC4H8+IC4H7=>H+C3H4-A+B1M2 0.000 19000.00	3.0000e+10
IC4H8+IC4H7=>1.01H2+C2H5+0.01C6H6+0.99MCPTD 0.000 19000.00	1.0000e+10
C3H6+IC4H7=>1.2H2+0.6CH3+0.4C2H5+0.6C6H6+0.4LC5H8 0.000 18000.00	1.0000e+11
H+C4H71-3 (+M)=C4H8-2 (+M) 0.000 0.00 LOW/ 1.33e+60 -12.000 5967.8/ TROE/ 0.02000 1097. 1.097e+04 6860./ H2/ 2.00/ H2O/ 6.00/ CH4/ 2.00/ CO/ 1.50/ CO2/ 2.00/ C2H6/ 3.00/ AR/ 0.70/	5.0000e+13
C4H8-1=C4H8-2 0.000 61000.00	1.0000e+12
C4H8-1=H2+C4H6 0.000 70000.00	3.0000e+13
C4H8-2=H2+C4H6 0.000 71000.00	2.0000e+12
CH3+C4H8-1=>H+B2M2 0.000 7600.00	4.0000e+10
CH3+C4H8-2=>H+0.5B1M3+0.5B2M2 0.000 7600.00	5.0000e+10
C2H5+C4H8-1=>CH3+0.75NC5H10+0.25B1M3 0.000 7600.00	3.0000e+11
C2H5+C4H8- 1=>0.38CH3+0.6C2H4+0.02NC3H7+0.02C3H6+0.5PC4H9+0.1SC4H9+0.38NC5H10 2.0000e+11 0.000 7600.00	
C2H5+C4H8-2=>CH3+NC5H10 0.000 7600.00	3.0000e+11

C2H5+C4H8-2=>0.7CH3+0.3C2H4+0.3SC4H9+0.7NC5H10 0.000 7600.00	5.0000e+10
C2H4+NC5H9-3=>C2H5+CYC5H8 0.000 13000.00	1.5000e+11
C4H8-1+C4H71-3=>0.2C2H5+0.8NC3H7+0.8CYC5H8+0.2CYC6H10 0.000 13500.00	1.2000e+10
C4H8-1+C4H71-3=>H2+C2H5+CYC6H8 0.000 12500.00	2.5000e+10
C4H8-2+C4H71-3=>NC3H7+CYC5H8 0.000 13500.00	8.0000e+09
C4H8-2+C4H71-3=>H+C3H6+LC5H8 0.000 13500.00	2.0000e+10
C4H8-2+C4H71-3=>H2+C2H5+MCPTD 0.000 13500.00	2.0000e+10
C4H8-2+C4H71-3=>H2+C2H5+CYC6H8 0.000 13000.00	2.5000e+10
2C4H71-3=C4H8-1+C4H6 0.000 0.00	6.0000e+11
C4H71-3=C2H4+C2H3 0.000 50000.00	1.5000e+13
C3H6+C4H71-3=>0.5H2+CH3+0.25C2H4+0.5C5H6+0.5CYC6H10 0.000 13500.00	1.5000e+11
CH3+IC4H7=B1M2 0.000 3000.00	1.0000e+12
O2+C4H71-3=>CH3O+C2H3CHO 0.000 16000.00	2.0000e+13
O2+C4H71-4=>1.2CH2O+0.6C2H3+0.4C2H4O1-2+0.4CH2CHO 0.000 3000.00	1.0000e+12
CH3+C4H71-3=B1M3 0.000 0.00	3.0000e+12
O2+B2M2=CH3CHO+CH3COCH3 0.000 39000.00	1.0000e+14
H+B1M2=C2H5+C3H6 0.000 2000.00	1.2500e+13
H+B1M3=CH3+C4H8-2 0.000 2000.00	1.2500e+13
H+B1M3=C2H4+IC3H7 0.000 2000.00	1.2500e+13



H+B2M2=CH3+C4H8-2 0.000            2000.00	1.2500e+13
OH+B1M2=C2H5+CH3COCH3 0.000            1000.00	2.0000e+12
OH+B1M2=>CH2O+SC4H9 0.000            1000.00	1.0000e+12
OH+B1M3=>CH3CHO+IC3H7 0.000            1000.00	1.5000e+12
OH+B1M3=>CH2O+IC4H9 0.000            1000.00	1.5000e+12
OH+B2M2=>CH3CHO+IC3H7 0.000            1000.00	1.5000e+12
OH+B2M2=>C2H5+CH3COCH3 0.000            1000.00	1.5000e+12
IC3H7+C3H6=CH3+B1M3 0.000            7600.00	1.0000e+11
H+B1M3=>H2+0.5H+0.5C2H3+0.5C3H6+0.5LC5H8 2.000            2825.33	3.0000e+06
CH3+B1M3=>0.5H+CH4+0.5C2H3+0.5C3H6+0.5LC5H8 2.000            3778.15	3.0000e+04
C2H3+B1M3=>0.5H+C2H4+0.5C2H3+0.5C3H6+0.5LC5H8 2.000            2730.26	6.7800e+04
C2H5+B1M3=>0.5H+C2H6+0.5C2H3+0.5C3H6+0.5LC5H8 2.000            5405.42	2.0000e+04
NC3H7+B1M3=>0.5H+0.5C2H3+C3H8+0.5C3H6+0.5LC5H8 2.000            5405.42	1.3500e+04
IC3H7+B1M3=>0.5H+0.5C2H3+C3H8+0.5C3H6+0.5LC5H8 2.000            8487.19	1.3500e+04
C3H5-S+B1M3=>0.5H+0.5C2H3+1.5C3H6+0.5LC5H8 2.000            3301.28	2.7000e+04
C3H5-T+B1M3=>0.5H+0.5C2H3+1.5C3H6+0.5LC5H8 2.000            3301.28	2.7000e+04
C3H5-A+B1M3=>0.5H+0.5C2H3+1.5C3H6+0.5LC5H8 2.000            11294.92	5.3900e+04
C4H5+B1M3=>0.5H+0.5C2H3+0.5C3H6+C4H6+0.5LC5H8 2.000            3301.28	2.7000e+04
C4H71-4+B1M3=>0.5H+0.5C2H3+0.5C3H6+C4H8-1+0.5LC5H8 2.000            5309.47	1.3500e+04

C4H71-3+B1M3=>0.5H+0.5C2H3+0.5C3H6+C4H8-2+0.5LC5H8 2.000 12168.47	3.4000e+04
IC4H7+B1M3=>0.5H+0.5C2H3+0.5C3H6+IC4H8+0.5LC5H8 2.000 12168.47	2.7000e+04
C4H3+B1M3=>0.5H+0.5C2H3+0.5C3H6+C4H4+0.5LC5H8 2.000 3969.14	4.0900e+04
C6H5+B1M3=>0.5H+0.5C2H3+0.5C3H6+C6H6+0.5LC5H8 1.000 1067.64	3.7000e+07
O+B1M3=>0.5H+OH+0.5C2H3+0.5C3H6+0.5LC5H8 2.000 1404.15	2.3500e+06
O2+B1M3=>0.5H+HO2+0.5C2H3+0.5C3H6+0.5LC5H8 2.000 41863.68	1.7000e+06
OH+B1M3=>0.5H+H2O+0.5C2H3+0.5C3H6+0.5LC5H8 1.000 -695.37	1.5000e+09
HO2+B1M3=>0.5H+H2O2+0.5C2H3+0.5C3H6+0.5LC5H8 2.000 14404.74	8.0000e+05
CH3O+B1M3=>0.5H+CH3OH+0.5C2H3+0.5C3H6+0.5LC5H8 2.000 463.75	4.2800e+04
CH2OH+B1M3=>0.5H+CH3OH+0.5C2H3+0.5C3H6+0.5LC5H8 2.000 8777.08	2.8300e+04
HCO+B1M3=>0.5H+CH2O+0.5C2H3+0.5C3H6+0.5LC5H8 2.000 10810.03	1.2600e+05
CH3CO+B1M3=>0.5H+0.5C2H3+CH3CHO+0.5C3H6+0.5LC5H8 2.000 12459.86	1.3500e+05
CH2CHO+B1M3=>0.5H+0.5C2H3+CH3CHO+0.5C3H6+0.5LC5H8 2.000 10034.85	2.3000e+04
C3H3+B1M3=>0.5H+0.5C2H3+0.5C3H6+C3H4-A+0.5LC5H8 2.000 12459.86	2.7000e+04
HCCO+B1M3=>0.5H+0.5C2H3+CH2CO+0.5C3H6+0.5LC5H8 2.000 3969.14	4.2800e+04
CH3O2+B1M3=>0.5H+CH3O2H+0.5C2H3+0.5C3H6+0.5LC5H8 2.000 11100.93	7.6000e+04
C2H5O2+B1M3=>0.5H+C2H5O2H+0.5C2H3+0.5C3H6+0.5LC5H8 2.000 11100.93	7.6000e+04
NC3H7O2+B1M3=>0.5H+0.5C2H3+0.5C3H6+C3H7OOH+0.5LC5H8 2.000 11100.93	7.6000e+04
IC3H7O2+B1M3=>0.5H+0.5C2H3+0.5C3H6+C3H7OOH+0.5LC5H8 2.000 11100.93	7.6000e+04

HCO3+B1M3=>0.5H+0.5C2H3+0.5C3H6+HCO3H+0.5LC5H8 2.000            5213.56	3.4000e+04
CH3CO3+B1M3=>0.5H+0.5C2H3+CH3CO3H+0.5C3H6+0.5LC5H8 2.000            5213.56	3.4000e+04
CH3COCH2+B1M3=>0.5H+0.5C2H3+0.5C3H6+CH3COCH3+0.5LC5H8 2.000            6654.87	2.3000e+04
B1M3+C6H5O=>0.5H+0.5C2H3+0.5C3H6+0.5LC5H8+C6H5OH 2.000            11003.95	2.7000e+04
B1M3+C5H7=>0.5H+0.5C2H3+0.5C3H6+1.5LC5H8 2.000            13431.81	2.7000e+04
B1M3+C7H7=>0.5H+0.5C2H3+0.5C3H6+0.5LC5H8+C7H8 2.000            14404.74	1.3500e+04
B1M3+CH3C6H4=>0.5H+0.5C2H3+0.5C3H6+0.5LC5H8+C7H8 1.000            1067.64	3.7000e+07
B1M3+RCRESOLO=>0.5H+0.5C2H3+0.5C3H6+0.5LC5H8+CRESOL 2.000            11294.92	2.7000e+04
B1M3+C10H7=>0.5H+0.5C2H3+0.5C3H6+C10H8+0.5LC5H8 1.000            1067.64	3.7000e+07
B1M3+INDENYL=>0.5H+0.5C2H3+0.5C3H6+0.5LC5H8+INDENE 2.000            14404.74	1.3000e+04
B1M3+C10H6CH3=>0.5H+0.5C2H3+0.5C3H6+0.5LC5H8+C10H7CH3 1.000            1067.64	3.7000e+07
H+B1M2=>H2+0.5H+0.5C2H4+0.5C3H5-S+0.5LC5H8 2.000            4000.00	2.1000e+07
CH3+B1M2=>0.5H+CH4+0.5C2H4+0.5C3H5-S+0.5LC5H8 2.000            5000.00	2.1000e+05
C2H3+B1M2=>0.5H+1.5C2H4+0.5C3H5-S+0.5LC5H8 2.000            3900.00	4.7460e+05
C2H5+B1M2=>0.5H+C2H6+0.5C2H4+0.5C3H5-S+0.5LC5H8 2.000            6700.00	1.4000e+05
NC3H7+B1M2=>0.5H+0.5C2H4+C3H8+0.5C3H5-S+0.5LC5H8 2.000            6700.00	9.4500e+04
IC3H7+B1M2=>0.5H+0.5C2H4+C3H8+0.5C3H5-S+0.5LC5H8 2.000            9900.00	9.4500e+04
C3H5-S+B1M2=>0.5H+0.5C2H4+C3H6+0.5C3H5-S+0.5LC5H8 2.000            4500.00	1.8900e+05
C3H5-T+B1M2=>0.5H+0.5C2H4+C3H6+0.5C3H5-S+0.5LC5H8 2.000            4500.00	1.8900e+05

C3H5-A+B1M2=>0.5H+0.5C2H4+C3H6+0.5C3H5-S+0.5LC5H8 2.000 12800.00	3.7730e+05
C4H5+B1M2=>0.5H+0.5C2H4+0.5C3H5-S+C4H6+0.5LC5H8 2.000 4500.00	1.8900e+05
C4H71-4+B1M2=>0.5H+0.5C2H4+0.5C3H5-S+C4H8-1+0.5LC5H8 2.000 6600.00	9.4500e+04
C4H71-3+B1M2=>0.5H+0.5C2H4+0.5C3H5-S+C4H8-2+0.5LC5H8 2.000 13700.00	2.3800e+05
IC4H7+B1M2=>0.5H+0.5C2H4+0.5C3H5-S+IC4H8+0.5LC5H8 2.000 13700.00	1.8900e+05
C4H3+B1M2=>0.5H+0.5C2H4+0.5C3H5-S+C4H4+0.5LC5H8 2.000 5200.00	2.8630e+05
C6H5+B1M2=>0.5H+0.5C2H4+0.5C3H5-S+C6H6+0.5LC5H8 1.000 2000.00	2.5900e+08
O+B1M2=>0.5H+OH+0.5C2H4+0.5C3H5-S+0.5LC5H8 2.000 2500.00	1.6450e+07
O2+B1M2=>0.5H+HO2+0.5C2H4+0.5C3H5-S+0.5LC5H8 2.000 44000.00	1.1900e+07
OH+B1M2=>0.5H+H2O+0.5C2H4+0.5C3H5-S+0.5LC5H8 1.000 50.00	1.0500e+10
HO2+B1M2=>0.5H+H2O2+0.5C2H4+0.5C3H5-S+0.5LC5H8 2.000 16000.00	5.6000e+06
CH3O+B1M2=>0.5H+CH3OH+0.5C2H4+0.5C3H5-S+0.5LC5H8 2.000 1500.00	2.9960e+05
CH2OH+B1M2=>0.5H+CH3OH+0.5C2H4+0.5C3H5-S+0.5LC5H8 2.000 10200.00	1.9810e+05
HCO+B1M2=>0.5H+CH2O+0.5C2H4+0.5C3H5-S+0.5LC5H8 2.000 12300.00	8.8200e+05
CH3CO+B1M2=>0.5H+0.5C2H4+CH3CHO+0.5C3H5-S+0.5LC5H8 2.000 14000.00	9.4500e+05
CH2CHO+B1M2=>0.5H+0.5C2H4+CH3CHO+0.5C3H5-S+0.5LC5H8 2.000 11500.00	1.6100e+05
C3H3+B1M2=>0.5H+0.5C2H4+0.5C3H5-S+C3H4-A+0.5LC5H8 2.000 14000.00	1.8900e+05
HCCO+B1M2=>0.5H+0.5C2H4+CH2CO+0.5C3H5-S+0.5LC5H8 2.000 5200.00	2.9960e+05
CH3O2+B1M2=>0.5H+CH3O2H+0.5C2H4+0.5C3H5-S+0.5LC5H8 2.000 12600.00	5.3200e+05

C2H5O2+B1M2=>0.5H+C2H5O2H+0.5C2H4+0.5C3H5-S+0.5LC5H8 2.000        12600.00	5.3200e+05
NC3H7O2+B1M2=>0.5H+0.5C2H4+0.5C3H5-S+C3H7OOH+0.5LC5H8 2.000        12600.00	5.3200e+05
IC3H7O2+B1M2=>0.5H+0.5C2H4+0.5C3H5-S+C3H7OOH+0.5LC5H8 2.000        12600.00	5.3200e+05
HCO3+B1M2=>0.5H+0.5C2H4+0.5C3H5-S+HCO3H+0.5LC5H8 2.000        6500.00	2.3800e+05
CH3CO3+B1M2=>0.5H+0.5C2H4+CH3CO3H+0.5C3H5-S+0.5LC5H8 2.000        6500.00	2.3800e+05
CH3COCH2+B1M2=>0.5H+0.5C2H4+0.5C3H5-S+CH3COCH3+0.5LC5H8 2.000        8000.00	1.6100e+05
B1M2+C6H5O=>0.5H+0.5C2H4+0.5C3H5-S+0.5LC5H8+C6H5OH 2.000        12500.00	1.8900e+05
B1M2+C5H7=>0.5H+0.5C2H4+0.5C3H5-S+1.5LC5H8 2.000        15000.00	1.8900e+05
B1M2+C7H7=>0.5H+0.5C2H4+0.5C3H5-S+0.5LC5H8+C7H8 2.000        16000.00	9.4500e+04
B1M2+CH3C6H4=>0.5H+0.5C2H4+0.5C3H5-S+0.5LC5H8+C7H8 1.000        2000.00	2.5900e+08
B1M2+RCRESOLO=>0.5H+0.5C2H4+0.5C3H5-S+0.5LC5H8+CRESOL 2.000        12800.00	1.8900e+05
B1M2+C10H7=>0.5H+0.5C2H4+0.5C3H5-S+C10H8+0.5LC5H8 1.000        2000.00	2.5900e+08
B1M2+INDENYL=>0.5H+0.5C2H4+0.5C3H5-S+0.5LC5H8+INDENE 2.000        16000.00	9.1000e+04
B1M2+C10H6CH3=>0.5H+0.5C2H4+0.5C3H5-S+0.5LC5H8+C10H7CH3 1.000        2000.00	2.5900e+08
H+B1M2=>H2+0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6 2.000        4000.00	9.0000e+06
CH3+B1M2=>CH4+0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6 2.000        5000.00	9.0000e+04
C2H3+B1M2=>0.3CH3+0.7C2H5+C2H4+0.7C3H4-A+0.3C4H6 2.000        3900.00	2.0340e+05
C2H5+B1M2=>0.3CH3+C2H6+0.7C2H5+0.7C3H4-A+0.3C4H6 2.000        6700.00	6.0000e+04
NC3H7+B1M2=>0.3CH3+0.7C2H5+C3H8+0.7C3H4-A+0.3C4H6 2.000        6700.00	4.0500e+04

IC3H7+B1M2=>0.3CH3+0.7C2H5+C3H8+0.7C3H4-A+0.3C4H6 2.000            9900.00	4.0500e+04
C3H5-S+B1M2=>0.3CH3+0.7C2H5+C3H6+0.7C3H4-A+0.3C4H6 2.000            4500.00	8.1000e+04
C3H5-T+B1M2=>0.3CH3+0.7C2H5+C3H6+0.7C3H4-A+0.3C4H6 2.000            4500.00	8.1000e+04
C3H5-A+B1M2=>0.3CH3+0.7C2H5+C3H6+0.7C3H4-A+0.3C4H6 2.000            12800.00	1.6170e+05
C4H5+B1M2=>0.3CH3+0.7C2H5+0.7C3H4-A+1.3C4H6 2.000            4500.00	8.1000e+04
C4H71-4+B1M2=>0.3CH3+0.7C2H5+0.7C3H4-A+C4H8-1+0.3C4H6 2.000            6600.00	4.0500e+04
C4H71-3+B1M2=>0.3CH3+0.7C2H5+0.7C3H4-A+C4H8-2+0.3C4H6 2.000            13700.00	1.0200e+05
IC4H7+B1M2=>0.3CH3+0.7C2H5+0.7C3H4-A+IC4H8+0.3C4H6 2.000            13700.00	8.1000e+04
C4H3+B1M2=>0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6+C4H4 2.000            5200.00	1.2270e+05
C6H5+B1M2=>0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6+C6H6 1.000            2000.00	1.1100e+08
O+B1M2=>OH+0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6 2.000            2500.00	7.0500e+06
O2+B1M2=>HO2+0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6 2.000            44000.00	5.1000e+06
OH+B1M2=>H2O+0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6 1.000            50.00	4.5000e+09
HO2+B1M2=>H2O2+0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6 2.000            16000.00	2.4000e+06
CH3O+B1M2=>0.3CH3+CH3OH+0.7C2H5+0.7C3H4-A+0.3C4H6 2.000            1500.00	1.2840e+05
CH2OH+B1M2=>0.3CH3+CH3OH+0.7C2H5+0.7C3H4-A+0.3C4H6 2.000            10200.00	8.4900e+04
HCO+B1M2=>0.3CH3+CH2O+0.7C2H5+0.7C3H4-A+0.3C4H6 2.000            12300.00	3.7800e+05
CH3CO+B1M2=>0.3CH3+0.7C2H5+CH3CHO+0.7C3H4-A+0.3C4H6 2.000            14000.00	4.0500e+05
CH2CHO+B1M2=>0.3CH3+0.7C2H5+CH3CHO+0.7C3H4-A+0.3C4H6 2.000            11500.00	6.9000e+04

C3H3+B1M2=>0.3CH3+0.7C2H5+1.7C3H4-A+0.3C4H6 2.000 14000.00	8.1000e+04
HCCO+B1M2=>0.3CH3+0.7C2H5+CH2CO+0.7C3H4-A+0.3C4H6 2.000 5200.00	1.2840e+05
CH3O2+B1M2=>0.3CH3+CH3O2H+0.7C2H5+0.7C3H4-A+0.3C4H6 2.000 12600.00	2.2800e+05
C2H5O2+B1M2=>0.3CH3+0.7C2H5+C2H5O2H+0.7C3H4-A+0.3C4H6 2.000 12600.00	2.2800e+05
NC3H7O2+B1M2=>0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6+C3H7OOH 2.000 12600.00	2.2800e+05
IC3H7O2+B1M2=>0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6+C3H7OOH 2.000 12600.00	2.2800e+05
HCO3+B1M2=>0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6+HCO3H 2.000 6500.00	1.0200e+05
CH3CO3+B1M2=>0.3CH3+0.7C2H5+CH3CO3H+0.7C3H4-A+0.3C4H6 2.000 6500.00	1.0200e+05
CH3COCH2+B1M2=>0.3CH3+0.7C2H5+0.7C3H4-A+CH3COCH3+0.3C4H6 2.000 8000.00	6.9000e+04
B1M2+C6H5O=>0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6+C6H5OH 2.000 12500.00	8.1000e+04
B1M2+C5H7=>0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6+LC5H8 2.000 15000.00	8.1000e+04
B1M2+C7H7=>0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6+C7H8 2.000 16000.00	4.0500e+04
B1M2+CH3C6H4=>0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6+C7H8 1.000 2000.00	1.1100e+08
B1M2+RCRESOLO=>0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6+CRESOL 2.000 12800.00	8.1000e+04
B1M2+C10H7=>0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6+C10H8 1.000 2000.00	1.1100e+08
B1M2+INDENYL=>0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6+INDENE 2.000 16000.00	3.9000e+04
B1M2+C10H6CH3=>0.3CH3+0.7C2H5+0.7C3H4-A+0.3C4H6+C10H7CH3 1.000 2000.00	1.1100e+08
H+B2M2=>H2+H+LC5H8 2.000 4000.00	1.2000e+07
CH3+B2M2=>H+CH4+LC5H8 2.000 5000.00	1.2000e+05

C2H3+B2M2=>H+C2H4+LC5H8 2.000        3900.00	2.7120e+05
C2H5+B2M2=>H+C2H6+LC5H8 2.000        6700.00	8.0000e+04
NC3H7+B2M2=>H+C3H8+LC5H8 2.000        6700.00	5.4000e+04
IC3H7+B2M2=>H+C3H8+LC5H8 2.000        9900.00	5.4000e+04
C3H5-S+B2M2=>H+C3H6+LC5H8 2.000        4500.00	1.0800e+05
C3H5-T+B2M2=>H+C3H6+LC5H8 2.000        4500.00	1.0800e+05
C3H5-A+B2M2=>H+C3H6+LC5H8 2.000        12800.00	2.1560e+05
C4H5+B2M2=>H+C4H6+LC5H8 2.000        4500.00	1.0800e+05
C4H71-4+B2M2=>H+C4H8-1+LC5H8 2.000        6600.00	5.4000e+04
C4H71-3+B2M2=>H+C4H8-2+LC5H8 2.000        13700.00	1.3600e+05
IC4H7+B2M2=>H+IC4H8+LC5H8 2.000        13700.00	1.0800e+05
C4H3+B2M2=>H+C4H4+LC5H8 2.000        5200.00	1.6360e+05
C6H5+B2M2=>H+C6H6+LC5H8 1.000        2000.00	1.4800e+08
O+B2M2=>H+OH+LC5H8 2.000        2500.00	9.4000e+06
O2+B2M2=>H+HO2+LC5H8 2.000        44000.00	6.8000e+06
OH+B2M2=>H+H2O+LC5H8 1.000        50.00	6.0000e+09
HO2+B2M2=>H+H2O2+LC5H8 2.000        16000.00	3.2000e+06
CH3O+B2M2=>H+CH3OH+LC5H8 2.000        1500.00	1.7120e+05
CH2OH+B2M2=>H+CH3OH+LC5H8 2.000        10200.00	1.1320e+05



HCO+B2M2=>H+CH2O+LC5H8	5.0400e+05
2.000 12300.00	
CH3CO+B2M2=>H+CH3CHO+LC5H8	5.4000e+05
2.000 14000.00	
CH2CHO+B2M2=>H+CH3CHO+LC5H8	9.2000e+04
2.000 11500.00	
C3H3+B2M2=>H+C3H4-A+LC5H8	1.0800e+05
2.000 14000.00	
HCCO+B2M2=>H+CH2CO+LC5H8	1.7120e+05
2.000 5200.00	
CH3O2+B2M2=>H+CH3O2H+LC5H8	3.0400e+05
2.000 12600.00	
C2H5O2+B2M2=>H+C2H5O2H+LC5H8	3.0400e+05
2.000 12600.00	
NC3H7O2+B2M2=>H+C3H7OOH+LC5H8	3.0400e+05
2.000 12600.00	
IC3H7O2+B2M2=>H+C3H7OOH+LC5H8	3.0400e+05
2.000 12600.00	
HCO3+B2M2=>H+HCO3H+LC5H8	1.3600e+05
2.000 6500.00	
CH3CO3+B2M2=>H+CH3CO3H+LC5H8	1.3600e+05
2.000 6500.00	
CH3COCH2+B2M2=>H+CH3COCH3+LC5H8	9.2000e+04
2.000 8000.00	
B2M2+C6H5O=>H+LC5H8+C6H5OH	1.0800e+05
2.000 12500.00	
B2M2+C5H7=>H+2LC5H8	1.0800e+05
2.000 15000.00	
B2M2+C7H7=>H+LC5H8+C7H8	5.4000e+04
2.000 16000.00	
B2M2+CH3C6H4=>H+LC5H8+C7H8	1.4800e+08
1.000 2000.00	
B2M2+RCRESOLO=>H+LC5H8+CRESOL	1.0800e+05
2.000 12800.00	
B2M2+C10H7=>H+C10H8+LC5H8	1.4800e+08
1.000 2000.00	
B2M2+INDENYL=>H+LC5H8+INDENE	5.2000e+04
2.000 16000.00	

B2M2+C10H6CH3=>H+LC5H8+C10H7CH3	1.4800e+08
1.000 2000.00	
DIALLYL=2C3H5-A	4.9000e+22 -
2.060 63355.50	
PLOG / 1.000000e+00 5.070000e+47 -9.700000e+00 7.268000e+04	
/	
PLOG / 4.000000e+00 4.220000e+39 -7.300000e+00 6.939000e+04	
/	
PLOG / 1.000000e+01 2.120000e+35 -6.000000e+00 6.762000e+04	
/	
C3H6+C3H5-A=>H+DIALLYL	2.0000e+10
0.000 15000.00	
RC6H9A=RCYC6H9	1.0000e+10
0.000 18000.00	
C3H5-A+C3H4-P=H+CYC6H8	1.5000e+11
0.000 15000.00	
C3H5-A+C3H4-A=H+CYC6H8	1.5000e+11
0.000 15000.00	
C3H6+C3H5-A=H+CYC6H10	2.5000e+10
0.000 15000.00	
C3H6+C3H5-A=CH3+LC5H8	2.0000e+10
0.000 15000.00	
C3H5-A+C4H8-1=CH3+CYC6H10	1.0000e+10
0.000 15000.00	
C3H5-A+C4H8-2=C2H5+LC5H8	7.0000e+10
0.000 15000.00	
C3H5-A+C4H6=CH3+CYC6H8	1.0000e+11
0.000 15000.00	
C3H5-A+C3H5-S=>CYC6H10	6.0000e+12
0.000 0.00	
LC5H8=>H+C5H7	1.0000e+15
0.000 80000.00	
LC5H8=>CH3+C4H5	1.0000e+16
0.000 87000.00	
LC5H8=>C2H3+C3H5-S	7.5000e+16
0.000 105000.00	
C2H3+C3H5-A=>0.05C2H4+0.05C3H4-A+0.95LC5H8	5.0000e+12
0.000 0.00	
C6H6+LC5H8=>H2+H+CH3+C10H8	5.0000e+11
0.000 44000.00	

H+LC5H8=>0.5CH3+0.3C2H4+0.2C2H3+0.2C3H6+0.3C3H5-S+0.5C4H6	3.0000e+13
0.000 2000.00	
C2H3+C3H6=>H+LC5H8	6.0000e+10
0.000 6000.00	
C2H3+C4H8-1=>CH3+LC5H8	4.0000e+11
0.000 6000.00	
C2H3+C4H8-2=>CH3+LC5H8	4.0000e+11
0.000 6000.00	
C2H3+IC4H8=>CH3+LC5H8	4.0000e+11
0.000 6000.00	
C2H3+LC5H8=>C2H5+C5H6	1.0000e+12
0.000 3000.00	
C2H4+C3H5-A=H+LC5H8	3.3000e+10
0.000 22000.00	
C3H6+C3H5-A=>0.8H2+CH3+0.8C5H6+0.2LC5H8	5.0000e+10
0.000 22000.00	
C3H5-A+IC4H8=>C2H5+LC5H8	2.0000e+11
0.000 20000.00	
C3H6+C3H5-S=C2H5+C4H6	1.0000e+11
0.000 6000.00	
C3H6+C3H5-S=CH3+LC5H8	3.0000e+10
0.000 6000.00	
C3H6+C3H5-S=C2H3+C4H8-1	7.0000e+10
0.000 6000.00	
IC4H8+C4H71-3=IC3H7+LC5H8	1.5000e+11
0.000 15000.00	
C4H71-4+C4H6=>C3H5-A+LC5H8	3.0000e+11
0.000 6000.00	
C3H6+IC4H7=C2H5+LC5H8	2.5000e+11
0.000 18000.00	
C3H6+IC4H7=CH3+CYC6H10	3.5000e+11
0.000 18000.00	
C2H2+C3H6=LC5H8	1.5000e+11
0.000 32000.00	
C2H4+LC5H8=>H+CH3+CYC6H8	2.5000e+10
0.000 30000.00	
O+LC5H8=>CO+C4H8-2	4.0000e+11
0.000 0.00	

O+LC5H8=>CO+C4H8-1 0.000            0.00	4.0000e+11
OH+LC5H8=CH2O+C4H71-3 0.000            0.00	3.0000e+12
O2+LC5H8=>OH+CO+C2H5+C2H2 0.000            36000.00	5.0000e+13
C2H+C4H4=C6H5 0.000            0.00	3.0000e+11
C5H7=CH3+C4H4 0.000            58000.00	1.0000e+13
C5H7=H+C5H6 0.000            35000.00	5.0000e+12
O2+C5H7=>OH+CO+C4H6 0.000            0.00	1.0000e+11
C2H2+C3H5-A=>C5H7 0.000            13000.00	1.5000e+11
C2H4+C3H5-A=>H2+C5H7 0.000            19000.00	2.0000e+10
OH+C5H7=>CH2O+C4H6 0.000            0.00	2.0000e+12
H+LC5H8=>H2+0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6 2.000            4000.00	9.0000e+06
CH3+LC5H8=>0.8H+CH4+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6 2.000            5000.00	9.0000e+04
C2H3+LC5H8=>0.8H+C2H4+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6 2.000            3900.00	2.0340e+05
C2H5+LC5H8=>0.8H+C2H6+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6 2.000            6700.00	6.0000e+04
NC3H7+LC5H8=>0.8H+0.2C2H3+C3H8+0.1C3H4-P+0.1C3H4-A+0.8C5H6 2.000            6700.00	4.0500e+04
IC3H7+LC5H8=>0.8H+0.2C2H3+C3H8+0.1C3H4-P+0.1C3H4-A+0.8C5H6 2.000            9900.00	4.0500e+04
C3H5-S+LC5H8=>0.8H+0.2C2H3+C3H6+0.1C3H4-P+0.1C3H4-A+0.8C5H6 2.000            4500.00	8.1000e+04
C3H5-T+LC5H8=>0.8H+0.2C2H3+C3H6+0.1C3H4-P+0.1C3H4-A+0.8C5H6 2.000            4500.00	8.1000e+04
C3H5-A+LC5H8=>0.8H+0.2C2H3+C3H6+0.1C3H4-P+0.1C3H4-A+0.8C5H6 2.000            12800.00	1.6170e+05

C4H5+LC5H8=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+C4H6+0.8C5H6 8.1000e+04  
2.000 4500.00

C4H71-4+LC5H8=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+C4H8-1+0.8C5H6 4.0500e+04  
2.000 6600.00

C4H71-3+LC5H8=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+C4H8-2+0.8C5H6 1.0200e+05  
2.000 13700.00

IC4H7+LC5H8=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+IC4H8+0.8C5H6 8.1000e+04  
2.000 13700.00

C4H3+LC5H8=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+C4H4+0.8C5H6 1.2270e+05  
2.000 5200.00

C6H5+LC5H8=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+C6H6+0.8C5H6 1.1100e+08  
1.000 2000.00

O+LC5H8=>0.8H+OH+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6 7.0500e+06  
2.000 2500.00

O2+LC5H8=>0.8H+HO2+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6 5.1000e+06  
2.000 44000.00

OH+LC5H8=>0.8H+H2O+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6 4.5000e+09  
1.000 50.00

HO2+LC5H8=>0.8H+H2O2+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6 2.4000e+06  
2.000 16000.00

CH3O+LC5H8=>0.8H+CH3OH+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6 1.2840e+05  
2.000 1500.00

CH2OH+LC5H8=>0.8H+CH3OH+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6 8.4900e+04  
2.000 10200.00

HCO+LC5H8=>0.8H+CH2O+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6 3.7800e+05  
2.000 12300.00

CH3CO+LC5H8=>0.8H+0.2C2H3+CH3CHO+0.1C3H4-P+0.1C3H4-A+0.8C5H6 4.0500e+05  
2.000 14000.00

CH2CHO+LC5H8=>0.8H+0.2C2H3+CH3CHO+0.1C3H4-P+0.1C3H4-A+0.8C5H6 6.9000e+04  
2.000 11500.00

C3H3+LC5H8=>0.8H+0.2C2H3+0.1C3H4-P+1.1C3H4-A+0.8C5H6 8.1000e+04  
2.000 14000.00

HCCO+LC5H8=>0.8H+0.2C2H3+CH2CO+0.1C3H4-P+0.1C3H4-A+0.8C5H6 1.2840e+05  
2.000 5200.00

CH3O2+LC5H8=>0.8H+CH3O2H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6 2.2800e+05  
2.000 12600.00

C2H5O2+LC5H8=>0.8H+C2H5O2H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6 2.2800e+05  
2.000 12600.00

NC3H7O2+LC5H8=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6+C3H7OOH  
 2.2800e+05      2.000      12600.00

IC3H7O2+LC5H8=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6+C3H7OOH  
 2.2800e+05      2.000      12600.00

HCO3+LC5H8=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6+HCO3H 1.0200e+05  
 2.000      6500.00

CH3CO3+LC5H8=>0.8H+0.2C2H3+CH3CO3H+0.1C3H4-P+0.1C3H4-A+0.8C5H6 1.0200e+05  
 2.000      6500.00

CH3COCH2+LC5H8=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+CH3COCH3+0.8C5H6  
 6.9000e+04      2.000      8000.00

LC5H8+C6H5O=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6+C6H5OH 8.1000e+04  
 2.000      12500.00

C5H7+LC5H8=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6+LC5H8 8.1000e+04  
 2.000      15000.00

LC5H8+C7H7=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6+C7H8 4.0500e+04  
 2.000      16000.00

LC5H8+CH3C6H4=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6+C7H8 1.1100e+08  
 1.000      2000.00

LC5H8+RCRESOLO=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6+CRESOL  
 8.1000e+04      2.000      12800.00

LC5H8+C10H7=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6+C10H8 1.1100e+08  
 1.000      2000.00

LC5H8+INDENYL=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6+INDENE 3.9000e+04  
 2.000      16000.00

LC5H8+C10H6CH3=>0.8H+0.2C2H3+0.1C3H4-P+0.1C3H4-A+0.8C5H6+C10H7CH3  
 1.1100e+08      1.000      2000.00

H+DIALLYL=>H2+RC6H9A      3.6000e+07  
 2.000      4000.00

CH3+DIALLYL=>CH4+RC6H9A      3.6000e+05  
 2.000      5000.00

C2H3+DIALLYL=>C2H4+RC6H9A      8.1360e+05  
 2.000      3900.00

C2H5+DIALLYL=>C2H6+RC6H9A      2.4000e+05  
 2.000      6700.00

NC3H7+DIALLYL=>C3H8+RC6H9A      1.6200e+05  
 2.000      6700.00

IC3H7+DIALLYL=>C3H8+RC6H9A      1.6200e+05  
 2.000      9900.00

C3H5-S+DIALLYL=>C3H6+RC6H9A 2.000 4500.00	3.2400e+05
C3H5-T+DIALLYL=>C3H6+RC6H9A 2.000 4500.00	3.2400e+05
C3H5-A+DIALLYL=>C3H6+RC6H9A 2.000 12800.00	6.4680e+05
C4H5+DIALLYL=>C4H6+RC6H9A 2.000 4500.00	3.2400e+05
C4H71-4+DIALLYL=>C4H8-1+RC6H9A 2.000 6600.00	1.6200e+05
C4H71-3+DIALLYL=>C4H8-2+RC6H9A 2.000 13700.00	4.0800e+05
IC4H7+DIALLYL=>IC4H8+RC6H9A 2.000 13700.00	3.2400e+05
C4H3+DIALLYL=>C4H4+RC6H9A 2.000 5200.00	4.9080e+05
C6H5+DIALLYL=>C6H6+RC6H9A 1.000 2000.00	4.4400e+08
O+DIALLYL=>OH+RC6H9A 2.000 2500.00	2.8200e+07
O2+DIALLYL=>HO2+RC6H9A 2.000 44000.00	2.0400e+07
OH+DIALLYL=>H2O+RC6H9A 1.000 50.00	1.8000e+10
HO2+DIALLYL=>H2O2+RC6H9A 2.000 16000.00	9.6000e+06
CH3O+DIALLYL=>CH3OH+RC6H9A 2.000 1500.00	5.1360e+05
CH2OH+DIALLYL=>CH3OH+RC6H9A 2.000 10200.00	3.3960e+05
HCO+DIALLYL=>CH2O+RC6H9A 2.000 12300.00	1.5120e+06
CH3CO+DIALLYL=>CH3CHO+RC6H9A 2.000 14000.00	1.6200e+06
CH2CHO+DIALLYL=>CH3CHO+RC6H9A 2.000 11500.00	2.7600e+05
C3H3+DIALLYL=>C3H4-A+RC6H9A 2.000 14000.00	3.2400e+05

HCCO+DIALLYL=>CH2CO+RC6H9A 2.000        5200.00	5.1360e+05
CH3O2+DIALLYL=>CH3O2H+RC6H9A 2.000        12600.00	9.1200e+05
C2H5O2+DIALLYL=>C2H5O2H+RC6H9A 2.000        12600.00	9.1200e+05
NC3H7O2+DIALLYL=>C3H7OOH+RC6H9A 2.000        12600.00	9.1200e+05
IC3H7O2+DIALLYL=>C3H7OOH+RC6H9A 2.000        12600.00	9.1200e+05
HCO3+DIALLYL=>HCO3H+RC6H9A 2.000        6500.00	4.0800e+05
CH3CO3+DIALLYL=>CH3CO3H+RC6H9A 2.000        6500.00	4.0800e+05
CH3COCH2+DIALLYL=>CH3COCH3+RC6H9A 2.000        8000.00	2.7600e+05
DIALLYL+C6H5O=>RC6H9A+C6H5OH 2.000        12500.00	3.2400e+05
C5H7+DIALLYL=>LC5H8+RC6H9A 2.000        15000.00	3.2400e+05
DIALLYL+C7H7=>RC6H9A+C7H8 2.000        16000.00	1.6200e+05
DIALLYL+CH3C6H4=>RC6H9A+C7H8 1.000        2000.00	4.4400e+08
DIALLYL+RCRESOLO=>RC6H9A+CRESOL 2.000        12800.00	3.2400e+05
DIALLYL+C10H7=>C10H8+RC6H9A 1.000        2000.00	4.4400e+08
DIALLYL+INDENYL=>RC6H9A+INDENE 2.000        16000.00	1.5600e+05
DIALLYL+C10H6CH3=>RC6H9A+C10H7CH3 1.000        2000.00	4.4400e+08
O2+LC5H8=>CH3CHO+C2H3CHO 0.000        36000.00	5.0000e+13
CH3+NC4H10=>CH4+PC4H9 2.000        7443.70	1.8000e+05
C2H3+NC4H10=>C2H4+PC4H9 2.000        6239.48	4.0680e+05



C2H5+NC4H10=>C2H6+PC4H9 2.000 9289.16	1.2000e+05
NC3H7+NC4H10=>C3H8+PC4H9 2.000 9289.16	8.1000e+04
IC3H7+NC4H10=>C3H8+PC4H9 2.000 12725.62	8.1000e+04
C3H5-S+NC4H10=>C3H6+PC4H9 2.000 6897.45	1.6200e+05
C3H5-T+NC4H10=>C3H6+PC4H9 2.000 6897.45	1.6200e+05
C3H5-A+NC4H10=>C3H6+PC4H9 2.000 15810.16	3.2340e+05
NC4H10+C4H5=>PC4H9+C4H6 2.000 6897.45	1.6200e+05
NC4H10+C4H71-4=>PC4H9+C4H8-1 2.000 9181.05	8.1000e+04
NC4H10+C4H71-3=>PC4H9+C4H8-2 2.000 16763.05	2.0400e+05
NC4H10+IC4H7=>PC4H9+IC4H8 2.000 16763.05	1.6200e+05
NC4H10+C4H3=>PC4H9+C4H4 2.000 7661.72	2.4540e+05
NC4H10+C6H5=>PC4H9+C6H6 1.000 3864.72	2.2200e+08
O+NC4H10=>OH+PC4H9 2.000 4691.70	1.4100e+07
O2+NC4H10=>HO2+PC4H9 2.000 48272.65	1.0200e+07
HO2+NC4H10=>H2O2+PC4H9 2.000 19190.53	4.8000e+06
CH3O+NC4H10=>CH3OH+PC4H9 2.000 3572.50	2.5680e+05
CH2OH+NC4H10=>CH3OH+PC4H9 2.000 13045.84	1.6980e+05
HCO+NC4H10=>CH2O+PC4H9 2.000 15279.95	7.5600e+05
CH3CO+NC4H10=>CH3CHO+PC4H9 2.000 17080.28	8.1000e+05

CH2CHO+NC4H10=>CH3CHO+PC4H9	1.3800e+05
2.000 14430.30	
C3H3+NC4H10=>C3H4-A+PC4H9	1.6200e+05
2.000 17080.28	
HCCO+NC4H10=>CH2CO+PC4H9	2.5680e+05
2.000 7661.72	
CH3O2+NC4H10=>CH3O2H+PC4H9	4.5600e+05
2.000 15598.15	
C2H5O2+NC4H10=>C2H5O2H+PC4H9	4.5600e+05
2.000 15598.15	
NC4H10+NC3H7O2=>PC4H9+C3H7OOH	4.5600e+05
2.000 15598.15	
NC4H10+IC3H7O2=>PC4H9+C3H7OOH	4.5600e+05
2.000 15598.15	
NC4H10+HCO3=>PC4H9+HCO3H	2.0400e+05
2.000 9072.89	
CH3CO3+NC4H10=>CH3CO3H+PC4H9	2.0400e+05
2.000 9072.89	
CH3COCH2+NC4H10=>CH3COCH3+PC4H9	1.3800e+05
2.000 10690.26	
NC4H10+C6H5O=>PC4H9+C6H5OH	1.6200e+05
2.000 15492.11	
NC4H10+C5H7=>PC4H9+LC5H8	1.6200e+05
2.000 18136.38	
NC4H10+C7H7=>PC4H9+C7H8	8.1000e+04
2.000 19190.53	
NC4H10+CH3C6H4=>PC4H9+C7H8	2.2200e+08
1.000 3864.72	
NC4H10+RCRESOLO=>PC4H9+CRESOL	1.6200e+05
2.000 15810.16	
NC4H10+C10H7=>PC4H9+C10H8	2.2200e+08
1.000 3864.72	
NC4H10+INDENYL=>PC4H9+INDENE	7.8000e+04
2.000 19190.53	
NC4H10+C10H6CH3=>PC4H9+C10H7CH3	2.2200e+08
1.000 3864.72	
CH3+NC4H10=>CH4+SC4H9	1.2000e+05
2.000 5000.00	

C2H3+NC4H10=>C2H4+SC4H9 2.000        3900.00	2.7120e+05
C2H5+NC4H10=>C2H6+SC4H9 2.000        6700.00	8.0000e+04
NC3H7+NC4H10=>C3H8+SC4H9 2.000        6700.00	5.4000e+04
IC3H7+NC4H10=>C3H8+SC4H9 2.000        9900.00	5.4000e+04
C3H5-S+NC4H10=>C3H6+SC4H9 2.000        4500.00	1.0800e+05
C3H5-T+NC4H10=>C3H6+SC4H9 2.000        4500.00	1.0800e+05
C3H5-A+NC4H10=>C3H6+SC4H9 2.000        12800.00	2.1560e+05
NC4H10+C4H5=>SC4H9+C4H6 2.000        4500.00	1.0800e+05
NC4H10+C4H71-4=>SC4H9+C4H8-1 2.000        6600.00	5.4000e+04
NC4H10+C4H71-3=>SC4H9+C4H8-2 2.000        13700.00	1.3600e+05
NC4H10+IC4H7=>SC4H9+IC4H8 2.000        13700.00	1.0800e+05
NC4H10+C4H3=>SC4H9+C4H4 2.000        5200.00	1.6360e+05
NC4H10+C6H5=>SC4H9+C6H6 1.000        2000.00	1.4800e+08
O+NC4H10=>OH+SC4H9 2.000        2500.00	9.4000e+06
O2+NC4H10=>HO2+SC4H9 2.000        44000.00	6.8000e+06
HO2+NC4H10=>H2O2+SC4H9 2.000        16000.00	3.2000e+06
CH3O+NC4H10=>CH3OH+SC4H9 2.000        1500.00	1.7120e+05
CH2OH+NC4H10=>CH3OH+SC4H9 2.000        10200.00	1.1320e+05
HCO+NC4H10=>CH2O+SC4H9 2.000        12300.00	5.0400e+05

CH3CO+NC4H10=>CH3CHO+SC4H9	5.4000e+05
2.000 14000.00	
CH2CHO+NC4H10=>CH3CHO+SC4H9	9.2000e+04
2.000 11500.00	
C3H3+NC4H10=>C3H4-A+SC4H9	1.0800e+05
2.000 14000.00	
HCCO+NC4H10=>CH2CO+SC4H9	1.7120e+05
2.000 5200.00	
CH3O2+NC4H10=>CH3O2H+SC4H9	3.0400e+05
2.000 12600.00	
C2H5O2+NC4H10=>C2H5O2H+SC4H9	3.0400e+05
2.000 12600.00	
NC4H10+NC3H7O2=>SC4H9+C3H7OOH	3.0400e+05
2.000 12600.00	
NC4H10+IC3H7O2=>SC4H9+C3H7OOH	3.0400e+05
2.000 12600.00	
NC4H10+HCO3=>SC4H9+HCO3H	1.3600e+05
2.000 6500.00	
CH3CO3+NC4H10=>CH3CO3H+SC4H9	1.3600e+05
2.000 6500.00	
CH3COCH2+NC4H10=>CH3COCH3+SC4H9	9.2000e+04
2.000 8000.00	
NC4H10+C6H5O=>SC4H9+C6H5OH	1.0800e+05
2.000 12500.00	
NC4H10+C5H7=>SC4H9+LC5H8	1.0800e+05
2.000 15000.00	
NC4H10+C7H7=>SC4H9+C7H8	5.4000e+04
2.000 16000.00	
NC4H10+CH3C6H4=>SC4H9+C7H8	1.4800e+08
1.000 2000.00	
NC4H10+RCRESOLO=>SC4H9+CRESOL	1.0800e+05
2.000 12800.00	
NC4H10+C10H7=>SC4H9+C10H8	1.4800e+08
1.000 2000.00	
NC4H10+INDENYL=>SC4H9+INDENE	5.2000e+04
2.000 16000.00	
NC4H10+C10H6CH3=>SC4H9+C10H7CH3	1.4800e+08
1.000 2000.00	

C2H3+IC4H10=>C2H4+IC4H9 2.000        6239.48	6.1020e+05
NC3H7+IC4H10=>C3H8+IC4H9 2.000        9289.16	1.2150e+05
IC3H7+IC4H10=>C3H8+IC4H9 2.000        12725.62	1.2150e+05
C3H5-S+IC4H10=>C3H6+IC4H9 2.000        6897.45	2.4300e+05
C3H5-T+IC4H10=>C3H6+IC4H9 2.000        6897.45	2.4300e+05
C3H5-A+IC4H10=>C3H6+IC4H9 2.000        15810.16	4.8510e+05
IC4H10+C4H5=>IC4H9+C4H6 2.000        6897.45	2.4300e+05
IC4H10+C4H71-4=>IC4H9+C4H8-1 2.000        9181.05	1.2150e+05
IC4H10+C4H71-3=>IC4H9+C4H8-2 2.000        16763.05	3.0600e+05
IC4H10+IC4H7=>IC4H9+IC4H8 2.000        16763.05	2.4300e+05
IC4H10+C4H3=>IC4H9+C4H4 2.000        7661.72	3.6810e+05
IC4H10+C6H5=>IC4H9+C6H6 1.000        3864.72	3.3300e+08
CH2OH+IC4H10=>CH3OH+IC4H9 2.000        13045.84	2.5470e+05
HCO+IC4H10=>CH2O+IC4H9 2.000        15279.95	1.1340e+06
CH3CO+IC4H10=>CH3CHO+IC4H9 2.000        17080.28	1.2150e+06
CH2CHO+IC4H10=>CH3CHO+IC4H9 2.000        14430.30	2.0700e+05
C3H3+IC4H10=>C3H4-A+IC4H9 2.000        17080.28	2.4300e+05
HCCO+IC4H10=>CH2CO+IC4H9 2.000        7661.72	3.8520e+05
IC4H10+NC3H7O2=>IC4H9+C3H7OOH 2.000        15598.15	6.8400e+05

IC4H10+IC3H7O2=>IC4H9+C3H7OOH	6.8400e+05
2.000 15598.15	
IC4H10+HCO3=>IC4H9+HCO3H	3.0600e+05
2.000 9072.89	
CH3CO3+IC4H10=>CH3CO3H+IC4H9	3.0600e+05
2.000 9072.89	
CH3COCH2+IC4H10=>CH3COCH3+IC4H9	2.0700e+05
2.000 10690.26	
IC4H10+C6H5O=>IC4H9+C6H5OH	2.4300e+05
2.000 15492.11	
IC4H10+C5H7=>IC4H9+LC5H8	2.4300e+05
2.000 18136.38	
IC4H10+C7H7=>IC4H9+C7H8	1.2150e+05
2.000 19190.53	
IC4H10+CH3C6H4=>IC4H9+C7H8	3.3300e+08
1.000 3864.72	
IC4H10+RCRESOLO=>IC4H9+CRESOL	2.4300e+05
2.000 15810.16	
IC4H10+C10H7=>IC4H9+C10H8	3.3300e+08
1.000 3864.72	
IC4H10+INDENYL=>IC4H9+INDENE	1.1700e+05
2.000 19190.53	
IC4H10+C10H6CH3=>IC4H9+C10H7CH3	3.3300e+08
1.000 3864.72	
C2H3+IC4H10=>C2H4+TC4H9	6.7800e+04
2.000 2730.26	
NC3H7+IC4H10=>C3H8+TC4H9	1.3500e+04
2.000 5405.42	
IC3H7+IC4H10=>C3H8+TC4H9	1.3500e+04
2.000 8487.19	
C3H5-S+IC4H10=>C3H6+TC4H9	2.7000e+04
2.000 3301.28	
C3H5-T+IC4H10=>C3H6+TC4H9	2.7000e+04
2.000 3301.28	
C3H5-A+IC4H10=>C3H6+TC4H9	5.3900e+04
2.000 11294.92	
IC4H10+C4H5=>TC4H9+C4H6	2.7000e+04
2.000 3301.28	

IC4H10+C4H71-4=>TC4H9+C4H8-1 2.000        5309.47	1.3500e+04
IC4H10+C4H71-3=>TC4H9+C4H8-2 2.000        12168.47	3.4000e+04
IC4H10+IC4H7=>TC4H9+IC4H8 2.000        12168.47	2.7000e+04
IC4H10+C4H3=>TC4H9+C4H4 2.000        3969.14	4.0900e+04
IC4H10+C6H5=>TC4H9+C6H6 1.000        1067.64	3.7000e+07
CH2OH+IC4H10=>CH3OH+TC4H9 2.000        8777.08	2.8300e+04
HCO+IC4H10=>CH2O+TC4H9 2.000        10810.03	1.2600e+05
CH3CO+IC4H10=>CH3CHO+TC4H9 2.000        12459.86	1.3500e+05
CH2CHO+IC4H10=>CH3CHO+TC4H9 2.000        10034.85	2.3000e+04
C3H3+IC4H10=>C3H4-A+TC4H9 2.000        12459.86	2.7000e+04
HCCO+IC4H10=>CH2CO+TC4H9 2.000        3969.14	4.2800e+04
IC4H10+NC3H7O2=>TC4H9+C3H7OOH 2.000        11100.93	7.6000e+04
IC4H10+IC3H7O2=>TC4H9+C3H7OOH 2.000        11100.93	7.6000e+04
IC4H10+HCO3=>TC4H9+HCO3H 2.000        5213.56	3.4000e+04
CH3CO3+IC4H10=>CH3CO3H+TC4H9 2.000        5213.56	3.4000e+04
CH3COCH2+IC4H10=>CH3COCH3+TC4H9 2.000        6654.87	2.3000e+04
IC4H10+C6H5O=>TC4H9+C6H5OH 2.000        11003.95	2.7000e+04
IC4H10+C5H7=>TC4H9+LC5H8 2.000        13431.81	2.7000e+04
IC4H10+C7H7=>TC4H9+C7H8 2.000        14404.74	1.3500e+04

IC4H10+CH3C6H4=>TC4H9+C7H8	3.7000e+07
1.000 1067.64	
IC4H10+RCRESOLO=>TC4H9+CRESOL	2.7000e+04
2.000 11294.92	
IC4H10+C10H7=>TC4H9+C10H8	3.7000e+07
1.000 1067.64	
IC4H10+INDENYL=>TC4H9+INDENE	1.3000e+04
2.000 14404.74	
IC4H10+C10H6CH3=>TC4H9+C10H7CH3	3.7000e+07
1.000 1067.64	
CYC5H8=>H+C5H7	3.0000e+15
0.000 86000.00	
CYC5H8=>LC5H8	5.0000e+15
0.000 86000.00	
2CYC5H8=>C2H4+C3H5-A+C5H7	2.5000e+14
0.000 45000.00	
CYC5H8=H2+C5H6	5.0000e+12
0.000 58000.00	
H+CYC5H8=>C2H4+C3H5-A	5.0000e+13
0.000 3000.00	
OH+CYC5H8=>H+C2H4+C2H3CHO	1.0000e+13
0.000 0.00	
CYC5H8+C5H7=>C2H5+C2H4+C6H6	1.0000e+12
0.000 16000.00	
C5H6+C5H7=>C2H4+C2H3+C6H6	1.0000e+12
0.000 16000.00	
C5H5+CYC5H8=>C2H4+C2H3+C6H6	1.0000e+11
0.000 22000.00	
CYC6H12=>NC3H7+C3H5-A	2.0000e+16
0.000 85000.00	
CYC6H12=>C2H5+C4H71-4	7.0000e+16
0.000 85000.00	
CYC6H12=NC6H12	1.5000e+16
0.000 82500.00	
HO2+CYC6H12=H2O2+CYC6H11	1.2000e+13
0.000 16000.00	
CYC6H12=H2+CYC6H10	2.0000e+14
0.000 70000.00	



CYC6H10=C2H4+C4H6	1.0000e+15
0.000 67000.00	
CYC6H10=H2+CYC6H8	1.0000e+14
0.000 69000.00	
CYC6H8=H2+C6H6	1.0000e+14
0.000 60000.00	
C2H4+C4H4=>CYC6H8	3.0000e+11
0.000 30000.00	
RCYC6H9=>0.6H+0.3CH3+0.1C2H4+0.1C4H5+0.3C5H6+0.6CYC6H8	2.5000e+13
0.000 38000.00	
HO2+RCYC6H9=>OH+HCO+CYC5H8	3.0000e+12
0.000 0.00	
OH+CYC6H10=>NC3H7+C2H3CHO	5.0000e+12
0.000 0.00	
CYC6H11=H+CYC6H10	2.5000e+14
0.000 38000.00	
CYC6H11=>0.2CH3+0.8C2H5+0.8C4H6+0.2LC5H8	2.0000e+13
0.000 31000.00	
CYC6H11=>0.25CH3+0.25C2H4+0.5C3H6+0.5C3H5-A+0.25C4H71-4+0.25CYC5H8	
1.0000e+13 0.000 31000.00	
O2+CYC6H11=>HO2+CYC6H10	1.0000e+12
0.000 3000.00	
NC6H12=NC3H7+C3H5-A	5.0000e+15
0.000 74000.00	
NC6H12=C2H5+C4H71-4	5.0000e+16
0.000 84500.00	
NC6H12=C2H4+C4H8-1	1.5000e+11
0.000 53000.00	
NC6H12=2C3H6	5.0000e+11
0.000 53000.00	
H+NC6H12=>0.125CH3+0.25C2H5+0.625C2H4+0.625PC4H9+0.25C4H8-1+0.125NC5H10	
1.0000e+13 0.000 2000.00	
H+NC6H12=>NC3H7+C3H6	1.5000e+13
0.000 2000.00	
CH3+NC6H12=>0.5C2H5+C2H4+0.5NC3H7+0.5NC5H10	4.2000e+10
0.000 7600.00	
CH3+NC6H12=>C3H6+0.75PC4H9+0.25IC4H9	1.1000e+11
0.000 7600.00	

CH3+NC6H12=>0.1IC3H7+0.9NC3H7+C4H8-1 0.000 7600.00	1.1400e+11
C3H5-A+NC6H12=>PC4H9+LC5H8 0.000 12000.00	1.0000e+11
O2+NC6H12=>0.3CH2O+0.5CH3CHO+1.2C2H5CHO+0.275C4H8-1 0.000 39000.00	1.0000e+14
OH+NC6H12=>0.7CH3CHO+0.3NC3H7+0.3C2H5CHO+0.7SC4H9 0.000 0.00	5.0000e+12
NC7H16=C2H5+NC5H11 0.000 82000.00	1.0000e+17
NC7H16=NC3H7+PC4H9 0.000 82000.00	1.0000e+17
NC7H16=>CH3+0.5NC5H11+0.5NC7H15 0.000 83500.00	1.0000e+17
NC7H14=C3H5-A+PC4H9 0.000 74500.00	5.0000e+15
NC7H14=>0.5CH3+0.5C2H5+0.5NC3H7+0.5C4H71-3+0.5C4H6 0.000 73000.00	3.0000e+15
O2+NC7H14=>0.6CH2O+0.7CH3CHO+0.7C2H5CHO+0.58NC5H10 0.000 39000.00	1.0000e+14
H+NC7H14=NC7H15 0.000 2500.00	2.5000e+13
OH+NC7H14=>0.7CH3CHO+0.3C2H5CHO+0.3PC4H9+0.7NC5H11 0.000 0.00	5.0000e+12
O+NC7H14=>0.5CH2O+0.5CH3CHO+0.5NC5H10+0.5NC6H12 0.000 7000.00	1.0000e+14
NC7H15=C2H4+NC5H11 0.000 30000.00	6.2000e+12
NC7H15=C3H6+PC4H9 0.000 30000.00	1.4200e+13
NC7H15=NC3H7+C4H8-1 0.000 30000.00	7.5000e+12
NC7H15=C2H5+NC5H10 0.000 30000.00	5.6000e+12
NC7H15=CH3+NC6H12 0.000 30000.00	2.5000e+12
O2+NC7H15=>HO2+NC7H14 0.000 3000.00	7.5000e+11

IC8H18=>0.2IC3H7+0.8IC4H9+0.8TC4H9+0.2NEOC5H11 0.000 78000.00	2.0000e+17
IC8H16=TC4H9+IC4H7 0.000 71000.00	1.0000e+16
IC8H16=2IC4H8 0.000 45500.00	6.0000e+10
O2+IC8H16=>0.5CH2O+C2H5CHO+0.5CH3COCH3+0.375IC8H16 0.000 37000.00	1.0000e+14
H+IC8H16=>IC8H17 0.000 2000.00	2.5000e+13
OH+IC8H16=>0.8C2H5CHO+0.2CH3COCH3+0.8TC4H9+0.2NEOC5H11+0.1IC8H16 3.0000e+12 0.000 2000.00	
O+IC8H16=>0.3333333300000000C3H6+CH3COCH3+1.0000000025000000IC4H8 1.0000e+13 0.000 7000.00	
DIMEPTD=>H+CH3+MCPTD 0.000 76000.00	1.0000e+16
C4H8-1+C4H71-3=>CH3+DIMEPTD 0.000 12500.00	5.0000e+10
O+DIMEPTD=>CH3COCH2+IC4H7 0.000 11000.00	1.0000e+14
H+DIMEPTD=>0.9CH3+0.1C3H5-S+0.325IC4H8+0.9LC5H8 0.000 2000.00	2.5000e+13
OH+DIMEPTD=>H+CH3CHO+LC5H8 0.000 0.00	1.0000e+13
HO2+DIMEPTD=>OH+CO+2C3H6 0.000 15000.00	8.0000e+12
IC4H8+IC4H7=>CH3+DIMEPTD 0.000 19000.00	2.5000e+10
IC8H17=>C3H6+NEOC5H11 0.000 30000.00	7.8000e+12
IC8H17=>TC4H9+IC4H8 0.000 30000.00	2.1600e+13
IC8H17=>IC4H9+IC4H8 0.000 30000.00	1.5000e+13
IC8H17=>CH3+0.25IC4H8+0.75IC8H16 0.000 30000.00	1.5600e+13
IC8H17=>H+IC8H16 0.000 38000.00	2.0000e+14

O2+IC8H17=>HO2+IC8H16 0.000 2500.00	1.3400e+11
NC7H13=>0.5NC3H7+0.5C3H6+0.5C4H71-4+0.5C4H6 0.000 31000.00	2.0000e+13
NC7H13=>0.5H+0.5C2H5+0.5C3H6+0.5C4H6+0.5LC5H8 0.000 31000.00	1.5000e+13
NC7H13=>C3H5-A+C4H8-1 0.000 31000.00	1.5000e+13
OH+IC8H18=>H2O+IC8H17 2.560 -1125.00	1.0000e+05
HO2+IC8H18=>H2O2+IC8H17 2.000 15500.00	6.1000e+06
H+CYC5H8=>H2+C5H7 2.000 4498.56	4.2000e+07
CH3+CYC5H8=>CH4+C5H7 2.000 5816.91	4.2000e+05
C2H3+CYC5H8=>C2H4+C5H7 2.000 4752.95	9.4920e+05
C2H5+CYC5H8=>C2H6+C5H7 2.000 7036.38	2.8000e+05
NC3H7+CYC5H8=>C3H8+C5H7 2.000 7036.38	1.8900e+05
IC3H7+CYC5H8=>C3H8+C5H7 2.000 10236.38	1.8900e+05
C3H5-S+CYC5H8=>C3H6+C5H7 2.000 4500.00	3.7800e+05
C3H5-T+CYC5H8=>C3H6+C5H7 2.000 4500.00	3.7800e+05
C3H5-A+CYC5H8=>C3H6+C5H7 2.000 12800.00	7.5460e+05
C4H5+CYC5H8=>C4H6+C5H7 2.000 5352.95	3.7800e+05
C4H71-4+CYC5H8=>C4H8-1+C5H7 2.000 6600.00	1.8900e+05
C4H71-3+CYC5H8=>C4H8-2+C5H7 2.000 13700.00	4.7600e+05
IC4H7+CYC5H8=>IC4H8+C5H7 2.000 13700.00	3.7800e+05

C4H3+CYC5H8=>C4H4+C5H7	5.7260e+05
2.000 6016.91	
C6H5+CYC5H8=>C6H6+C5H7	5.1800e+08
1.000 2852.95	
O+CYC5H8=>OH+C5H7	3.2900e+07
2.000 2500.00	
O2+CYC5H8=>HO2+C5H7	2.3800e+07
2.000 44000.00	
OH+CYC5H8=>H2O+C5H7	2.1000e+10
1.000 1563.69	
HO2+CYC5H8=>H2O2+C5H7	1.1200e+07
2.000 15417.35	
CH3O+CYC5H8=>CH3OH+C5H7	5.9920e+05
2.000 1836.38	
CH2OH+CYC5H8=>CH3OH+C5H7	3.9620e+05
2.000 10536.38	
HCO+CYC5H8=>CH2O+C5H7	1.7640e+06
2.000 12095.77	
CH3CO+CYC5H8=>CH3CHO+C5H7	1.8900e+06
2.000 13795.77	
CH2CHO+CYC5H8=>CH3CHO+C5H7	3.2200e+05
2.000 11295.77	
C3H3+CYC5H8=>C3H4-A+C5H7	3.7800e+05
2.000 14852.95	
HCCO+CYC5H8=>CH2CO+C5H7	5.9920e+05
2.000 6052.95	
CH3O2+CYC5H8=>CH3O2H+C5H7	1.0640e+06
2.000 12600.00	
C2H5O2+CYC5H8=>C2H5O2H+C5H7	1.0640e+06
2.000 12600.00	
NC3H7O2+CYC5H8=>C3H7OOH+C5H7	1.0640e+06
2.000 12431.81	
IC3H7O2+CYC5H8=>C3H7OOH+C5H7	1.0640e+06
2.000 12431.81	
HCO3+CYC5H8=>HCO3H+C5H7	4.7600e+05
2.000 6500.00	
CH3CO3+CYC5H8=>CH3CO3H+C5H7	4.7600e+05
2.000 6500.00	

CH3COCH2+CYC5H8=>CH3COCH3+C5H7 2.000        8000.00	3.2200e+05
CYC5H8+C6H5O=>C5H7+C6H5OH 2.000        12836.38	3.7800e+05
CYC5H8+C5H7=>C5H7+LC5H8 2.000        15000.00	3.7800e+05
CYC5H8+C7H7=>C5H7+C7H8 2.000        16852.95	1.8900e+05
CYC5H8+CH3C6H4=>C5H7+C7H8 1.000        2852.95	5.1800e+08
CYC5H8+RCRESOLO=>C5H7+CRESOL 2.000        12800.00	3.7800e+05
CYC5H8+C10H7=>C10H8+C5H7 1.000        2852.95	5.1800e+08
CYC5H8+INDENYL=>C5H7+INDENE 2.000        16000.00	1.8200e+05
CYC5H8+C10H6CH3=>C5H7+C10H7CH3 1.000        2000.00	5.1800e+08
H+CYC6H12=>H2+CYC6H11 2.000        4000.00	3.6000e+07
CH3+CYC6H12=>CH4+CYC6H11 2.000        5000.00	3.6000e+05
C2H3+CYC6H12=>C2H4+CYC6H11 2.000        3900.00	8.1360e+05
C2H5+CYC6H12=>C2H6+CYC6H11 2.000        6700.00	2.4000e+05
NC3H7+CYC6H12=>C3H8+CYC6H11 2.000        6700.00	1.6200e+05
IC3H7+CYC6H12=>C3H8+CYC6H11 2.000        9900.00	1.6200e+05
C3H5-S+CYC6H12=>C3H6+CYC6H11 2.000        4500.00	3.2400e+05
C3H5-T+CYC6H12=>C3H6+CYC6H11 2.000        4500.00	3.2400e+05
C3H5-A+CYC6H12=>C3H6+CYC6H11 2.000        12800.00	6.4680e+05
C4H5+CYC6H12=>C4H6+CYC6H11 2.000        4500.00	3.2400e+05

C4H71-4+CYC6H12=>C4H8-1+CYC6H11 2.000        6600.00	1.6200e+05
C4H71-3+CYC6H12=>C4H8-2+CYC6H11 2.000        13700.00	4.0800e+05
IC4H7+CYC6H12=>IC4H8+CYC6H11 2.000        13700.00	3.2400e+05
C4H3+CYC6H12=>C4H4+CYC6H11 2.000        5200.00	4.9080e+05
C6H5+CYC6H12=>C6H6+CYC6H11 1.000        2000.00	4.4400e+08
O+CYC6H12=>OH+CYC6H11 2.000        2500.00	2.8200e+07
O2+CYC6H12=>HO2+CYC6H11 2.000        44000.00	2.0400e+07
OH+CYC6H12=>H2O+CYC6H11 1.000        50.00	1.8000e+10
CH3O+CYC6H12=>CH3OH+CYC6H11 2.000        1500.00	5.1360e+05
CH2OH+CYC6H12=>CH3OH+CYC6H11 2.000        10200.00	3.3960e+05
HCO+CYC6H12=>CH2O+CYC6H11 2.000        12300.00	1.5120e+06
CH3CO+CYC6H12=>CH3CHO+CYC6H11 2.000        14000.00	1.6200e+06
CH2CHO+CYC6H12=>CH3CHO+CYC6H11 2.000        11500.00	2.7600e+05
C3H3+CYC6H12=>C3H4-A+CYC6H11 2.000        14000.00	3.2400e+05
HCCO+CYC6H12=>CH2CO+CYC6H11 2.000        5200.00	5.1360e+05
CH3O2+CYC6H12=>CH3O2H+CYC6H11 2.000        12600.00	9.1200e+05
C2H5O2+CYC6H12=>C2H5O2H+CYC6H11 2.000        12600.00	9.1200e+05
NC3H7O2+CYC6H12=>C3H7OOH+CYC6H11 2.000        12600.00	9.1200e+05
IC3H7O2+CYC6H12=>C3H7OOH+CYC6H11 2.000        12600.00	9.1200e+05

HCO3+CYC6H12=>HCO3H+CYC6H11 2.000        6500.00	4.0800e+05
CH3CO3+CYC6H12=>CH3CO3H+CYC6H11 2.000        6500.00	4.0800e+05
CH3COCH2+CYC6H12=>CH3COCH3+CYC6H11 2.000        8000.00	2.7600e+05
CYC6H12+C6H5O=>CYC6H11+C6H5OH 2.000        12500.00	3.2400e+05
C5H7+CYC6H12=>LC5H8+CYC6H11 2.000        15000.00	3.2400e+05
CYC6H12+C7H7=>CYC6H11+C7H8 2.000        16000.00	1.6200e+05
CYC6H12+CH3C6H4=>CYC6H11+C7H8 1.000        2000.00	4.4400e+08
CYC6H12+RCRESOLO=>CYC6H11+CRESOL 2.000        12800.00	3.2400e+05
CYC6H12+C10H7=>C10H8+CYC6H11 1.000        2000.00	4.4400e+08
CYC6H12+INDENYL=>CYC6H11+INDENE 2.000        16000.00	1.5600e+05
CYC6H12+C10H6CH3=>CYC6H11+C10H7CH3 1.000        2000.00	4.4400e+08
H+NC6H12=>H2+C2H5+C4H6 2.000        4000.00	1.9800e+07
CH3+NC6H12=>CH4+C2H5+C4H6 2.000        5000.00	1.9800e+05
C2H3+NC6H12=>C2H5+C2H4+C4H6 2.000        3900.00	4.4748e+05
C2H5+NC6H12=>C2H6+C2H5+C4H6 2.000        6700.00	1.3200e+05
NC3H7+NC6H12=>C2H5+C3H8+C4H6 2.000        6700.00	8.9100e+04
IC3H7+NC6H12=>C2H5+C3H8+C4H6 2.000        9900.00	8.9100e+04
C3H5-S+NC6H12=>C2H5+C3H6+C4H6 2.000        4500.00	1.7820e+05
C3H5-T+NC6H12=>C2H5+C3H6+C4H6 2.000        4500.00	1.7820e+05



C3H5-A+NC6H12=>C2H5+C3H6+C4H6	3.5574e+05
2.000 12800.00	
C4H5+NC6H12=>C2H5+2C4H6	1.7820e+05
2.000 4500.00	
C4H71-4+NC6H12=>C2H5+C4H8-1+C4H6	8.9100e+04
2.000 6600.00	
C4H71-3+NC6H12=>C2H5+C4H8-2+C4H6	2.2440e+05
2.000 13700.00	
IC4H7+NC6H12=>C2H5+IC4H8+C4H6	1.7820e+05
2.000 13700.00	
C4H3+NC6H12=>C2H5+C4H6+C4H4	2.6994e+05
2.000 5200.00	
C6H5+NC6H12=>C2H5+C4H6+C6H6	2.4420e+08
1.000 2000.00	
O+NC6H12=>OH+C2H5+C4H6	1.5510e+07
2.000 2500.00	
O2+NC6H12=>HO2+C2H5+C4H6	1.1220e+07
2.000 44000.00	
OH+NC6H12=>H2O+C2H5+C4H6	9.9000e+09
1.000 50.00	
HO2+NC6H12=>H2O2+C2H5+C4H6	5.2800e+06
2.000 16000.00	
CH3O+NC6H12=>CH3OH+C2H5+C4H6	2.8248e+05
2.000 1500.00	
CH2OH+NC6H12=>CH3OH+C2H5+C4H6	1.8678e+05
2.000 10200.00	
HCO+NC6H12=>CH2O+C2H5+C4H6	8.3160e+05
2.000 12300.00	
CH3CO+NC6H12=>C2H5+CH3CHO+C4H6	8.9100e+05
2.000 14000.00	
CH2CHO+NC6H12=>C2H5+CH3CHO+C4H6	1.5180e+05
2.000 11500.00	
C3H3+NC6H12=>C2H5+C3H4-A+C4H6	1.7820e+05
2.000 14000.00	
HCCO+NC6H12=>C2H5+CH2CO+C4H6	2.8248e+05
2.000 5200.00	
CH3O2+NC6H12=>CH3O2H+C2H5+C4H6	5.0160e+05
2.000 12600.00	

C2H5O2+NC6H12=>C2H5+C2H5O2H+C4H6 2.000        12600.00	5.0160e+05
NC3H7O2+NC6H12=>C2H5+C4H6+C3H7OOH 2.000        12600.00	5.0160e+05
IC3H7O2+NC6H12=>C2H5+C4H6+C3H7OOH 2.000        12600.00	5.0160e+05
HCO3+NC6H12=>C2H5+C4H6+HCO3H 2.000        6500.00	2.2440e+05
CH3CO3+NC6H12=>C2H5+CH3CO3H+C4H6 2.000        6500.00	2.2440e+05
CH3COCH2+NC6H12=>C2H5+CH3COCH3+C4H6 2.000        8000.00	1.5180e+05
NC6H12+C6H5O=>C2H5+C4H6+C6H5OH 2.000        12500.00	1.7820e+05
C5H7+NC6H12=>C2H5+C4H6+LC5H8 2.000        15000.00	1.7820e+05
NC6H12+C7H7=>C2H5+C4H6+C7H8 2.000        16000.00	8.9100e+04
NC6H12+CH3C6H4=>C2H5+C4H6+C7H8 1.000        2000.00	2.4420e+08
NC6H12+RCRESOLO=>C2H5+C4H6+CRESOL 2.000        12800.00	1.7820e+05
NC6H12+C10H7=>C2H5+C4H6+C10H8 1.000        2000.00	2.4420e+08
NC6H12+INDENYL=>C2H5+C4H6+INDENE 2.000        16000.00	8.5800e+04
NC6H12+C10H6CH3=>C2H5+C4H6+C10H7CH3 1.000        2000.00	2.4420e+08
H+NC6H12=>H2+0.5C2H3+0.5C3H6+0.5C3H5-A+0.5C4H8-1 2.000        4000.00	1.3200e+07
CH3+NC6H12=>CH4+0.5C2H3+0.5C3H6+0.5C3H5-A+0.5C4H8-1 2.000        5000.00	1.3200e+05
C2H3+NC6H12=>C2H4+0.5C2H3+0.5C3H6+0.5C3H5-A+0.5C4H8-1 2.000        3900.00	2.9832e+05
C2H5+NC6H12=>C2H6+0.5C2H3+0.5C3H6+0.5C3H5-A+0.5C4H8-1 2.000        6700.00	8.8000e+04
NC3H7+NC6H12=>0.5C2H3+C3H8+0.5C3H6+0.5C3H5-A+0.5C4H8-1 2.000        6700.00	5.9400e+04

IC3H7+NC6H12=>0.5C2H3+C3H8+0.5C3H6+0.5C3H5-A+0.5C4H8-1	5.9400e+04
2.000 9900.00	
C3H5-S+NC6H12=>0.5C2H3+1.5C3H6+0.5C3H5-A+0.5C4H8-1	1.1880e+05
2.000 4500.00	
C3H5-T+NC6H12=>0.5C2H3+1.5C3H6+0.5C3H5-A+0.5C4H8-1	1.1880e+05
2.000 4500.00	
C3H5-A+NC6H12=>0.5C2H3+1.5C3H6+0.5C3H5-A+0.5C4H8-1	2.3716e+05
2.000 12800.00	
C4H5+NC6H12=>0.5C2H3+0.5C3H6+0.5C3H5-A+0.5C4H8-1+C4H6	1.1880e+05
2.000 4500.00	
C4H71-4+NC6H12=>0.5C2H3+0.5C3H6+0.5C3H5-A+1.5C4H8-1	5.9400e+04
2.000 6600.00	
C4H71-3+NC6H12=>0.5C2H3+0.5C3H6+0.5C3H5-A+0.5C4H8-1+C4H8-2	1.4960e+05
2.000 13700.00	
IC4H7+NC6H12=>0.5C2H3+0.5C3H6+0.5C3H5-A+IC4H8+0.5C4H8-1	1.1880e+05
2.000 13700.00	
C4H3+NC6H12=>0.5C2H3+0.5C3H6+0.5C3H5-A+0.5C4H8-1+C4H4	1.7996e+05
2.000 5200.00	
C6H5+NC6H12=>0.5C2H3+0.5C3H6+0.5C3H5-A+0.5C4H8-1+C6H6	1.6280e+08
1.000 2000.00	
O+NC6H12=>OH+0.5C2H3+0.5C3H6+0.5C3H5-A+0.5C4H8-1	1.0340e+07
2.000 2500.00	
O2+NC6H12=>HO2+0.5C2H3+0.5C3H6+0.5C3H5-A+0.5C4H8-1	7.4800e+06
2.000 44000.00	
OH+NC6H12=>H2O+0.5C2H3+0.5C3H6+0.5C3H5-A+0.5C4H8-1	6.6000e+09
1.000 50.00	
HO2+NC6H12=>H2O2+0.5C2H3+0.5C3H6+0.5C3H5-A+0.5C4H8-1	3.5200e+06
2.000 16000.00	
CH3O+NC6H12=>CH3OH+0.5C2H3+0.5C3H6+0.5C3H5-A+0.5C4H8-1	1.8832e+05
2.000 1500.00	
CH2OH+NC6H12=>CH3OH+0.5C2H3+0.5C3H6+0.5C3H5-A+0.5C4H8-1	1.2452e+05
2.000 10200.00	
HCO+NC6H12=>CH2O+0.5C2H3+0.5C3H6+0.5C3H5-A+0.5C4H8-1	5.5440e+05
2.000 12300.00	
CH3CO+NC6H12=>0.5C2H3+CH3CHO+0.5C3H6+0.5C3H5-A+0.5C4H8-1	5.9400e+05
2.000 14000.00	
CH2CHO+NC6H12=>0.5C2H3+CH3CHO+0.5C3H6+0.5C3H5-A+0.5C4H8-1	1.0120e+05
2.000 11500.00	

$C_3H_3+NC_6H_{12} \Rightarrow 0.5C_2H_3+0.5C_3H_6+0.5C_3H_5-A+C_3H_4-A+0.5C_4H_8-1$  1.1880e+05  
 2.000 14000.00

$HCCO+NC_6H_{12} \Rightarrow 0.5C_2H_3+CH_2CO+0.5C_3H_6+0.5C_3H_5-A+0.5C_4H_8-1$  1.8832e+05  
 2.000 5200.00

$CH_3O_2+NC_6H_{12} \Rightarrow CH_3O_2H+0.5C_2H_3+0.5C_3H_6+0.5C_3H_5-A+0.5C_4H_8-1$  3.3440e+05  
 2.000 12600.00

$C_2H_5O_2+NC_6H_{12} \Rightarrow C_2H_5O_2H+0.5C_2H_3+0.5C_3H_6+0.5C_3H_5-A+0.5C_4H_8-1$  3.3440e+05  
 2.000 12600.00

$NC_3H_7O_2+NC_6H_{12} \Rightarrow 0.5C_2H_3+0.5C_3H_6+0.5C_3H_5-A+0.5C_4H_8-1+C_3H_7OOH$  3.3440e+05  
 2.000 12600.00

$IC_3H_7O_2+NC_6H_{12} \Rightarrow 0.5C_2H_3+0.5C_3H_6+0.5C_3H_5-A+0.5C_4H_8-1+C_3H_7OOH$  3.3440e+05  
 2.000 12600.00

$HCO_3+NC_6H_{12} \Rightarrow 0.5C_2H_3+0.5C_3H_6+0.5C_3H_5-A+0.5C_4H_8-1+HCO_3H$  1.4960e+05  
 2.000 6500.00

$CH_3CO_3+NC_6H_{12} \Rightarrow 0.5C_2H_3+CH_3CO_3H+0.5C_3H_6+0.5C_3H_5-A+0.5C_4H_8-1$  1.4960e+05  
 2.000 6500.00

$CH_3COCH_2+NC_6H_{12} \Rightarrow 0.5C_2H_3+0.5C_3H_6+0.5C_3H_5-A+CH_3COCH_3+0.5C_4H_8-1$  1.0120e+05  
 2.000 8000.00

$NC_6H_{12}+C_6H_5O \Rightarrow 0.5C_2H_3+0.5C_3H_6+0.5C_3H_5-A+0.5C_4H_8-1+C_6H_5OH$  1.1880e+05  
 2.000 12500.00

$C_5H_7+NC_6H_{12} \Rightarrow 0.5C_2H_3+0.5C_3H_6+0.5C_3H_5-A+0.5C_4H_8-1+LC_5H_8$  1.1880e+05  
 2.000 15000.00

$NC_6H_{12}+C_7H_7 \Rightarrow 0.5C_2H_3+0.5C_3H_6+0.5C_3H_5-A+0.5C_4H_8-1+C_7H_8$  5.9400e+04  
 2.000 16000.00

$NC_6H_{12}+CH_3C_6H_4 \Rightarrow 0.5C_2H_3+0.5C_3H_6+0.5C_3H_5-A+0.5C_4H_8-1+C_7H_8$  1.6280e+08  
 1.000 2000.00

$NC_6H_{12}+RCRESOLO \Rightarrow 0.5C_2H_3+0.5C_3H_6+0.5C_3H_5-A+0.5C_4H_8-1+RCRESOL$  1.1880e+05  
 2.000 12800.00

$NC_6H_{12}+C_{10}H_7 \Rightarrow 0.5C_2H_3+0.5C_3H_6+0.5C_3H_5-A+0.5C_4H_8-1+C_{10}H_8$  1.6280e+08  
 1.000 2000.00

$NC_6H_{12}+INDENYL \Rightarrow 0.5C_2H_3+0.5C_3H_6+0.5C_3H_5-A+0.5C_4H_8-1+INDENE$  5.7200e+04  
 2.000 16000.00

$NC_6H_{12}+C_{10}H_6CH_3 \Rightarrow 0.5C_2H_3+0.5C_3H_6+0.5C_3H_5-A+0.5C_4H_8-1+C_{10}H_7CH_3$  1.6280e+08  
 1.000 2000.00

$H+NC_7H_{16} \Rightarrow H_2+NC_7H_{15}$  3.6000e+07  
 2.000 4000.00

$CH_3+NC_7H_{16} \Rightarrow CH_4+NC_7H_{15}$  3.6000e+05  
 2.000 5000.00

C2H3+NC7H16=>C2H4+NC7H15 2.000        3900.00	8.1360e+05
C2H5+NC7H16=>C2H6+NC7H15 2.000        6700.00	2.4000e+05
NC3H7+NC7H16=>C3H8+NC7H15 2.000        6700.00	1.6200e+05
IC3H7+NC7H16=>C3H8+NC7H15 2.000        9900.00	1.6200e+05
C3H5-S+NC7H16=>C3H6+NC7H15 2.000        4500.00	3.2400e+05
C3H5-T+NC7H16=>C3H6+NC7H15 2.000        4500.00	3.2400e+05
C3H5-A+NC7H16=>C3H6+NC7H15 2.000        12800.00	6.4680e+05
C4H5+NC7H16=>C4H6+NC7H15 2.000        4500.00	3.2400e+05
C4H71-4+NC7H16=>C4H8-1+NC7H15 2.000        6600.00	1.6200e+05
C4H71-3+NC7H16=>C4H8-2+NC7H15 2.000        13700.00	4.0800e+05
IC4H7+NC7H16=>IC4H8+NC7H15 2.000        13700.00	3.2400e+05
C4H3+NC7H16=>C4H4+NC7H15 2.000        5200.00	4.9080e+05
C6H5+NC7H16=>C6H6+NC7H15 1.000        2000.00	4.4400e+08
O+NC7H16=>OH+NC7H15 2.000        2500.00	2.8200e+07
O2+NC7H16=>HO2+NC7H15 2.000        44000.00	2.0400e+07
OH+NC7H16=>H2O+NC7H15 1.000        50.00	1.8000e+10
HO2+NC7H16=>H2O2+NC7H15 2.000        16000.00	9.6000e+06
CH3O+NC7H16=>CH3OH+NC7H15 2.000        1500.00	5.1360e+05
CH2OH+NC7H16=>CH3OH+NC7H15 2.000        10200.00	3.3960e+05

HCO+NC7H16=>CH2O+NC7H15	1.5120e+06
2.000 12300.00	
CH3CO+NC7H16=>CH3CHO+NC7H15	1.6200e+06
2.000 14000.00	
CH2CHO+NC7H16=>CH3CHO+NC7H15	2.7600e+05
2.000 11500.00	
C3H3+NC7H16=>C3H4-A+NC7H15	3.2400e+05
2.000 14000.00	
HCCO+NC7H16=>CH2CO+NC7H15	5.1360e+05
2.000 5200.00	
CH3O2+NC7H16=>CH3O2H+NC7H15	9.1200e+05
2.000 12600.00	
C2H5O2+NC7H16=>C2H5O2H+NC7H15	9.1200e+05
2.000 12600.00	
NC3H7O2+NC7H16=>C3H7OOH+NC7H15	9.1200e+05
2.000 12600.00	
IC3H7O2+NC7H16=>C3H7OOH+NC7H15	9.1200e+05
2.000 12600.00	
HCO3+NC7H16=>HCO3H+NC7H15	4.0800e+05
2.000 6500.00	
CH3CO3+NC7H16=>CH3CO3H+NC7H15	4.0800e+05
2.000 6500.00	
CH3COCH2+NC7H16=>CH3COCH3+NC7H15	2.7600e+05
2.000 8000.00	
NC7H16+C6H5O=>NC7H15+C6H5OH	3.2400e+05
2.000 12500.00	
C5H7+NC7H16=>LC5H8+NC7H15	3.2400e+05
2.000 15000.00	
NC7H16+C7H7=>NC7H15+C7H8	1.6200e+05
2.000 16000.00	
NC7H16+CH3C6H4=>NC7H15+C7H8	4.4400e+08
1.000 2000.00	
NC7H16+RCRESOLO=>NC7H15+CRESOL	3.2400e+05
2.000 12800.00	
NC7H16+C10H7=>C10H8+NC7H15	4.4400e+08
1.000 2000.00	
NC7H16+INDENYL=>NC7H15+INDENE	1.5600e+05
2.000 16000.00	

NC7H16+C10H6CH3=>NC7H15+C10H7CH3	4.4400e+08
1.000 2000.00	
H+NC7H14=>H2+NC7H13	3.9000e+07
2.000 4000.00	
CH3+NC7H14=>CH4+NC7H13	3.9000e+05
2.000 5000.00	
C2H3+NC7H14=>C2H4+NC7H13	8.8140e+05
2.000 3900.00	
C2H5+NC7H14=>C2H6+NC7H13	2.6000e+05
2.000 6700.00	
NC3H7+NC7H14=>C3H8+NC7H13	1.7550e+05
2.000 6700.00	
IC3H7+NC7H14=>C3H8+NC7H13	1.7550e+05
2.000 9900.00	
C3H5-S+NC7H14=>C3H6+NC7H13	3.5100e+05
2.000 4500.00	
C3H5-T+NC7H14=>C3H6+NC7H13	3.5100e+05
2.000 4500.00	
C3H5-A+NC7H14=>C3H6+NC7H13	7.0070e+05
2.000 12800.00	
C4H5+NC7H14=>C4H6+NC7H13	3.5100e+05
2.000 4500.00	
C4H71-4+NC7H14=>C4H8-1+NC7H13	1.7550e+05
2.000 6600.00	
C4H71-3+NC7H14=>C4H8-2+NC7H13	4.4200e+05
2.000 13700.00	
IC4H7+NC7H14=>IC4H8+NC7H13	3.5100e+05
2.000 13700.00	
C4H3+NC7H14=>C4H4+NC7H13	5.3170e+05
2.000 5200.00	
C6H5+NC7H14=>C6H6+NC7H13	4.8100e+08
1.000 2000.00	
O+NC7H14=>OH+NC7H13	3.0550e+07
2.000 2500.00	
O2+NC7H14=>HO2+NC7H13	2.2100e+07
2.000 44000.00	
OH+NC7H14=>H2O+NC7H13	1.9500e+10
1.000 50.00	

HO2+NC7H14=>H2O2+NC7H13	1.0400e+07
2.000 16000.00	
CH3O+NC7H14=>CH3OH+NC7H13	5.5640e+05
2.000 1500.00	
CH2OH+NC7H14=>CH3OH+NC7H13	3.6790e+05
2.000 10200.00	
HCO+NC7H14=>CH2O+NC7H13	1.6380e+06
2.000 12300.00	
CH3CO+NC7H14=>CH3CHO+NC7H13	1.7550e+06
2.000 14000.00	
CH2CHO+NC7H14=>CH3CHO+NC7H13	2.9900e+05
2.000 11500.00	
C3H3+NC7H14=>C3H4-A+NC7H13	3.5100e+05
2.000 14000.00	
HCCO+NC7H14=>CH2CO+NC7H13	5.5640e+05
2.000 5200.00	
CH3O2+NC7H14=>CH3O2H+NC7H13	9.8800e+05
2.000 12600.00	
C2H5O2+NC7H14=>C2H5O2H+NC7H13	9.8800e+05
2.000 12600.00	
NC3H7O2+NC7H14=>C3H7OOH+NC7H13	9.8800e+05
2.000 12600.00	
IC3H7O2+NC7H14=>C3H7OOH+NC7H13	9.8800e+05
2.000 12600.00	
HCO3+NC7H14=>HCO3H+NC7H13	4.4200e+05
2.000 6500.00	
CH3CO3+NC7H14=>CH3CO3H+NC7H13	4.4200e+05
2.000 6500.00	
CH3COCH2+NC7H14=>CH3COCH3+NC7H13	2.9900e+05
2.000 8000.00	
NC7H14+C6H5O=>NC7H13+C6H5OH	3.5100e+05
2.000 12500.00	
C5H7+NC7H14=>LC5H8+NC7H13	3.5100e+05
2.000 15000.00	
NC7H14+C7H7=>NC7H13+C7H8	1.7550e+05
2.000 16000.00	
NC7H14+CH3C6H4=>NC7H13+C7H8	4.8100e+08
1.000 2000.00	



NC7H14+RCRESOLO=>NC7H13+CRESOL 2.000 12800.00	3.5100e+05
NC7H14+C10H7=>C10H8+NC7H13 1.000 2000.00	4.8100e+08
NC7H14+INDENYL=>NC7H13+INDENE 2.000 16000.00	1.6900e+05
NC7H14+C10H6CH3=>NC7H13+C10H7CH3 1.000 2000.00	4.8100e+08
H+IC8H18=>H2+IC8H17 2.000 4000.00	2.7000e+07
CH3+IC8H18=>CH4+IC8H17 2.000 5000.00	2.7000e+05
C2H3+IC8H18=>C2H4+IC8H17 2.000 3900.00	6.1020e+05
C2H5+IC8H18=>C2H6+IC8H17 2.000 6700.00	1.8000e+05
NC3H7+IC8H18=>C3H8+IC8H17 2.000 6700.00	1.2150e+05
IC3H7+IC8H18=>C3H8+IC8H17 2.000 9900.00	1.2150e+05
C3H5-S+IC8H18=>C3H6+IC8H17 2.000 4500.00	2.4300e+05
C3H5-T+IC8H18=>C3H6+IC8H17 2.000 4500.00	2.4300e+05
C3H5-A+IC8H18=>C3H6+IC8H17 2.000 12800.00	4.8510e+05
C4H5+IC8H18=>C4H6+IC8H17 2.000 4500.00	2.4300e+05
C4H71-4+IC8H18=>C4H8-1+IC8H17 2.000 6600.00	1.2150e+05
C4H71-3+IC8H18=>C4H8-2+IC8H17 2.000 13700.00	3.0600e+05
IC4H7+IC8H18=>IC4H8+IC8H17 2.000 13700.00	2.4300e+05
C4H3+IC8H18=>C4H4+IC8H17 2.000 5200.00	3.6810e+05
C6H5+IC8H18=>C6H6+IC8H17 1.000 2000.00	3.3300e+08

O+IC8H18=>OH+IC8H17	2.1150e+07
2.000 2500.00	
O2+IC8H18=>HO2+IC8H17	1.5300e+07
2.000 44000.00	
CH3O+IC8H18=>CH3OH+IC8H17	3.8520e+05
2.000 1500.00	
CH2OH+IC8H18=>CH3OH+IC8H17	2.5470e+05
2.000 10200.00	
HCO+IC8H18=>CH2O+IC8H17	1.1340e+06
2.000 12300.00	
CH3CO+IC8H18=>CH3CHO+IC8H17	1.2150e+06
2.000 14000.00	
CH2CHO+IC8H18=>CH3CHO+IC8H17	2.0700e+05
2.000 11500.00	
C3H3+IC8H18=>C3H4-A+IC8H17	2.4300e+05
2.000 14000.00	
HCCO+IC8H18=>CH2CO+IC8H17	3.8520e+05
2.000 5200.00	
CH3O2+IC8H18=>CH3O2H+IC8H17	6.8400e+05
2.000 12600.00	
C2H5O2+IC8H18=>C2H5O2H+IC8H17	6.8400e+05
2.000 12600.00	
NC3H7O2+IC8H18=>C3H7OOH+IC8H17	6.8400e+05
2.000 12600.00	
IC3H7O2+IC8H18=>C3H7OOH+IC8H17	6.8400e+05
2.000 12600.00	
HCO3+IC8H18=>HCO3H+IC8H17	3.0600e+05
2.000 6500.00	
CH3CO3+IC8H18=>CH3CO3H+IC8H17	3.0600e+05
2.000 6500.00	
CH3COCH2+IC8H18=>CH3COCH3+IC8H17	2.0700e+05
2.000 8000.00	
IC8H18+C6H5O=>IC8H17+C6H5OH	2.4300e+05
2.000 12500.00	
C5H7+IC8H18=>LC5H8+IC8H17	2.4300e+05
2.000 15000.00	
IC8H18+C7H7=>IC8H17+C7H8	1.2150e+05
2.000 16000.00	

IC8H18+CH3C6H4=>IC8H17+C7H8	3.3300e+08
1.000 2000.00	
IC8H18+RCRESOLO=>IC8H17+CRESOL	2.4300e+05
2.000 12800.00	
IC8H18+C10H7=>C10H8+IC8H17	3.3300e+08
1.000 2000.00	
IC8H18+INDENYL=>IC8H17+INDENE	1.1700e+05
2.000 16000.00	
IC8H18+C10H6CH3=>IC8H17+C10H7CH3	3.3300e+08
1.000 2000.00	
H+IC8H16=>H2+CH3+DIMEPTD	1.8000e+07
2.000 4000.00	
CH3+IC8H16=>CH4+CH3+DIMEPTD	1.8000e+05
2.000 5000.00	
C2H3+IC8H16=>CH3+C2H4+DIMEPTD	4.0680e+05
2.000 3900.00	
C2H5+IC8H16=>CH3+C2H6+DIMEPTD	1.2000e+05
2.000 6700.00	
NC3H7+IC8H16=>CH3+C3H8+DIMEPTD	8.1000e+04
2.000 6700.00	
IC3H7+IC8H16=>CH3+C3H8+DIMEPTD	8.1000e+04
2.000 9900.00	
C3H5-S+IC8H16=>CH3+C3H6+DIMEPTD	1.6200e+05
2.000 4500.00	
C3H5-T+IC8H16=>CH3+C3H6+DIMEPTD	1.6200e+05
2.000 4500.00	
C3H5-A+IC8H16=>CH3+C3H6+DIMEPTD	3.2340e+05
2.000 12800.00	
C4H5+IC8H16=>CH3+C4H6+DIMEPTD	1.6200e+05
2.000 4500.00	
C4H71-4+IC8H16=>CH3+C4H8-1+DIMEPTD	8.1000e+04
2.000 6600.00	
C4H71-3+IC8H16=>CH3+C4H8-2+DIMEPTD	2.0400e+05
2.000 13700.00	
IC4H7+IC8H16=>CH3+IC4H8+DIMEPTD	1.6200e+05
2.000 13700.00	
C4H3+IC8H16=>CH3+C4H4+DIMEPTD	2.4540e+05
2.000 5200.00	

C6H5+IC8H16=>CH3+C6H6+DIMEPTD	2.2200e+08
1.000 2000.00	
O+IC8H16=>OH+CH3+DIMEPTD	1.4100e+07
2.000 2500.00	
O2+IC8H16=>HO2+CH3+DIMEPTD	1.0200e+07
2.000 44000.00	
OH+IC8H16=>H2O+CH3+DIMEPTD	9.0000e+09
1.000 50.00	
HO2+IC8H16=>H2O2+CH3+DIMEPTD	4.8000e+06
2.000 16000.00	
CH3O+IC8H16=>CH3+CH3OH+DIMEPTD	2.5680e+05
2.000 1500.00	
CH2OH+IC8H16=>CH3+CH3OH+DIMEPTD	1.6980e+05
2.000 10200.00	
HCO+IC8H16=>CH3+CH2O+DIMEPTD	7.5600e+05
2.000 12300.00	
CH3CO+IC8H16=>CH3+CH3CHO+DIMEPTD	8.1000e+05
2.000 14000.00	
CH2CHO+IC8H16=>CH3+CH3CHO+DIMEPTD	1.3800e+05
2.000 11500.00	
C3H3+IC8H16=>CH3+C3H4-A+DIMEPTD	1.6200e+05
2.000 14000.00	
HCCO+IC8H16=>CH3+CH2CO+DIMEPTD	2.5680e+05
2.000 5200.00	
CH3O2+IC8H16=>CH3+CH3O2H+DIMEPTD	4.5600e+05
2.000 12600.00	
C2H5O2+IC8H16=>CH3+C2H5O2H+DIMEPTD	4.5600e+05
2.000 12600.00	
NC3H7O2+IC8H16=>CH3+C3H7OOH+DIMEPTD	4.5600e+05
2.000 12600.00	
IC3H7O2+IC8H16=>CH3+C3H7OOH+DIMEPTD	4.5600e+05
2.000 12600.00	
HCO3+IC8H16=>CH3+HCO3H+DIMEPTD	2.0400e+05
2.000 6500.00	
CH3CO3+IC8H16=>CH3+CH3CO3H+DIMEPTD	2.0400e+05
2.000 6500.00	
CH3COCH2+IC8H16=>CH3+CH3COCH3+DIMEPTD	1.3800e+05
2.000 8000.00	

IC8H16+C6H5O=>CH3+DIMEPTD+C6H5OH	1.6200e+05
2.000 12500.00	
C5H7+IC8H16=>CH3+LC5H8+DIMEPTD	1.6200e+05
2.000 15000.00	
IC8H16+C7H7=>CH3+DIMEPTD+C7H8	8.1000e+04
2.000 16000.00	
IC8H16+CH3C6H4=>CH3+DIMEPTD+C7H8	2.2200e+08
1.000 2000.00	
IC8H16+RCRESOLO=>CH3+DIMEPTD+CRESOL	1.6200e+05
2.000 12800.00	
IC8H16+C10H7=>CH3+C10H8+DIMEPTD	2.2200e+08
1.000 2000.00	
IC8H16+INDENYL=>CH3+DIMEPTD+INDENE	7.8000e+04
2.000 16000.00	
IC8H16+C10H6CH3=>CH3+DIMEPTD+C10H7CH3	2.2200e+08
1.000 2000.00	
H+IC8H16=>H2+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11	1.8000e+07
2.000 4000.00	
CH3+IC8H16=>CH4+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11	1.8000e+05
2.000 5000.00	
C2H3+IC8H16=>C2H4+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11	4.0680e+05
2.000 3900.00	
C2H5+IC8H16=>C2H6+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11	1.2000e+05
2.000 6700.00	
NC3H7+IC8H16=>C3H8+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11	8.1000e+04
2.000 6700.00	
IC3H7+IC8H16=>C3H8+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11	8.1000e+04
2.000 9900.00	
C3H5-S+IC8H16=>C3H6+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11	1.6200e+05
2.000 4500.00	
C3H5-T+IC8H16=>C3H6+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11	1.6200e+05
2.000 4500.00	
C3H5-A+IC8H16=>C3H6+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11	3.2340e+05
2.000 12800.00	
C4H5+IC8H16=>0.5C3H4-A+0.5IC4H8+0.5IC4H7+C4H6+0.5NEOC5H11	1.6200e+05
2.000 4500.00	
C4H71-4+IC8H16=>0.5C3H4-A+0.5IC4H8+0.5IC4H7+C4H8-1+0.5NEOC5H11	8.1000e+04
2.000 6600.00	

C4H71-3+IC8H16=>0.5C3H4-A+0.5IC4H8+0.5IC4H7+C4H8-2+0.5NEOC5H11 2.0400e+05  
2.000 13700.00

IC4H7+IC8H16=>0.5C3H4-A+1.5IC4H8+0.5IC4H7+0.5NEOC5H11 1.6200e+05  
2.000 13700.00

C4H3+IC8H16=>0.5C3H4-A+0.5IC4H8+0.5IC4H7+C4H4+0.5NEOC5H11 2.4540e+05  
2.000 5200.00

C6H5+IC8H16=>0.5C3H4-A+0.5IC4H8+0.5IC4H7+C6H6+0.5NEOC5H11 2.2200e+08  
1.000 2000.00

O+IC8H16=>OH+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11 1.4100e+07  
2.000 2500.00

O2+IC8H16=>HO2+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11 1.0200e+07  
2.000 44000.00

OH+IC8H16=>H2O+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11 9.0000e+09  
1.000 50.00

HO2+IC8H16=>H2O2+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11 4.8000e+06  
2.000 16000.00

CH3O+IC8H16=>CH3OH+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11 2.5680e+05  
2.000 1500.00

CH2OH+IC8H16=>CH3OH+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11 1.6980e+05  
2.000 10200.00

HCO+IC8H16=>CH2O+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11 7.5600e+05  
2.000 12300.00

CH3CO+IC8H16=>CH3CHO+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11 8.1000e+05  
2.000 14000.00

CH2CHO+IC8H16=>CH3CHO+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11 1.3800e+05  
2.000 11500.00

C3H3+IC8H16=>1.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11 1.6200e+05  
2.000 14000.00

HCCO+IC8H16=>CH2CO+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11 2.5680e+05  
2.000 5200.00

CH3O2+IC8H16=>CH3O2H+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11 4.5600e+05  
2.000 12600.00

C2H5O2+IC8H16=>C2H5O2H+0.5C3H4-A+0.5IC4H8+0.5IC4H7+0.5NEOC5H11 4.5600e+05  
2.000 12600.00

NC3H7O2+IC8H16=>0.5C3H4-A+0.5IC4H8+0.5IC4H7+C3H7OOH+0.5NEOC5H11  
4.5600e+05 2.000 12600.00

IC3H7O2+IC8H16=>0.5C3H4-A+0.5IC4H8+0.5IC4H7+C3H7OOH+0.5NEOC5H11  
4.5600e+05 2.000 12600.00

$\text{HCO}_3 + \text{IC}_8\text{H}_{16} \Rightarrow 0.5\text{C}_3\text{H}_4 - \text{A} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_4\text{H}_7 + \text{HCO}_3\text{H} + 0.5\text{NEOC}_5\text{H}_{11}$  2.0400e+05  
 2.000 6500.00

$\text{CH}_3\text{CO}_3 + \text{IC}_8\text{H}_{16} \Rightarrow \text{CH}_3\text{CO}_3\text{H} + 0.5\text{C}_3\text{H}_4 - \text{A} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_4\text{H}_7 + 0.5\text{NEOC}_5\text{H}_{11}$  2.0400e+05  
 2.000 6500.00

$\text{CH}_3\text{COCH}_2 + \text{IC}_8\text{H}_{16} \Rightarrow 0.5\text{C}_3\text{H}_4 - \text{A} + \text{CH}_3\text{COCH}_3 + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_4\text{H}_7 + 0.5\text{NEOC}_5\text{H}_{11}$   
 1.3800e+05 2.000 8000.00

$\text{IC}_8\text{H}_{16} + \text{C}_6\text{H}_5\text{O} \Rightarrow 0.5\text{C}_3\text{H}_4 - \text{A} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_4\text{H}_7 + 0.5\text{NEOC}_5\text{H}_{11} + \text{C}_6\text{H}_5\text{OH}$  1.6200e+05  
 2.000 12500.00

$\text{C}_5\text{H}_7 + \text{IC}_8\text{H}_{16} \Rightarrow 0.5\text{C}_3\text{H}_4 - \text{A} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_4\text{H}_7 + 0.5\text{NEOC}_5\text{H}_{11} + \text{LC}_5\text{H}_8$  1.6200e+05  
 2.000 15000.00

$\text{IC}_8\text{H}_{16} + \text{C}_7\text{H}_7 \Rightarrow 0.5\text{C}_3\text{H}_4 - \text{A} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_4\text{H}_7 + 0.5\text{NEOC}_5\text{H}_{11} + \text{C}_7\text{H}_8$  8.1000e+04  
 2.000 16000.00

$\text{IC}_8\text{H}_{16} + \text{CH}_3\text{C}_6\text{H}_4 \Rightarrow 0.5\text{C}_3\text{H}_4 - \text{A} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_4\text{H}_7 + 0.5\text{NEOC}_5\text{H}_{11} + \text{C}_7\text{H}_8$  2.2200e+08  
 1.000 2000.00

$\text{IC}_8\text{H}_{16} + \text{RCRESOLO} \Rightarrow 0.5\text{C}_3\text{H}_4 - \text{A} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_4\text{H}_7 + 0.5\text{NEOC}_5\text{H}_{11} + \text{CRESOL}$   
 1.6200e+05 2.000 12800.00

$\text{IC}_8\text{H}_{16} + \text{C}_{10}\text{H}_7 \Rightarrow 0.5\text{C}_3\text{H}_4 - \text{A} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_4\text{H}_7 + \text{C}_{10}\text{H}_8 + 0.5\text{NEOC}_5\text{H}_{11}$  2.2200e+08  
 1.000 2000.00

$\text{IC}_8\text{H}_{16} + \text{INDENYL} \Rightarrow 0.5\text{C}_3\text{H}_4 - \text{A} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_4\text{H}_7 + 0.5\text{NEOC}_5\text{H}_{11} + \text{INDENE}$  7.8000e+04  
 2.000 16000.00

$\text{IC}_8\text{H}_{16} + \text{C}_{10}\text{H}_6\text{CH}_3 \Rightarrow 0.5\text{C}_3\text{H}_4 - \text{A} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_4\text{H}_7 + 0.5\text{NEOC}_5\text{H}_{11} + \text{C}_{10}\text{H}_7\text{CH}_3$   
 2.2200e+08 1.000 2000.00

$\text{H} + \text{DIMEPTD} \Rightarrow 1.8\text{H}_2 + 0.8\text{CH}_3 + 0.2\text{C}_2\text{H}_3 + 0.8\text{C}_6\text{H}_6 + 0.2\text{LC}_5\text{H}_8$  1.6200e+07  
 2.000 4000.00

$\text{CH}_3 + \text{DIMEPTD} \Rightarrow 0.8\text{H}_2 + \text{CH}_4 + 0.8\text{CH}_3 + 0.2\text{C}_2\text{H}_3 + 0.8\text{C}_6\text{H}_6 + 0.2\text{LC}_5\text{H}_8$  1.6200e+05  
 2.000 5000.00

$\text{C}_2\text{H}_3 + \text{DIMEPTD} \Rightarrow 0.8\text{H}_2 + 0.8\text{CH}_3 + \text{C}_2\text{H}_4 + 0.2\text{C}_2\text{H}_3 + 0.8\text{C}_6\text{H}_6 + 0.2\text{LC}_5\text{H}_8$  3.6612e+05  
 2.000 3900.00

$\text{C}_2\text{H}_5 + \text{DIMEPTD} \Rightarrow 0.8\text{H}_2 + 0.8\text{CH}_3 + \text{C}_2\text{H}_6 + 0.2\text{C}_2\text{H}_3 + 0.8\text{C}_6\text{H}_6 + 0.2\text{LC}_5\text{H}_8$  1.0800e+05  
 2.000 6700.00

$\text{NC}_3\text{H}_7 + \text{DIMEPTD} \Rightarrow 0.8\text{H}_2 + 0.8\text{CH}_3 + 0.2\text{C}_2\text{H}_3 + \text{C}_3\text{H}_8 + 0.8\text{C}_6\text{H}_6 + 0.2\text{LC}_5\text{H}_8$  7.2900e+04  
 2.000 6700.00

$\text{IC}_3\text{H}_7 + \text{DIMEPTD} \Rightarrow 0.8\text{H}_2 + 0.8\text{CH}_3 + 0.2\text{C}_2\text{H}_3 + \text{C}_3\text{H}_8 + 0.8\text{C}_6\text{H}_6 + 0.2\text{LC}_5\text{H}_8$  7.2900e+04  
 2.000 9900.00

$\text{C}_3\text{H}_5 - \text{S} + \text{DIMEPTD} \Rightarrow 0.8\text{H}_2 + 0.8\text{CH}_3 + 0.2\text{C}_2\text{H}_3 + \text{C}_3\text{H}_6 + 0.8\text{C}_6\text{H}_6 + 0.2\text{LC}_5\text{H}_8$  1.4580e+05  
 2.000 4500.00

$\text{C}_3\text{H}_5 - \text{T} + \text{DIMEPTD} \Rightarrow 0.8\text{H}_2 + 0.8\text{CH}_3 + 0.2\text{C}_2\text{H}_3 + \text{C}_3\text{H}_6 + 0.8\text{C}_6\text{H}_6 + 0.2\text{LC}_5\text{H}_8$  1.4580e+05  
 2.000 4500.00

C3H5-A+DIMEPTD=>0.8H2+0.8CH3+0.2C2H3+C3H6+0.8C6H6+0.2LC5H8 2.9106e+05  
 2.000 12800.00

C4H5+DIMEPTD=>0.8H2+0.8CH3+0.2C2H3+C4H6+0.8C6H6+0.2LC5H8 1.4580e+05  
 2.000 4500.00

C4H71-4+DIMEPTD=>0.8H2+0.8CH3+0.2C2H3+C4H8-1+0.8C6H6+0.2LC5H8 7.2900e+04  
 2.000 6600.00

C4H71-3+DIMEPTD=>0.8H2+0.8CH3+0.2C2H3+C4H8-2+0.8C6H6+0.2LC5H8 1.8360e+05  
 2.000 13700.00

IC4H7+DIMEPTD=>0.8H2+0.8CH3+0.2C2H3+IC4H8+0.8C6H6+0.2LC5H8 1.4580e+05  
 2.000 13700.00

C4H3+DIMEPTD=>0.8H2+0.8CH3+0.2C2H3+C4H4+0.8C6H6+0.2LC5H8 2.2086e+05  
 2.000 5200.00

C6H5+DIMEPTD=>0.8H2+0.8CH3+0.2C2H3+1.8C6H6+0.2LC5H8 1.9980e+08  
 1.000 2000.00

O+DIMEPTD=>0.8H2+OH+0.8CH3+0.2C2H3+0.8C6H6+0.2LC5H8 1.2690e+07  
 2.000 2500.00

O2+DIMEPTD=>0.8H2+HO2+0.8CH3+0.2C2H3+0.8C6H6+0.2LC5H8 9.1800e+06  
 2.000 44000.00

OH+DIMEPTD=>0.8H2+H2O+0.8CH3+0.2C2H3+0.8C6H6+0.2LC5H8 8.1000e+09  
 1.000 50.00

HO2+DIMEPTD=>0.8H2+H2O2+0.8CH3+0.2C2H3+0.8C6H6+0.2LC5H8 4.3200e+06  
 2.000 16000.00

CH3O+DIMEPTD=>0.8H2+0.8CH3+CH3OH+0.2C2H3+0.8C6H6+0.2LC5H8 2.3112e+05  
 2.000 1500.00

CH2OH+DIMEPTD=>0.8H2+0.8CH3+CH3OH+0.2C2H3+0.8C6H6+0.2LC5H8 1.5282e+05  
 2.000 10200.00

HCO+DIMEPTD=>0.8H2+0.8CH3+CH2O+0.2C2H3+0.8C6H6+0.2LC5H8 6.8040e+05  
 2.000 12300.00

CH3CO+DIMEPTD=>0.8H2+0.8CH3+0.2C2H3+CH3CHO+0.8C6H6+0.2LC5H8 7.2900e+05  
 2.000 14000.00

CH2CHO+DIMEPTD=>0.8H2+0.8CH3+0.2C2H3+CH3CHO+0.8C6H6+0.2LC5H8 1.2420e+05  
 2.000 11500.00

C3H3+DIMEPTD=>0.8H2+0.8CH3+0.2C2H3+C3H4-A+0.8C6H6+0.2LC5H8 1.4580e+05  
 2.000 14000.00

HCCO+DIMEPTD=>0.8H2+0.8CH3+0.2C2H3+CH2CO+0.8C6H6+0.2LC5H8 2.3112e+05  
 2.000 5200.00

CH3O2+DIMEPTD=>0.8H2+0.8CH3+CH3O2H+0.2C2H3+0.8C6H6+0.2LC5H8 4.1040e+05  
 2.000 12600.00



C2H5O2+DIMEPTD=>0.8H2+0.8CH3+C2H5O2H+0.2C2H3+0.8C6H6+0.2LC5H8 4.1040e+05  
 2.000 12600.00

NC3H7O2+DIMEPTD=>0.8H2+0.8CH3+0.2C2H3+0.8C6H6+C3H7OOH+0.2LC5H8 4.1040e+05  
 2.000 12600.00

IC3H7O2+DIMEPTD=>0.8H2+0.8CH3+0.2C2H3+0.8C6H6+C3H7OOH+0.2LC5H8 4.1040e+05  
 2.000 12600.00

HCO3+DIMEPTD=>0.8H2+0.8CH3+0.2C2H3+0.8C6H6+HCO3H+0.2LC5H8 1.8360e+05  
 2.000 6500.00

CH3CO3+DIMEPTD=>0.8H2+0.8CH3+0.2C2H3+CH3CO3H+0.8C6H6+0.2LC5H8 1.8360e+05  
 2.000 6500.00

CH3COCH2+DIMEPTD=>0.8H2+0.8CH3+0.2C2H3+CH3COCH3+0.8C6H6+0.2LC5H8  
 1.2420e+05 2.000 8000.00

DIMEPTD+C6H5O=>0.8H2+0.8CH3+0.2C2H3+0.8C6H6+0.2LC5H8+C6H5OH 1.4580e+05  
 2.000 12500.00

C5H7+DIMEPTD=>0.8H2+0.8CH3+0.2C2H3+0.8C6H6+1.2LC5H8 1.4580e+05  
 2.000 15000.00

DIMEPTD+C7H7=>0.8H2+0.8CH3+0.2C2H3+0.8C6H6+0.2LC5H8+C7H8 7.2900e+04  
 2.000 16000.00

DIMEPTD+CH3C6H4=>0.8H2+0.8CH3+0.2C2H3+0.8C6H6+0.2LC5H8+C7H8 1.9980e+08  
 1.000 2000.00

DIMEPTD+RCRESOLO=>0.8H2+0.8CH3+0.2C2H3+0.8C6H6+0.2LC5H8+CRESOL 1.4580e+05  
 2.000 12800.00

DIMEPTD+C10H7=>0.8H2+0.8CH3+0.2C2H3+0.8C6H6+C10H8+0.2LC5H8 1.9980e+08  
 1.000 2000.00

DIMEPTD+INDENYL=>0.8H2+0.8CH3+0.2C2H3+0.8C6H6+0.2LC5H8+INDENE 7.0200e+04  
 2.000 16000.00

DIMEPTD+C10H6CH3=>0.8H2+0.8CH3+0.2C2H3+0.8C6H6+0.2LC5H8+C10H7CH3  
 1.9980e+08 1.000 2000.00

H+DIMEPTD=>H2+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 1.0800e+07  
 2.000 4000.00

CH3+DIMEPTD=>CH4+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 1.0800e+05  
 2.000 5000.00

C2H3+DIMEPTD=>C2H4+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 2.4408e+05  
 2.000 3900.00

C2H5+DIMEPTD=>C2H6+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 7.2000e+04  
 2.000 6700.00

NC3H7+DIMEPTD=>C3H8+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 4.8600e+04  
 2.000 6700.00

IC3H7+DIMEPTD=>C3H8+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 4.8600e+04  
 2.000 9900.00

C3H5-S+DIMEPTD=>C3H6+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 9.7200e+04  
 2.000 4500.00

C3H5-T+DIMEPTD=>C3H6+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 9.7200e+04  
 2.000 4500.00

C3H5-A+DIMEPTD=>C3H6+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 1.9404e+05  
 2.000 12800.00

C4H5+DIMEPTD=>0.5C3H5-A+0.5C3H4-A+0.5IC4H7+1.5C4H6 9.7200e+04  
 2.000 4500.00

C4H71-4+DIMEPTD=>0.5C3H5-A+0.5C3H4-A+0.5IC4H7+C4H8-1+0.5C4H6 4.8600e+04  
 2.000 6600.00

C4H71-3+DIMEPTD=>0.5C3H5-A+0.5C3H4-A+0.5IC4H7+C4H8-2+0.5C4H6 1.2240e+05  
 2.000 13700.00

IC4H7+DIMEPTD=>0.5C3H5-A+0.5C3H4-A+IC4H8+0.5IC4H7+0.5C4H6 9.7200e+04  
 2.000 13700.00

C4H3+DIMEPTD=>0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6+C4H4 1.4724e+05  
 2.000 5200.00

C6H5+DIMEPTD=>0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6+C6H6 1.3320e+08  
 1.000 2000.00

O+DIMEPTD=>OH+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 8.4600e+06  
 2.000 2500.00

O2+DIMEPTD=>HO2+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 6.1200e+06  
 2.000 44000.00

OH+DIMEPTD=>H2O+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 5.4000e+09  
 1.000 50.00

HO2+DIMEPTD=>H2O2+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 2.8800e+06  
 2.000 16000.00

CH3O+DIMEPTD=>CH3OH+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 1.5408e+05  
 2.000 1500.00

CH2OH+DIMEPTD=>CH3OH+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 1.0188e+05  
 2.000 10200.00

HCO+DIMEPTD=>CH2O+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 4.5360e+05  
 2.000 12300.00

CH3CO+DIMEPTD=>CH3CHO+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 4.8600e+05  
 2.000 14000.00

CH2CHO+DIMEPTD=>CH3CHO+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 8.2800e+04  
 2.000 11500.00

C3H3+DIMEPTD=>0.5C3H5-A+1.5C3H4-A+0.5IC4H7+0.5C4H6 9.7200e+04  
 2.000 14000.00

HCCO+DIMEPTD=>CH2CO+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 1.5408e+05  
 2.000 5200.00

CH3O2+DIMEPTD=>CH3O2H+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 2.7360e+05  
 2.000 12600.00

C2H5O2+DIMEPTD=>C2H5O2H+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 2.7360e+05  
 2.000 12600.00

NC3H7O2+DIMEPTD=>0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6+C3H7OOH 2.7360e+05  
 2.000 12600.00

IC3H7O2+DIMEPTD=>0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6+C3H7OOH 2.7360e+05  
 2.000 12600.00

HCO3+DIMEPTD=>0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6+HCO3H 1.2240e+05  
 2.000 6500.00

CH3CO3+DIMEPTD=>CH3CO3H+0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6 1.2240e+05  
 2.000 6500.00

CH3COCH2+DIMEPTD=>0.5C3H5-A+0.5C3H4-A+CH3COCH3+0.5IC4H7+0.5C4H6  
 8.2800e+04 2.000 8000.00

DIMEPTD+C6H5O=>0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6+C6H5OH 9.7200e+04  
 2.000 12500.00

C5H7+DIMEPTD=>0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6+LC5H8 9.7200e+04  
 2.000 15000.00

DIMEPTD+C7H7=>0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6+C7H8 4.8600e+04  
 2.000 16000.00

DIMEPTD+CH3C6H4=>0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6+C7H8 1.3320e+08  
 1.000 2000.00

DIMEPTD+RCRESOLO=>0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6+CRESOL 9.7200e+04  
 2.000 12800.00

DIMEPTD+C10H7=>0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6+C10H8 1.3320e+08  
 1.000 2000.00

DIMEPTD+INDENYL=>0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6+INDENE 4.6800e+04  
 2.000 16000.00

DIMEPTD+C10H6CH3=>0.5C3H5-A+0.5C3H4-A+0.5IC4H7+0.5C4H6+C10H7CH3  
 1.3320e+08 1.000 2000.00

C2H2+C4H3=>C6H5 4.0000e+11  
 0.000 5000.00

O2+C4H71-4=>2CH2O+C2H3 3.0000e+11  
 0.000 2500.00

O2+C4H71-4=>C2H4O1-2+CH2CHO	2.0000e+11
0.000 2500.00	
O2+IC4H7=>CH2O+CH3COCH2	5.0000e+11
0.000 17500.00	
HO2+C3H5-S=>OH+CH3COCH2	5.0000e+11
0.000 0.00	
HO2+C3H5-T=>OH+CO+C2H5	5.0000e+11
0.000 0.00	
H+C6H5O (+M) =C6H5OH (+M)	2.5000e+14
0.000 0.00	
LOW/ 1.00e+94 -21.840 13880.0/	
TROE/ 0.2000 1.000e-30 1.000e+30 1.000e-10/	
H2O/ 6.00/ H2/ 2.00/ CO2/ 2.00/ CO/ 1.50/ CH4/ 2.00/ C2H6/ 3.00/	
AR/ 0.70/	
C6H5OH+C7H7=C7H8+C6H5O	2.0000e+11
0.000 14500.00	
C6H5OH=OH+C6H5	2.0000e+16
0.000 111000.00	
C6H5OH=CO+C5H6	2.5000e+13
0.000 72400.00	
O2+C6H5OH=>H+CO+HCO+C2H2+CH2CO	1.0000e+17
0.000 53000.00	
O2+C6H5OH=>CO+CO2+C4H6	2.0000e+17
0.000 55500.00	
H+C6H5OH=OH+C6H6	1.2000e+13
0.000 7000.00	
O2+C6H6=>OH+C6H5O	4.0000e+13
0.000 44000.00	
O+C6H6=H+C6H5O	1.5000e+13
0.000 4000.00	
H+C6H5O=CO+C5H6	2.0000e+14
0.000 0.00	
OH+C6H5O=>CO+HCO+C4H5	5.0000e+12
0.000 0.00	
OH+C6H5O=>HO2+C6H5	5.0000e+12
0.000 0.00	
HO2+C6H5O=>OH+CO+HCO+2C2H2	1.0000e+12
0.000 6000.00	
O+C6H5O=>2CO+C4H5	1.0000e+14
0.000 0.00	

O2+C6H5=O+C6H5O					2.6000e+13
0.000	6120.00				
O2+C6H5=C6H5O2					6.9100e+132 -
36.410	49920.00				
PLOG /	1.000000e+00	6.910000e+132	-3.641000e+01	4.992000e+04	
/					
PLOG /	8.500000e+00	5.670000e+132	-3.591000e+01	5.365900e+04	
/					
C6H5O2=O+C6H5O					9.5900e+80 -
19.820	79043.00				
PLOG /	1.000000e+00	9.590000e+80	-1.982000e+01	7.904300e+04	
/					
PLOG /	8.500000e+00	7.510000e+67	-1.572000e+01	7.369900e+04	
/					
O2+C6H5=CO2+C5H5					1.7000e+33 -
5.960	18648.00				
PLOG /	1.000000e+00	1.700000e+33	-5.960000e+00	1.864800e+04	
/					
PLOG /	8.500000e+00	2.410000e+40	-7.860000e+00	2.644800e+04	
/					
C6H5O=CO+C5H5					2.8550e+59 -
14.400	68564.00				
PLOG /	1.000000e-02	2.855000e+59	-1.440000e+01	6.856400e+04	
/					
PLOG /	1.000000e-01	8.250000e+70	-1.720000e+01	8.184300e+04	
/					
PLOG /	1.000000e+00	6.600000e+73	-1.760000e+01	8.898500e+04	
/					
PLOG /	1.000000e+01	2.205000e+68	-1.580000e+01	8.945600e+04	
/					
PLOG /	1.000000e+02	1.885000e+71	-1.618000e+01	9.861100e+04	
/					
C5H5+C6H5OH=C5H6+C6H5O					3.0000e+12
0.000	25000.00				
C2H2+C5H6=>C7H8					3.0000e+11
0.000	30000.00				
2IC4H7=>H2+H+CH3+C7H8					1.0000e+10
0.000	0.00				
C4H71-3+C4H6=>H2+CH3+C7H8					6.0000e+11
0.000	13000.00				
2C4H71-3=>H2+H+CH3+C7H8					7.5000e+11
0.000	0.00				
C7H8 (+M)=H+C7H7 (+M)					5.6000e+15
0.170	91168.00				
LOW/	1.00e+98	-22.855	99882.0/		
TROE/	0.06547	15.11	1.000e+10	7.596e+07/	

H+CH3C6H4 (+M)=C7H8 (+M)	1.0000e+14
0.000            0.00	
LOW/    6.60e+75    -16.300            7000.0/	
TROE/            1.000    0.1000    584.9    6113./	
H2/ 2.00/    H2O/ 6.00/    CH4/ 2.00/    CO/ 1.50/    CO2/ 2.00/    C2H6/ 3.00/	
C7H8 (+M)=CH3+C6H5 (+M)	1.9500e+27    -
3.160    107447.00	
LOW/    1.00e+98    -22.966            122080.0/	
TROE/            0.7055    1.000e+10    459.9    8.214e+09/	
CH3C6H4=C7H7	1.0000e+00
1.000            1.00	
PLOG /    1.000000e-01    1.050000e+65    -1.573000e+01    6.543690e+04	
/	
PLOG /    1.000000e+00    5.580000e+45    -9.832000e+00    5.761785e+04	
/	
PLOG /    1.000000e+01    7.600000e+24    -3.522000e+00    4.912007e+04	
/	
PLOG /    5.000000e+01    2.790000e+14    -4.220000e-01    4.368101e+04	
/	
PLOG /    1.000000e+02    3.340000e+13    0.000000e+00    4.592354e+04	
/	
H+C7H8=CH3+C6H6	1.2000e+13
0.000            5100.00	
C3H3+C4H6=H+C7H8	2.0000e+11
0.000            5000.00	
H+C7H8=H2+C7H7	2.1400e+06
2.268            4392.37	
H+C7H8=H2+CH3C6H4	4.0000e+08
1.834            14381.82	
CH3+C7H8=CH4+C7H7	2.5600e+00
3.807            7395.74	
CH3+C7H8=CH4+CH3C6H4	5.3773e+02
3.284            14601.08	
H+C7H7=CH3+C6H5	4.5000e+58    -
11.900            51860.00	
PLOG /    3.950000e-02    4.500000e+58    -1.190000e+01    5.186000e+04	
/	
PLOG /    1.320000e-01    2.030000e+64    -1.337000e+01    5.952000e+04	
/	
PLOG /    1.000000e+00    5.830000e+67    -1.415000e+01    6.833000e+04	
/	
PLOG /    1.000000e+01    8.850000e+68    -1.423000e+01    7.841000e+04	
/	
O2+C7H8=HO2+C7H7	1.8070e+02
3.365            38473.24	
O2+C7H8=HO2+CH3C6H4	1.6720e+06
2.361            53670.69	

OH+C7H8=H2O+C7H7				6.1200e+07
1.587	220.32			
OH+C7H8=H2O+CH3C6H4				9.3890e+03
2.859	1326.04			
OH+C7H8=CH3+C6H5OH				7.8290e+02
2.884	3221.00			
HO2+C7H8=H2O2+C7H7				2.7180e+00
3.546	11323.60			
HO2+C7H8=H2O2+CH3C6H4				1.4370e+02
3.384	22595.28			
O+C7H8=OH+C7H7				4.9140e+07
1.635	3795.67			
O+C7H8=OH+CH3C6H4				6.4910e+06
2.151	9201.59			
O+C7H8=CO+MCPTD				5.0200e+15 -
0.490	14993.00			
PLOG /	1.000000e-01	6.020000e+13	1.200000e-01	1.177695e+04
/				
PLOG /	1.000000e+00	5.020000e+15	-4.900000e-01	1.499390e+04
/				
PLOG /	1.000000e+01	1.150000e+38	-6.710000e+00	3.463142e+04
/				
PLOG /	5.000000e+01	1.300000e+31	-4.730000e+00	3.356838e+04
/				
O2+CH3C6H4=>O2C6H4CH3				3.2100e+132 -
38.080	33960.00			
PLOG /	1.000000e-02	1.130000e+90	-2.798000e+01	-1.890000e+03
/				
PLOG /	1.000000e-01	6.510000e+107	-3.205000e+01	1.222000e+04
/				
PLOG /	1.000000e+00	3.210000e+132	-3.808000e+01	3.396000e+04
/				
PLOG /	1.000000e+01	6.570000e+179	-4.968000e+01	8.166000e+04
/				
PLOG /	1.000000e+02	1.470000e+184	-5.024000e+01	9.204000e+04
/				
O2C6H4CH3=>O2+CH3C6H4				1.5200e+34 -
6.560	48790.00			
PLOG /	1.000000e-02	4.600000e+27	-5.340000e+00	4.442000e+04
/				
PLOG /	1.000000e-01	2.780000e+29	-5.550000e+00	4.516000e+04
/				
PLOG /	1.000000e+00	1.520000e+34	-6.560000e+00	4.879000e+04
/				
PLOG /	1.000000e+01	3.270000e+41	-8.250000e+00	5.605000e+04
/				
PLOG /	1.000000e+02	9.470000e+41	-8.010000e+00	5.977000e+04
/				

O2+CH3C6H4=OH+OC6H4CH2				3.7000e+12	-
0.180	-1520.00				
PLOG /	1.000000e-02	3.480000e+09	6.500000e-01	-4.200000e+03	
/					
PLOG /	1.000000e-01	4.980000e+09	6.000000e-01	-4.060000e+03	
/					
PLOG /	1.000000e+00	3.700000e+12	-1.800000e-01	-1.520000e+03	
/					
PLOG /	1.000000e+01	1.740000e+24	-3.360000e+00	8.980000e+03	
/					
PLOG /	1.000000e+02	3.720000e+40	-7.770000e+00	2.494000e+04	
/					
O2C6H4CH3=OH+OC6H4CH2				2.0300e+45	-
10.170	40220.00				
PLOG /	1.000000e-02	5.580000e+29	-6.600000e+00	2.357000e+04	
/					
PLOG /	1.000000e-01	3.910000e+38	-8.690000e+00	3.214000e+04	
/					
PLOG /	1.000000e+00	2.030000e+45	-1.017000e+01	4.022000e+04	
/					
PLOG /	1.000000e+01	2.140000e+44	-9.500000e+00	4.344000e+04	
/					
PLOG /	1.000000e+02	6.020000e+33	-6.250000e+00	3.947000e+04	
/					
OC6H4CH2=CO+C6H6				6.3100e+14	
0.000	67160.00				
O2+C7H7=C7H7O2				1.9250e+06	
1.759	-1967.00				
PLOG /	1.000000e-01	8.368000e+49	-1.245500e+01	1.029190e+04	
/					
PLOG /	1.000000e+00	2.797000e+36	-7.924000e+00	7.184800e+03	
/					
PLOG /	1.000000e+01	6.718000e+25	-4.423000e+00	4.444900e+03	
/					
PLOG /	1.000000e+02	1.717000e+20	-2.544000e+00	3.410900e+03	
/					
PLOG /	1.000000e+03	1.563000e+12	-5.400000e-02	3.027000e+02	
/					
O2+C7H7=OH+C6H5CHO				1.0000e+00	
1.000	1.00				
PLOG /	1.000000e-01	2.896000e+03	2.341000e+00	1.420000e+04	
/					
PLOG /	1.000000e+00	3.537000e+06	1.483000e+00	1.650800e+04	
/					
PLOG /	1.000000e+01	9.498000e+10	2.750000e-01	2.045710e+04	
/					
PLOG /	1.000000e+02	2.502000e+15	-8.800000e-01	2.593700e+04	
/					
PLOG /	1.000000e+03	2.578000e+06	1.754000e+00	2.402400e+04	
/					
C7H7O2=OH+C6H5CHO				3.2740e+05	
2.091	35335.00				



PLOG /	1.000000e-01	2.182000e+39	-1.043700e+01	3.797800e+04	
/					
PLOG /	1.000000e+00	1.589000e+39	-9.522000e+00	4.135000e+04	
/					
PLOG /	1.000000e+01	1.343000e+30	-6.081000e+00	4.101600e+04	
/					
PLOG /	1.000000e+02	4.799000e+18	-2.202000e+00	3.859840e+04	
/					
PLOG /	1.000000e+03	1.789000e+11	2.300000e-01	3.665000e+04	
/					
O2+C7H7=CH2O+C6H5O				1.0000e+00	
1.000	1.00				
PLOG /	1.000000e-01	4.615000e+08	6.230000e-01	2.011060e+04	
/					
PLOG /	1.000000e+00	2.581000e+09	4.160000e-01	2.071420e+04	
/					
PLOG /	1.000000e+01	4.359000e+13	-7.410000e-01	2.437770e+04	
/					
PLOG /	1.000000e+02	1.473000e+21	-2.756000e+00	3.230480e+04	
/					
PLOG /	1.000000e+03	1.304000e+17	-1.475000e+00	3.486770e+04	
/					
C7H7O2=CH2O+C6H5O				1.0000e+00	
1.000	1.00				
PLOG /	1.000000e+00	2.718000e+00	7.360000e-01	1.399070e+04	
/					
PLOG /	1.000000e+01	4.681000e+11	-1.032000e+00	3.225110e+04	
/					
PLOG /	1.000000e+02	6.990000e+35	-7.432000e+00	5.105790e+04	
/					
PLOG /	1.000000e+03	1.502000e+25	-3.918000e+00	4.953200e+04	
/					
H+C7H7O2=OH+C6H5CH2O				3.8000e+14	-
0.190	1890.00				
H+C7H7O2=BZCOOH				4.3500e+60	-
15.920	11400.00				
H+C7H7O2=HO2+C7H7				1.9600e+04	
2.470	1430.00				
HO2+C7H7O2=O2+BZCOOH				2.0000e+11	
0.000	-1300.00				
C7H8+C7H7O2=C7H7+BZCOOH				4.0000e+11	
0.000	14000.00				
2C7H7O2=>O2+2C6H5CH2O				6.3000e+10	
0.000	-725.00				
HO2+C7H7=BZCOOH				1.0000e+00	
1.000	1.00				
PLOG /	1.000000e-03	1.300000e+27	-5.910000e+00	-9.620000e+02	
/					

PLOG /	1.000000e-02	6.290000e+30	-6.660000e+00	1.085000e+03
/				
PLOG /	1.000000e-01	3.570000e+35	-7.680000e+00	4.734000e+03
/				
PLOG /	1.000000e+00	6.530000e+35	-7.360000e+00	7.058000e+03
/				
PLOG /	1.000000e+01	4.420000e+28	-4.910000e+00	5.804000e+03
/				
PLOG /	1.000000e+02	6.440000e+18	-1.800000e+00	2.538000e+03
/				

HO2+C7H7=OH+C6H5CH2O 1.0000e+00  
 1.000 1.00

DUPLICATE

PLOG /	1.000000e-03	3.730000e+12	1.500000e-01	3.010000e+02
/				
PLOG /	1.000000e-02	1.840000e+14	-3.400000e-01	1.409000e+03
/				
PLOG /	1.000000e-01	8.590000e+18	-1.660000e+00	4.697000e+03
/				
PLOG /	1.000000e+00	2.260000e+24	-3.150000e+00	9.500000e+03
/				
PLOG /	1.000000e+01	1.120000e+24	-2.930000e+00	1.233900e+04
/				
PLOG /	1.000000e+02	2.900000e+16	-6.600000e-01	1.141400e+04
/				

HO2+C7H7=OH+C6H5CH2O 1.0000e+00  
 1.000 1.00

DUPLICATE

PLOG /	1.000000e-03	7.240000e-09	5.310000e+00	2.145000e+03
/				
PLOG /	1.000000e-02	6.310000e-08	5.040000e+00	2.753000e+03
/				
PLOG /	1.000000e-01	2.170000e-04	4.040000e+00	5.168000e+03
/				
PLOG /	1.000000e+00	1.630000e+02	2.400000e+00	9.841000e+03
/				
PLOG /	1.000000e+01	2.510000e+04	1.880000e+00	1.375800e+04
/				
PLOG /	1.000000e+02	1.070000e-01	3.530000e+00	1.401100e+04
/				

HO2+C7H7=H2O+C6H5CHO 1.0000e+00  
 1.000 1.00

PLOG /	1.000000e-03	5.060000e-03	3.880000e+00	4.110000e+02
/				
PLOG /	1.000000e-02	2.020000e-01	3.430000e+00	1.457000e+03
/				
PLOG /	1.000000e-01	7.380000e+03	2.130000e+00	4.655000e+03
/				
PLOG /	1.000000e+00	2.510000e+09	6.100000e-01	9.474000e+03
/				
PLOG /	1.000000e+01	2.660000e+09	7.300000e-01	1.246200e+04
/				
PLOG /	1.000000e+02	1.240000e+02	2.930000e+00	1.167800e+04
/				

BZCOOH=OH+C6H5CH2O 1.0000e+00  
 1.000 1.00  
 DUPLICATE  
 PLOG / 1.000000e-03 9.390000e+69 -1.768000e+01 5.800600e+04  
 /  
 PLOG / 1.000000e-02 3.420000e+67 -1.656000e+01 5.918700e+04  
 /  
 PLOG / 1.000000e-01 9.000000e+60 -1.426000e+01 5.839000e+04  
 /  
 PLOG / 1.000000e+00 1.480000e+50 -1.077000e+01 5.527100e+04  
 /  
 PLOG / 1.000000e+01 1.200000e+38 -6.990000e+00 5.095300e+04  
 /  
 PLOG / 1.000000e+02 1.880000e+29 -4.280000e+00 4.751800e+04  
 /

BZCOOH=OH+C6H5CH2O 1.0000e+00  
 1.000 1.00  
 DUPLICATE  
 PLOG / 1.000000e-03 9.930000e+35 -8.710000e+00 5.685200e+04  
 /  
 PLOG / 1.000000e-02 5.840000e+40 -9.720000e+00 6.073400e+04  
 /  
 PLOG / 1.000000e-01 9.540000e+41 -9.670000e+00 6.353600e+04  
 /  
 PLOG / 1.000000e+00 3.940000e+36 -7.710000e+00 6.330900e+04  
 /  
 PLOG / 1.000000e+01 1.040000e+26 -4.310000e+00 6.014200e+04  
 /  
 PLOG / 1.000000e+02 1.800000e+16 -1.270000e+00 5.655200e+04  
 /

BZCOOH=H2O+C6H5CHO 1.0000e+00  
 1.000 1.00  
 PLOG / 1.000000e-03 5.230000e+53 -1.355000e+01 5.782400e+04  
 /  
 PLOG / 1.000000e-02 2.810000e+52 -1.278000e+01 5.953900e+04  
 /  
 PLOG / 1.000000e-01 7.040000e+46 -1.075000e+01 5.923800e+04  
 /  
 PLOG / 1.000000e+00 3.910000e+36 -7.410000e+00 5.643000e+04  
 /  
 PLOG / 1.000000e+01 3.680000e+24 -3.640000e+00 5.219900e+04  
 /  
 PLOG / 1.000000e+02 3.870000e+15 -8.700000e-01 4.872000e+04  
 /

O2+C6H5CH2O=HO2+C6H5CHO 6.0000e+10  
 0.000 1600.00

C6H5CH2O=CH2O+C6H5 4.5900e+43 -  
 9.513 39050.00  
 PLOG / 1.000000e-02 4.590000e+43 -9.513000e+00 3.905000e+04  
 /  
 PLOG / 1.000000e-01 2.880000e+38 -7.786000e+00 3.777000e+04  
 /  
 PLOG / 1.000000e+00 7.210000e+33 -6.210000e+00 3.685000e+04  
 /

PLOG /	1.000000e+01	1.320000e+27	-4.009000e+00	3.507000e+04	
/					
PLOG /	1.000000e+02	1.080000e+21	-2.057000e+00	3.331000e+04	
/					
C6H5CH2O=H+C6H5CHO				3.0400e+32	-
6.665	21880.00				
PLOG /	1.000000e-02	3.040000e+32	-6.665000e+00	2.188000e+04	
/					
PLOG /	1.000000e-01	6.130000e+31	-6.261000e+00	2.236000e+04	
/					
PLOG /	1.000000e+00	5.260000e+28	-5.081000e+00	2.225000e+04	
/					
PLOG /	1.000000e+01	1.680000e+22	-2.901000e+00	2.076000e+04	
/					
PLOG /	1.000000e+02	2.440000e+17	-1.307000e+00	1.954000e+04	
/					
C6H5CH2O=HCO+C6H6				2.5700e+31	-
6.215	25760.00				
PLOG /	1.000000e-02	2.570000e+31	-6.215000e+00	2.576000e+04	
/					
PLOG /	1.000000e-01	5.270000e+31	-6.153000e+00	2.688000e+04	
/					
PLOG /	1.000000e+00	2.370000e+32	-6.095000e+00	2.881000e+04	
/					
PLOG /	1.000000e+01	3.820000e+31	-5.663000e+00	2.984000e+04	
/					
PLOG /	1.000000e+02	2.040000e+28	-4.576000e+00	2.920000e+04	
/					
O2+C6H5CHO=HO2+C6H5CO				1.3630e+07	
2.000	38109.91				
OH+C6H5CHO=H2O+C6H5CO				2.0000e+13	
0.000	630.00				
H+C6H5CHO=H2+C6H5CO				1.6000e+14	
0.000	6360.00				
HO2+C6H5CHO=H2O2+C6H5CO				5.0000e+12	
0.000	12460.00				
CH3+C6H5CHO=CH4+C6H5CO				1.4000e+12	
0.000	7234.20				
C6H5CHO+C7H7=C7H8+C6H5CO				9.4730e+04	
2.000	14112.33				
O+C6H5CHO=OH+C6H5CO				9.4730e+06	
2.000	1094.46				
C6H5CO=CO+C6H5				4.0000e+14	
0.000	29500.00				
C6H5CHO=HCO+C6H5				5.0000e+15	
0.000	98900.00				

C6H5CHO=H+C6H5CO 0.000 89300.00	3.0000e+15
H+C6H5CHO=HCO+C6H6 0.000 5000.00	1.2000e+13
C3H5-A+C4H2=>C7H7 0.000 15000.00	2.0000e+11
C2H+C5H6=>C7H7 0.000 8000.00	3.0000e+11
C7H7=>C3H3+C4H4 0.000 83600.00	1.0000e+14
C3H3+C4H4=>C7H7 0.000 15000.00	2.0000e+13
C3H4-P+C4H3=>CH3C6H4 0.000 0.00	2.4000e+10
CH3C6H4=>C3H4-P+C4H3 0.000 72500.00	4.5000e+13
C2H2+C4H6=>CYC6H8 0.000 22500.00	1.5000e+11
C3H6+C4H6=>H+CH3+CYC6H8 0.000 30000.00	2.5000e+10
C3H5-A+IC4H7=>H+CH3+CYC6H8 0.000 0.00	4.0000e+10
C3H5-S+C4H6=>CH3+CYC6H8 0.000 5000.00	2.0000e+11
C2H4+C4H5=>H+CYC6H8 0.000 7000.00	3.0000e+11
C4H6+C4H5=>C2H3+CYC6H8 0.000 7000.00	5.0000e+11
H+CYC6H8=>H2+H+C6H6 2.000 4000.00	2.7000e+07
CH3+CYC6H8=>H+CH4+C6H6 2.000 5000.00	2.7000e+05
C2H3+CYC6H8=>H+C2H4+C6H6 2.000 3900.00	6.1020e+05
C2H5+CYC6H8=>H+C2H6+C6H6 2.000 6700.00	1.8000e+05
NC3H7+CYC6H8=>H+C3H8+C6H6 2.000 6700.00	1.2150e+05

IC3H7+CYC6H8=>H+C3H8+C6H6 2.000        9900.00	1.2150e+05
C3H5-S+CYC6H8=>H+C3H6+C6H6 2.000        4500.00	2.4300e+05
C3H5-T+CYC6H8=>H+C3H6+C6H6 2.000        4500.00	2.4300e+05
C3H5-A+CYC6H8=>H+C3H6+C6H6 2.000        12800.00	4.8510e+05
C4H5+CYC6H8=>H+C4H6+C6H6 2.000        4500.00	2.4300e+05
C4H71-4+CYC6H8=>H+C4H8-1+C6H6 2.000        6600.00	1.2150e+05
C4H71-3+CYC6H8=>H+C4H8-2+C6H6 2.000        13700.00	3.0600e+05
IC4H7+CYC6H8=>H+IC4H8+C6H6 2.000        13700.00	2.4300e+05
C4H3+CYC6H8=>H+C4H4+C6H6 2.000        5200.00	3.6810e+05
C6H5+CYC6H8=>H+2C6H6 1.000        2000.00	3.3300e+08
O+CYC6H8=>H+OH+C6H6 2.000        2500.00	2.1150e+07
O2+CYC6H8=>H+HO2+C6H6 2.000        44000.00	1.5300e+07
OH+CYC6H8=>H+H2O+C6H6 1.000        50.00	1.3500e+10
HO2+CYC6H8=>H+H2O2+C6H6 2.000        16000.00	7.2000e+06
CH3O+CYC6H8=>H+CH3OH+C6H6 2.000        1500.00	3.8520e+05
CH2OH+CYC6H8=>H+CH3OH+C6H6 2.000        10200.00	2.5470e+05
HCO+CYC6H8=>H+CH2O+C6H6 2.000        12300.00	1.1340e+06
CH3CO+CYC6H8=>H+CH3CHO+C6H6 2.000        14000.00	1.2150e+06
CH2CHO+CYC6H8=>H+CH3CHO+C6H6 2.000        11500.00	2.0700e+05

C3H3+CYC6H8=>H+C3H4-A+C6H6 2.000 14000.00	2.4300e+05
HCCO+CYC6H8=>H+CH2CO+C6H6 2.000 5200.00	3.8520e+05
CH3O2+CYC6H8=>H+CH3O2H+C6H6 2.000 12600.00	6.8400e+05
C2H5O2+CYC6H8=>H+C2H5O2H+C6H6 2.000 12600.00	6.8400e+05
NC3H7O2+CYC6H8=>H+C6H6+C3H7OOH 2.000 12600.00	6.8400e+05
IC3H7O2+CYC6H8=>H+C6H6+C3H7OOH 2.000 12600.00	6.8400e+05
HCO3+CYC6H8=>H+C6H6+HCO3H 2.000 6500.00	3.0600e+05
CH3CO3+CYC6H8=>H+CH3CO3H+C6H6 2.000 6500.00	3.0600e+05
CH3COCH2+CYC6H8=>H+CH3COCH3+C6H6 2.000 8000.00	2.0700e+05
CYC6H8+C6H5O=>H+C6H6+C6H5OH 2.000 12500.00	2.4300e+05
C5H7+CYC6H8=>H+C6H6+LC5H8 2.000 15000.00	2.4300e+05
CYC6H8+C7H7=>H+C6H6+C7H8 2.000 16000.00	1.2150e+05
CYC6H8+CH3C6H4=>H+C6H6+C7H8 1.000 2000.00	3.3300e+08
CYC6H8+RCRESOLO=>H+C6H6+CRESOL 2.000 12800.00	2.4300e+05
CYC6H8+C10H7=>H+C6H6+C10H8 1.000 2000.00	3.3300e+08
CYC6H8+INDENYL=>H+C6H6+INDENE 2.000 16000.00	1.1700e+05
CYC6H8+C10H6CH3=>H+C6H6+C10H7CH3 1.000 2000.00	3.3300e+08
H+CYC6H10=>H2+0.2CH3+0.2C5H6+0.8RCYC6H9 2.000 4000.00	3.6000e+07
CH3+CYC6H10=>CH4+0.2CH3+0.2C5H6+0.8RCYC6H9 2.000 5000.00	3.6000e+05

C2H3+CYC6H10=>0.2CH3+C2H4+0.2C5H6+0.8RCYC6H9 2.000 3900.00	8.1360e+05
C2H5+CYC6H10=>0.2CH3+C2H6+0.2C5H6+0.8RCYC6H9 2.000 6700.00	2.4000e+05
NC3H7+CYC6H10=>0.2CH3+C3H8+0.2C5H6+0.8RCYC6H9 2.000 6700.00	1.6200e+05
IC3H7+CYC6H10=>0.2CH3+C3H8+0.2C5H6+0.8RCYC6H9 2.000 9900.00	1.6200e+05
C3H5-S+CYC6H10=>0.2CH3+C3H6+0.2C5H6+0.8RCYC6H9 2.000 4500.00	3.2400e+05
C3H5-T+CYC6H10=>0.2CH3+C3H6+0.2C5H6+0.8RCYC6H9 2.000 4500.00	3.2400e+05
C3H5-A+CYC6H10=>0.2CH3+C3H6+0.2C5H6+0.8RCYC6H9 2.000 12800.00	6.4680e+05
C4H5+CYC6H10=>0.2CH3+C4H6+0.2C5H6+0.8RCYC6H9 2.000 4500.00	3.2400e+05
C4H71-4+CYC6H10=>0.2CH3+C4H8-1+0.2C5H6+0.8RCYC6H9 2.000 6600.00	1.6200e+05
C4H71-3+CYC6H10=>0.2CH3+C4H8-2+0.2C5H6+0.8RCYC6H9 2.000 13700.00	4.0800e+05
IC4H7+CYC6H10=>0.2CH3+IC4H8+0.2C5H6+0.8RCYC6H9 2.000 13700.00	3.2400e+05
C4H3+CYC6H10=>0.2CH3+C4H4+0.2C5H6+0.8RCYC6H9 2.000 5200.00	4.9080e+05
C6H5+CYC6H10=>0.2CH3+C6H6+0.2C5H6+0.8RCYC6H9 1.000 2000.00	4.4400e+08
O+CYC6H10=>OH+0.2CH3+0.2C5H6+0.8RCYC6H9 2.000 2500.00	2.8200e+07
O2+CYC6H10=>HO2+0.2CH3+0.2C5H6+0.8RCYC6H9 2.000 44000.00	2.0400e+07
OH+CYC6H10=>H2O+0.2CH3+0.2C5H6+0.8RCYC6H9 1.000 50.00	1.8000e+10
HO2+CYC6H10=>H2O2+0.2CH3+0.2C5H6+0.8RCYC6H9 2.000 16000.00	9.6000e+06
CH3O+CYC6H10=>0.2CH3+CH3OH+0.2C5H6+0.8RCYC6H9 2.000 1500.00	5.1360e+05
CH2OH+CYC6H10=>0.2CH3+CH3OH+0.2C5H6+0.8RCYC6H9 2.000 10200.00	3.3960e+05



HCO+CYC6H10=>0.2CH3+CH2O+0.2C5H6+0.8RCYC6H9 2.000 12300.00	1.5120e+06
CH3CO+CYC6H10=>0.2CH3+CH3CHO+0.2C5H6+0.8RCYC6H9 2.000 14000.00	1.6200e+06
CH2CHO+CYC6H10=>0.2CH3+CH3CHO+0.2C5H6+0.8RCYC6H9 2.000 11500.00	2.7600e+05
C3H3+CYC6H10=>0.2CH3+C3H4-A+0.2C5H6+0.8RCYC6H9 2.000 14000.00	3.2400e+05
HCCO+CYC6H10=>0.2CH3+CH2CO+0.2C5H6+0.8RCYC6H9 2.000 5200.00	5.1360e+05
CH3O2+CYC6H10=>0.2CH3+CH3O2H+0.2C5H6+0.8RCYC6H9 2.000 12600.00	9.1200e+05
C2H5O2+CYC6H10=>0.2CH3+C2H5O2H+0.2C5H6+0.8RCYC6H9 2.000 12600.00	9.1200e+05
NC3H7O2+CYC6H10=>0.2CH3+0.2C5H6+C3H7OOH+0.8RCYC6H9 2.000 12600.00	9.1200e+05
IC3H7O2+CYC6H10=>0.2CH3+0.2C5H6+C3H7OOH+0.8RCYC6H9 2.000 12600.00	9.1200e+05
HCO3+CYC6H10=>0.2CH3+0.2C5H6+HCO3H+0.8RCYC6H9 2.000 6500.00	4.0800e+05
CH3CO3+CYC6H10=>0.2CH3+CH3CO3H+0.2C5H6+0.8RCYC6H9 2.000 6500.00	4.0800e+05
CH3COCH2+CYC6H10=>0.2CH3+CH3COCH3+0.2C5H6+0.8RCYC6H9 2.000 8000.00	2.7600e+05
CYC6H10+C6H5O=>0.2CH3+0.2C5H6+0.8RCYC6H9+C6H5OH 2.000 12500.00	3.2400e+05
C5H7+CYC6H10=>0.2CH3+0.2C5H6+LC5H8+0.8RCYC6H9 2.000 15000.00	3.2400e+05
CYC6H10+C7H7=>0.2CH3+0.2C5H6+0.8RCYC6H9+C7H8 2.000 16000.00	1.6200e+05
CYC6H10+CH3C6H4=>0.2CH3+0.2C5H6+0.8RCYC6H9+C7H8 1.000 2000.00	4.4400e+08
CYC6H10+RCRESOLO=>0.2CH3+0.2C5H6+0.8RCYC6H9+CRESOL 2.000 12800.00	3.2400e+05
CYC6H10+C10H7=>0.2CH3+0.2C5H6+C10H8+0.8RCYC6H9 1.000 2000.00	4.4400e+08
CYC6H10+INDENYL=>0.2CH3+0.2C5H6+0.8RCYC6H9+INDENE 2.000 16000.00	1.5600e+05

CYC6H10+C10H6CH3=>0.2CH3+0.2C5H6+0.8RCYC6H9+C10H7CH3	4.4400e+08
1.000 2000.00	
H+C6H5OH=>H2+C6H5O	1.2000e+07
2.000 6634.07	
CH3+C6H5OH=>CH4+C6H5O	1.2000e+05
2.000 7910.24	
C2H3+C6H5OH=>C2H4+C6H5O	2.7120e+05
2.000 6726.61	
C2H5+C6H5OH=>C2H6+C6H5O	8.0000e+04
2.000 9481.27	
NC3H7+C6H5OH=>C3H8+C6H5O	5.4000e+04
2.000 9481.27	
IC3H7+C6H5OH=>C3H8+C6H5O	5.4000e+04
2.000 12917.73	
C3H5-S+C6H5OH=>C3H6+C6H5O	1.0800e+05
2.000 6897.45	
C3H5-T+C6H5OH=>C3H6+C6H5O	1.0800e+05
2.000 6897.45	
C3H5-A+C6H5OH=>C3H6+C6H5O	2.1560e+05
2.000 15810.16	
C4H5+C6H5OH=>C4H6+C6H5O	1.0800e+05
2.000 7384.57	
C4H71-4+C6H5OH=>C4H8-1+C6H5O	5.4000e+04
2.000 9181.05	
C4H71-3+C6H5OH=>C4H8-2+C6H5O	1.3600e+05
2.000 16763.05	
IC4H7+C6H5OH=>IC4H8+C6H5O	1.0800e+05
2.000 16763.05	
C4H3+C6H5OH=>C4H4+C6H5O	1.6360e+05
2.000 8128.26	
C6H5+C6H5OH=>C6H6+C6H5O	1.4800e+08
1.000 4351.84	
O+C6H5OH=>OH+C6H5O	9.4000e+06
2.000 4691.70	
O2+C6H5OH=>HO2+C6H5O	6.8000e+06
2.000 48272.65	
OH+C6H5OH=>H2O+C6H5O	6.0000e+09
1.000 2405.22	

HO2+C6H5OH=>H2O2+C6H5O	3.2000e+06
2.000 18857.78	
CH3O+C6H5OH=>CH3OH+C6H5O	1.7120e+05
2.000 3764.61	
CH2OH+C6H5OH=>CH3OH+C6H5O	1.1320e+05
2.000 13237.94	
HCO+C6H5OH=>CH2O+C6H5O	5.0400e+05
2.000 15163.31	
CH3CO+C6H5OH=>CH3CHO+C6H5O	5.4000e+05
2.000 16963.65	
CH2CHO+C6H5OH=>CH3CHO+C6H5O	9.2000e+04
2.000 14313.67	
C3H3+C6H5OH=>C3H4-A+C6H5O	1.0800e+05
2.000 17567.41	
HCCO+C6H5OH=>CH2CO+C6H5O	1.7120e+05
2.000 8148.85	
CH3O2+C6H5OH=>CH3O2H+C6H5O	3.0400e+05
2.000 15598.15	
C2H5O2+C6H5OH=>C2H5O2H+C6H5O	3.0400e+05
2.000 15598.15	
NC3H7O2+C6H5OH=>C3H7OOH+C6H5O	3.0400e+05
2.000 15502.09	
IC3H7O2+C6H5OH=>C3H7OOH+C6H5O	3.0400e+05
2.000 15502.09	
HCO3+C6H5OH=>HCO3H+C6H5O	1.3600e+05
2.000 9072.89	
CH3CO3+C6H5OH=>CH3CO3H+C6H5O	1.3600e+05
2.000 9072.89	
CH3COCH2+C6H5OH=>CH3COCH3+C6H5O	9.2000e+04
2.000 10690.26	
C5H7+C6H5OH=>LC5H8+C6H5O	1.0800e+05
2.000 18136.38	
C6H5OH+CH3C6H4=>C7H8+C6H5O	1.4800e+08
1.000 4351.84	
C6H5OH+RCRESOLO=>C6H5O+CRESOL	1.0800e+05
2.000 15810.16	
C6H5OH+C10H7=>C10H8+C6H5O	1.4800e+08
1.000 4351.84	

C6H5OH+INDENYL=>C6H5O+INDENE	5.2000e+04
2.000 19190.53	
C6H5OH+C10H6CH3=>C6H5O+C10H7CH3	1.4800e+08
1.000 3864.72	
C2H3+C7H8=>C2H4+CH3C6H4	6.7800e+05
2.000 7460.65	
C2H5+C7H8=>C2H6+CH3C6H4	2.0000e+05
2.000 12330.09	
NC3H7+C7H8=>C3H8+CH3C6H4	1.3500e+05
2.000 12330.09	
IC3H7+C7H8=>C3H8+CH3C6H4	1.3500e+05
2.000 16129.68	
C3H5-S+C7H8=>C3H6+CH3C6H4	2.7000e+05
2.000 10579.25	
C3H5-T+C7H8=>C3H6+CH3C6H4	2.7000e+05
2.000 10579.25	
C3H5-A+C7H8=>C3H6+CH3C6H4	5.3900e+05
2.000 20432.90	
C4H5+C7H8=>C4H6+CH3C6H4	2.7000e+05
2.000 8207.64	
C4H71-4+C7H8=>C4H8-1+CH3C6H4	1.3500e+05
2.000 13144.81	
C4H71-3+C7H8=>C4H8-2+CH3C6H4	3.4000e+05
2.000 21467.03	
IC4H7+C7H8=>IC4H8+CH3C6H4	2.7000e+05
2.000 21467.03	
C4H3+C7H8=>C4H4+CH3C6H4	4.0900e+05
2.000 9170.82	
C6H5+C7H8=>C6H6+CH3C6H4	3.7000e+08
1.000 4356.78	
CH3O+C7H8=>CH3OH+CH3C6H4	4.2800e+05
2.000 5819.99	
CH2OH+C7H8=>CH3OH+CH3C6H4	2.8300e+05
2.000 16480.95	
HCO+C7H8=>CH2O+CH3C6H4	1.2600e+06
2.000 20424.15	
CH3CO+C7H8=>CH3CHO+CH3C6H4	1.3500e+06
2.000 22378.57	

CH2CHO+C7H8=>CH3CHO+CH3C6H4 2.000 19498.26	2.3000e+05
C3H3+C7H8=>C3H4-A+CH3C6H4 2.000 19439.11	2.7000e+05
HCCO+C7H8=>CH2CO+CH3C6H4 2.000 9070.61	4.2800e+05
CH3O2+C7H8=>CH3O2H+CH3C6H4 2.000 20202.44	7.6000e+05
C2H5O2+C7H8=>C2H5O2H+CH3C6H4 2.000 20202.44	7.6000e+05
NC3H7O2+C7H8=>C3H7OOH+CH3C6H4 2.000 20670.08	7.6000e+05
IC3H7O2+C7H8=>C3H7OOH+CH3C6H4 2.000 20670.08	7.6000e+05
HCO3+C7H8=>HCO3H+CH3C6H4 2.000 13024.11	3.4000e+05
CH3CO3+C7H8=>CH3CO3H+CH3C6H4 2.000 13024.11	3.4000e+05
CH3COCH2+C7H8=>CH3COCH3+CH3C6H4 2.000 14821.74	2.3000e+05
C7H8+C6H5O=>C6H5OH+CH3C6H4 2.000 19151.84	2.7000e+05
C5H7+C7H8=>LC5H8+CH3C6H4 2.000 22952.95	2.7000e+05
C7H8+C7H7=>C7H8+CH3C6H4 2.000 21718.66	1.3500e+05
C7H8+RCRESOLO=>CH3C6H4+CRESOL 2.000 20432.90	2.7000e+05
C7H8+C10H7=>C10H8+CH3C6H4 1.000 4356.78	3.7000e+08
C7H8+INDENYL=>CH3C6H4+INDENE 2.000 24090.27	1.3000e+05
C7H8+C10H6CH3=>CH3C6H4+C10H7CH3 1.000 6728.39	3.7000e+08
C2H3+C7H8=>C2H4+C7H7 2.000 4890.27	2.0340e+05
C2H5+C7H8=>C2H6+C7H7 2.000 7090.53	6.0000e+04

NC3H7+C7H8=>C3H8+C7H7	4.0500e+04
2.000 7090.53	
IC3H7+C7H8=>C3H8+C7H7	4.0500e+04
2.000 10290.53	
C3H5-S+C7H8=>C3H6+C7H7	8.1000e+04
2.000 4500.00	
C3H5-T+C7H8=>C3H6+C7H7	8.1000e+04
2.000 4500.00	
C3H5-A+C7H8=>C3H6+C7H7	1.6170e+05
2.000 12800.00	
C4H5+C7H8=>C4H6+C7H7	8.1000e+04
2.000 5490.27	
C4H71-4+C7H8=>C4H8-1+C7H7	4.0500e+04
2.000 6600.00	
C4H71-3+C7H8=>C4H8-2+C7H7	1.0200e+05
2.000 13700.00	
IC4H7+C7H8=>IC4H8+C7H7	8.1000e+04
2.000 13700.00	
C4H3+C7H8=>C4H4+C7H7	1.2270e+05
2.000 6148.43	
C6H5+C7H8=>C6H6+C7H7	1.1100e+08
1.000 2990.27	
CH3O+C7H8=>CH3OH+C7H7	1.2840e+05
2.000 1890.53	
CH2OH+C7H8=>CH3OH+C7H7	8.4900e+04
2.000 10590.53	
HCO+C7H8=>CH2O+C7H7	3.7800e+05
2.000 12062.89	
CH3CO+C7H8=>CH3CHO+C7H7	4.0500e+05
2.000 13762.89	
CH2CHO+C7H8=>CH3CHO+C7H7	6.9000e+04
2.000 11262.89	
C3H3+C7H8=>C3H4-A+C7H7	8.1000e+04
2.000 14990.27	
HCCO+C7H8=>CH2CO+C7H7	1.2840e+05
2.000 6190.27	
CH3O2+C7H8=>CH3O2H+C7H7	2.2800e+05
2.000 12600.00	

C2H5O2+C7H8=>C2H5O2H+C7H7	2.2800e+05
2.000 12600.00	
NC3H7O2+C7H8=>C3H7OOH+C7H7	2.2800e+05
2.000 12404.74	
IC3H7O2+C7H8=>C3H7OOH+C7H7	2.2800e+05
2.000 12404.74	
HCO3+C7H8=>HCO3H+C7H7	1.0200e+05
2.000 6500.00	
CH3CO3+C7H8=>CH3CO3H+C7H7	1.0200e+05
2.000 6500.00	
CH3COCH2+C7H8=>CH3COCH3+C7H7	6.9000e+04
2.000 8000.00	
C5H7+C7H8=>LC5H8+C7H7	8.1000e+04
2.000 15000.00	
C7H8+CH3C6H4=>C7H8+C7H7	1.1100e+08
1.000 2990.27	
C7H8+RCRESOLO=>C7H7+CRESOL	8.1000e+04
2.000 12800.00	
C7H8+C10H7=>C10H8+C7H7	1.1100e+08
1.000 2990.27	
C7H8+INDENYL=>C7H7+INDENE	3.9000e+04
2.000 16000.00	
C7H8+C10H6CH3=>C7H7+C10H7CH3	1.1100e+08
1.000 2000.00	
C2H3+C6H5CHO=>C2H4+C6H5CO	5.4240e+05
2.000 2479.60	
C2H5+C6H5CHO=>C2H6+C6H5CO	1.6000e+05
2.000 5128.01	
NC3H7+C6H5CHO=>C3H8+C6H5CO	1.0800e+05
2.000 5128.01	
IC3H7+C6H5CHO=>C3H8+C6H5CO	1.0800e+05
2.000 8184.45	
C3H5-S+C6H5CHO=>C3H6+C6H5CO	2.1600e+05
2.000 3044.41	
C3H5-T+C6H5CHO=>C3H6+C6H5CO	2.1600e+05
2.000 3044.41	
C3H5-A+C6H5CHO=>C3H6+C6H5CO	4.3120e+05
2.000 10972.41	

C4H5+C6H5CHO=>C4H6+C6H5CO	2.1600e+05
2.000        3044.41	
C4H71-4+C6H5CHO=>C4H8-1+C6H5CO	1.0800e+05
2.000        5032.93	
C4H71-3+C6H5CHO=>C4H8-2+C6H5CO	2.7200e+05
2.000        11840.29	
IC4H7+C6H5CHO=>IC4H8+C6H5CO	2.1600e+05
2.000        11840.29	
C4H3+C6H5CHO=>C4H4+C6H5CO	3.2720e+05
2.000        3705.38	
C6H5+C6H5CHO=>C6H6+C6H5CO	2.9600e+08
1.000        867.85	
CH3O+C6H5CHO=>CH3OH+C6H5CO	3.4240e+05
2.000        241.70	
CH2OH+C6H5CHO=>CH3OH+C6H5CO	2.2640e+05
2.000        8472.17	
HCO+C6H5CHO=>CH2O+C6H5CO	1.0080e+06
2.000        10490.75	
CH3CO+C6H5CHO=>CH3CHO+C6H5CO	1.0800e+06
2.000        12129.83	
CH2CHO+C6H5CHO=>CH3CHO+C6H5CO	1.8400e+05
2.000        9720.89	
C3H3+C6H5CHO=>C3H4-A+C6H5CO	2.1600e+05
2.000        12129.83	
HCCO+C6H5CHO=>CH2CO+C6H5CO	3.4240e+05
2.000        3705.38	
CH3O2+C6H5CHO=>CH3O2H+C6H5CO	6.0800e+05
2.000        10779.70	
C2H5O2+C6H5CHO=>C2H5O2H+C6H5CO	6.0800e+05
2.000        10779.70	
NC3H7O2+C6H5CHO=>C3H7OOH+C6H5CO	6.0800e+05
2.000        10779.70	
IC3H7O2+C6H5CHO=>C3H7OOH+C6H5CO	6.0800e+05
2.000        10779.70	
HCO3+C6H5CHO=>HCO3H+C6H5CO	2.7200e+05
2.000        4937.89	
CH3CO3+C6H5CHO=>CH3CO3H+C6H5CO	2.7200e+05
2.000        4937.89	



CH3COCH2+C6H5CHO=>CH3COCH3+C6H5CO 2.000        6366.63	1.8400e+05
C6H5CHO+C6H5O=>C6H5OH+C6H5CO 2.000        10683.36	2.1600e+05
C5H7+C6H5CHO=>LC5H8+C6H5CO 2.000        13095.77	2.1600e+05
C6H5CHO+CH3C6H4=>C7H8+C6H5CO 1.000        867.85	2.9600e+08
C6H5CHO+RCRESOLO=>C6H5CO+CRESOL 2.000        10972.41	2.1600e+05
C6H5CHO+C10H7=>C10H8+C6H5CO 1.000        867.85	2.9600e+08
C6H5CHO+INDENYL=>C6H5CO+INDENE 2.000        14062.89	1.0400e+05
C6H5CHO+C10H6CH3=>C6H5CO+C10H7CH3 1.000        867.85	2.9600e+08
O2+NC7H15=>NC7H15-OO 0.000        0.00	2.0000e+12
NC7H15-OO=>O2+NC7H15 0.000        30000.00	3.0000e+13
NC7H15-OO=>NC7-QOOH 0.000        25100.00	3.0000e+12
NC7-QOOH=>NC7H15-OO 0.000        16100.00	6.0000e+10
NC7H15-OO=>HO2+NC7H14 0.730        29883.00	4.0000e+10
NC7-QOOH=>HO2+NC7H14 0.000        20000.00	1.0000e+11
HO2+NC7H14=>NC7-QOOH 0.000        15000.00	8.0000e+11
NC7-QOOH=>OH+NC7H14O 0.000        14100.00	1.0000e+10
NC7-QOOH=>OH+CH2O+C2H4+C4H8-1 0.000        22500.00	3.0000e+11
NC7-QOOH=>OH+0.1C2H4+CH3CHO+0.75NC5H10+0.15NC7H14 0.000        22500.00	5.0000e+11
NC7-QOOH=>OH+C3H6+C3H7CHO 0.000        22500.00	2.5000e+11

NC7-QOOH=>OH+C2H4+C4H9CHO	5.0000e+10
0.000 22500.00	
NC7-QOOH=>OH+0.25C2H4+0.5CH3CHO+C3H6+0.5C2H5CHO+0.25C4H8-1	3.0000e+11
0.000 22500.00	
NC7-QOOH=>OH+0.25C2H4+0.9C3H6+C2H5CHO+0.2C4H8-1	6.0000e+11
0.000 22500.00	
O2+NC7-QOOH=>NC7-OOQOOH	2.0000e+12
0.000 0.00	
NC7-OOQOOH=>O2+NC7-QOOH	2.0000e+14
0.000 29000.00	
NC7-OOQOOH=>OH+NC7-OQOOH	1.1000e+12
0.000 25000.00	
NC7-OQOOH=>OH+CH3COCH2+C3H7CHO	7.5000e+14
0.000 42000.00	
NC7-OQOOH=>OH+CH3CHO+CH3CO+0.18NC5H10+0.3NC7H14	1.5000e+15
0.000 42000.00	
NC7-OQOOH=>OH+NC3H7+C4H6O2	1.5000e+15
0.000 42000.00	
NC7-OQOOH=>OH+PC4H9+CHOCH2CHO	4.0000e+14
0.000 42000.00	
NC7-OQOOH=>OH+CH2CHO+C4H9CHO	3.0000e+14
0.000 42000.00	
NC7-OQOOH=>OH+C2H5+CH2CO+C2H5CHO	9.0000e+14
0.000 42000.00	
NC7-OQOOH=>OH+CH2O+CH2CO+PC4H9	2.0000e+14
0.000 42000.00	
NC7-OQOOH=>C2H4+HCOOH+MEK	1.7000e+05
1.130 26100.00	
NC7-OQOOH=>CH3CO2H+C4H9CHO	5.1000e+05
1.130 26100.00	
NC7-OQOOH=>CH2OHCH2CHO+MEK	3.4000e+05
1.130 26100.00	
NC7-OQOOH=>C2H4+CH3COCH3+CH3CO2H	1.7000e+05
1.130 26100.00	
HO2+NC7H15-OO=>O2+NC7H15OOH	1.0000e+11
0.000 -1200.00	
HO2+NC7H15-OO=>O2+H2O+C7KETONE	5.0000e+10
0.000 -1200.00	

CH3O2+NC7H15-OO=>O2+CH3OH+C7KETONE 0.000        -1200.00	2.5000e+10
2NC7H15-OO=>O2+C3H6+N1C4H9OH+C7KETONE 0.000        -1200.00	2.5000e+10
2NC7H15-OO=>O2+NC7H14+NC7H15OOH 0.000        -1200.00	1.0000e+11
HO2+NC7-OOQOOH=>O2+2OH+0.5CH2O+0.5CH3CHO+0.5C2H5CHO+0.5C3H7CHO+0.4NC5H10 1.0000e+11    0.000        -1200.00	
CH3O2+NC7- OOQOOH=>O2+OH+CH3O+0.5CH2O+0.5CH3CHO+0.5C2H5CHO+0.5C3H7CHO+0.4NC5H10 1.0000e+11    0.000        -1200.00	
NC7H15OOH=>OH+C2H5+0.4C3H6+C2H5CHO+0.2C4H8-1 0.000        42000.00	1.4000e+14
NC7H15OOH=>OH+0.7C2H4+CH3CHO+NC3H7+0.2C3H6 0.000        42000.00	1.2000e+14
NC7H15OOH=>OH+CH2O+PC4H9+0.4NC5H10 0.000        42000.00	1.4000e+14
HO2+IC8H16=>0.4IC8-QOOH+0.6IC8T-QOOH 0.000        12000.00	5.0000e+11
O2+IC8H17=>IC8H17-OO 0.000        0.00	1.0000e+12
IC8H17-OO=>O2+IC8H17 0.000        30500.00	3.0000e+13
IC8H17-OO=>IC8T-QOOH 0.000        26000.00	1.0000e+12
IC8H17-OO=>IC8-QOOH 0.000        26000.00	1.0000e+12
IC8-QOOH=>IC8H17-OO 0.000        18650.00	3.0000e+11
IC8T-QOOH=>IC8H17-OO 0.000        18650.00	3.0000e+11
IC8-QOOH=>OH+IC8H16O 0.000        14000.00	4.0000e+10
IC8-QOOH=>HO2+IC8H16 0.000        22000.00	4.0000e+12
IC8-QOOH=>OH+CH2O+C3H6+IC4H8 0.000        25600.00	1.7500e+13
IC8-QOOH=>OH+0.4C2H4+IC3H7CHO+0.4IC8H16 0.000        25600.00	1.7500e+13

IC8T-QOOH=>OH+IC8H16O	6.0000e+10
0.000 14000.00	
IC8T-QOOH=>HO2+IC8H16	2.4000e+12
0.000 22000.00	
O2+IC8-QOOH=>IC8-OOQOOH	1.1000e+12
0.000 0.00	
IC8-OOQOOH=>O2+IC8-QOOH	3.0000e+13
0.000 30500.00	
IC8-OQOOH=>OH+0.5CH3CHO+CH2CHO+0.5C3H6+0.5C2H5CHO+0.5IC4H8	1.0000e+16
0.000 40500.00	
IC8-OQOOH=>OH+0.5CH2O+CH3COCH2+0.625IC4H8+0.5IC3H7CHO	1.0000e+16
0.000 40500.00	
IC8-OOQOOH=>OH+IC8-OQOOH	9.0000e+09
0.000 18000.00	
IC8-OOQOOH=>OH+CH2O+0.21C2H5CHO+CH3COCH3+0.0525IC4H8+0.79IC3H7CHO	
1.5000e+11 0.000 22600.00	
IC8-OOQOOH=>HO2+CH3COCH3+0.25IC4H8+IC3H7CHO	2.5000e+08
0.000 16500.00	
HO2+IC8H17-OO=>O2+0.125IC8H16+NC7H15OOH	1.0000e+11
0.000 -2600.00	
HO2+IC8H17-OO=>O2+OH+0.5CH3COCH3+0.5TC4H9+0.5IC3H7CHO+0.5NEOC5H11	
1.0000e+11 0.000 -2600.00	
HO2+IC8-OOQOOH=>2O2+0.125IC8H16+NC7H15OOH	3.0000e+11
0.000 -2600.00	
O2+CYC6H11=>CYC6-OO	1.5000e+12
0.000 0.00	
CYC6-OO=>O2+CYC6H11	3.0000e+13
0.000 29000.00	
CYC6-OO=>HO2+CYC6H10	5.0000e+12
0.000 29000.00	
CYC6-OO=>CYC6-QOOH-2	2.2000e+12
0.000 32000.00	
CYC6-OO=>CYC6-QOOH-3	1.2000e+12
0.000 24400.00	
CYC6-OO=>CYC6-QOOH-4	8.6000e+11
0.000 29300.00	
CYC6-QOOH-2=>CYC6-OO	3.3000e+11
0.000 19500.00	

CYC6-QOOH-3=>CYC6-OO	2.9000e+11
0.000 13500.00	
CYC6-QOOH-4=>CYC6-OO	4.3000e+11
0.000 18100.00	
O2+CYC6-QOOH-2=CYC6-OOQOOH-2	1.5000e+12
0.000 0.00	
O2+CYC6-QOOH-3=CYC6-OOQOOH-3	1.5000e+12
0.000 0.00	
O2+CYC6-QOOH-4=CYC6-OOQOOH-4	1.5000e+12
0.000 0.00	
CYC6-OOQOOH-2=>OH+CYC6-OQOOH-2	2.2000e+12
0.000 32000.00	
CYC6-OOQOOH-3=>OH+CYC6-OQOOH-3	1.2000e+12
0.000 24400.00	
CYC6-OOQOOH-4=>OH+CYC6-OQOOH-4	8.6000e+11
0.000 29300.00	
CYC6-OQOOH-2=>OH+C2H4+CH2CHO+CH2CO	1.0000e+15
0.000 41500.00	
CYC6-OQOOH-3=>OH+C2H4+CH2CHO+CH2CO	1.0000e+15
0.000 41500.00	
CYC6-OQOOH-4=>OH+C2H4+CH2CHO+CH2CO	1.0000e+15
0.000 41500.00	
CYC6-QOOH-2=OH+CYC6H10-O-12	2.9000e+12
0.000 15400.00	
CYC6-QOOH-3=OH+CYC6H10-O-13	1.4000e+12
0.000 23400.00	
CYC6-QOOH-4=OH+CYC6H10-O-14	8.6000e+12
0.000 20700.00	
CYC6-QOOH-2=HO2+CYC6H10	1.0000e+14
0.000 23000.00	
CYC6-QOOH-2=OH+CYC6H10-ONE	9.0000e+12
0.000 38200.00	
CYC6-QOOH-2=>HO2+C2H4+C4H6	2.2000e+14
0.000 49300.00	
CYC6-QOOH-3=OH+C5H9CHO	9.2000e+11
0.000 17900.00	
CYC6-QOOH-3=>OH+C2H4+IC3H5CHO	3.8000e+14
0.000 49000.00	

CYC6-QOOH-4=HO2+CYC6H10 0.000 31200.00	7.6000e+12
O2+NC6H12=>CH2O+C4H9CHO 0.000 37000.00	1.0000e+14
HO2+B1M2=>0.6NC5-QOOH+0.4NEOC5-QOOH 0.000 15000.00	8.0000e+11
H+NC7-OQOOH=>H2+OH+C7DIONE 2.000 2825.33	3.0000e+06
CH3+NC7-OQOOH=>OH+CH4+C7DIONE 2.000 3778.15	3.0000e+04
C2H3+NC7-OQOOH=>OH+C2H4+C7DIONE 2.000 2730.26	6.7800e+04
C2H5+NC7-OQOOH=>OH+C2H6+C7DIONE 2.000 5405.42	2.0000e+04
NC3H7+NC7-OQOOH=>OH+C3H8+C7DIONE 2.000 5405.42	1.3500e+04
IC3H7+NC7-OQOOH=>OH+C3H8+C7DIONE 2.000 8487.19	1.3500e+04
C3H5-S+NC7-OQOOH=>OH+C3H6+C7DIONE 2.000 3301.28	2.7000e+04
C3H5-T+NC7-OQOOH=>OH+C3H6+C7DIONE 2.000 3301.28	2.7000e+04
C3H5-A+NC7-OQOOH=>OH+C3H6+C7DIONE 2.000 11294.92	5.3900e+04
C4H5+NC7-OQOOH=>OH+C4H6+C7DIONE 2.000 3301.28	2.7000e+04
C4H71-4+NC7-OQOOH=>OH+C4H8-1+C7DIONE 2.000 5309.47	1.3500e+04
C4H71-3+NC7-OQOOH=>OH+C4H8-2+C7DIONE 2.000 12168.47	3.4000e+04
IC4H7+NC7-OQOOH=>OH+IC4H8+C7DIONE 2.000 12168.47	2.7000e+04
C4H3+NC7-OQOOH=>OH+C4H4+C7DIONE 2.000 3969.14	4.0900e+04
C6H5+NC7-OQOOH=>OH+C6H6+C7DIONE 1.000 1067.64	3.7000e+07
O+NC7-OQOOH=>2OH+C7DIONE 2.000 1404.15	2.3500e+06

O2+NC7-OQOOH=>OH+HO2+C7DIONE	1.7000e+06
2.000 41863.68	
OH+NC7-OQOOH=>H2O+OH+C7DIONE	1.5000e+09
1.000 -695.37	
HO2+NC7-OQOOH=>OH+H2O2+C7DIONE	8.0000e+05
2.000 14404.74	
CH3O+NC7-OQOOH=>OH+CH3OH+C7DIONE	4.2800e+04
2.000 463.75	
CH2OH+NC7-OQOOH=>OH+CH3OH+C7DIONE	2.8300e+04
2.000 8777.08	
HCO+NC7-OQOOH=>OH+CH2O+C7DIONE	1.2600e+05
2.000 10810.03	
CH3CO+NC7-OQOOH=>OH+CH3CHO+C7DIONE	1.3500e+05
2.000 12459.86	
CH2CHO+NC7-OQOOH=>OH+CH3CHO+C7DIONE	2.3000e+04
2.000 10034.85	
C3H3+NC7-OQOOH=>OH+C3H4-A+C7DIONE	2.7000e+04
2.000 12459.86	
HCCO+NC7-OQOOH=>OH+CH2CO+C7DIONE	4.2800e+04
2.000 3969.14	
CH3O2+NC7-OQOOH=>OH+CH3O2H+C7DIONE	7.6000e+04
2.000 11100.93	
C2H5O2+NC7-OQOOH=>OH+C2H5O2H+C7DIONE	7.6000e+04
2.000 11100.93	
NC3H7O2+NC7-OQOOH=>OH+C3H7OOH+C7DIONE	7.6000e+04
2.000 11100.93	
IC3H7O2+NC7-OQOOH=>OH+C3H7OOH+C7DIONE	7.6000e+04
2.000 11100.93	
HCO3+NC7-OQOOH=>OH+HCO3H+C7DIONE	3.4000e+04
2.000 5213.56	
CH3CO3+NC7-OQOOH=>OH+CH3CO3H+C7DIONE	3.4000e+04
2.000 5213.56	
CH3COCH2+NC7-OQOOH=>OH+CH3COCH3+C7DIONE	2.3000e+04
2.000 6654.87	
C6H5O+NC7-OQOOH=>OH+C6H5OH+C7DIONE	2.7000e+04
2.000 11003.95	
C5H7+NC7-OQOOH=>OH+LC5H8+C7DIONE	2.7000e+04
2.000 13431.81	

C7H7+NC7-OQOOH=>OH+C7H8+C7DIONE	1.3500e+04
2.000 14404.74	
CH3C6H4+NC7-OQOOH=>OH+C7H8+C7DIONE	3.7000e+07
1.000 1067.64	
NC7-OQOOH+RCRESOLO=>OH+C7DIONE+CRESOL	2.7000e+04
2.000 11294.92	
NC7-OQOOH+C10H7=>OH+C10H8+C7DIONE	3.7000e+07
1.000 1067.64	
NC7-OQOOH+INDENYL=>OH+C7DIONE+INDENE	1.3000e+04
2.000 14404.74	
NC7-OQOOH+C10H6CH3=>OH+C7DIONE+C10H7CH3	3.7000e+07
1.000 1067.64	
H+NC7-OQOOH=>H2+OH+C2H3CHO+MEK	1.5000e+06
2.000 4000.00	
CH3+NC7-OQOOH=>OH+CH4+C2H3CHO+MEK	1.5000e+04
2.000 5000.00	
C2H3+NC7-OQOOH=>OH+C2H4+C2H3CHO+MEK	3.3900e+04
2.000 3900.00	
C2H5+NC7-OQOOH=>OH+C2H6+C2H3CHO+MEK	1.0000e+04
2.000 6700.00	
NC3H7+NC7-OQOOH=>OH+C3H8+C2H3CHO+MEK	6.7500e+03
2.000 6700.00	
IC3H7+NC7-OQOOH=>OH+C3H8+C2H3CHO+MEK	6.7500e+03
2.000 9900.00	
C3H5-S+NC7-OQOOH=>OH+C3H6+C2H3CHO+MEK	1.3500e+04
2.000 4500.00	
C3H5-T+NC7-OQOOH=>OH+C3H6+C2H3CHO+MEK	1.3500e+04
2.000 4500.00	
C3H5-A+NC7-OQOOH=>OH+C3H6+C2H3CHO+MEK	2.6950e+04
2.000 12800.00	
C4H5+NC7-OQOOH=>OH+C2H3CHO+C4H6+MEK	1.3500e+04
2.000 4500.00	
C4H71-4+NC7-OQOOH=>OH+C2H3CHO+C4H8-1+MEK	6.7500e+03
2.000 6600.00	
C4H71-3+NC7-OQOOH=>OH+C2H3CHO+C4H8-2+MEK	1.7000e+04
2.000 13700.00	
IC4H7+NC7-OQOOH=>OH+C2H3CHO+IC4H8+MEK	1.3500e+04
2.000 13700.00	



C4H3+NC7-OQOOH=>OH+C2H3CHO+C4H4+MEK 2.000            5200.00	2.0450e+04
C6H5+NC7-OQOOH=>OH+C2H3CHO+C6H6+MEK 1.000            2000.00	1.8500e+07
O+NC7-OQOOH=>2OH+C2H3CHO+MEK 2.000            2500.00	1.1750e+06
O2+NC7-OQOOH=>OH+HO2+C2H3CHO+MEK 2.000            44000.00	8.5000e+05
OH+NC7-OQOOH=>H2O+OH+C2H3CHO+MEK 1.000            50.00	7.5000e+08
HO2+NC7-OQOOH=>OH+H2O2+C2H3CHO+MEK 2.000            16000.00	4.0000e+05
CH3O+NC7-OQOOH=>OH+CH3OH+C2H3CHO+MEK 2.000            1500.00	2.1400e+04
CH2OH+NC7-OQOOH=>OH+CH3OH+C2H3CHO+MEK 2.000            10200.00	1.4150e+04
HCO+NC7-OQOOH=>OH+CH2O+C2H3CHO+MEK 2.000            12300.00	6.3000e+04
CH3CO+NC7-OQOOH=>OH+CH3CHO+C2H3CHO+MEK 2.000            14000.00	6.7500e+04
CH2CHO+NC7-OQOOH=>OH+CH3CHO+C2H3CHO+MEK 2.000            11500.00	1.1500e+04
C3H3+NC7-OQOOH=>OH+C3H4-A+C2H3CHO+MEK 2.000            14000.00	1.3500e+04
HCCO+NC7-OQOOH=>OH+CH2CO+C2H3CHO+MEK 2.000            5200.00	2.1400e+04
CH3O2+NC7-OQOOH=>OH+CH3O2H+C2H3CHO+MEK 2.000            12600.00	3.8000e+04
C2H5O2+NC7-OQOOH=>OH+C2H5O2H+C2H3CHO+MEK 2.000            12600.00	3.8000e+04
NC3H7O2+NC7-OQOOH=>OH+C2H3CHO+C3H7OOH+MEK 2.000            12600.00	3.8000e+04
IC3H7O2+NC7-OQOOH=>OH+C2H3CHO+C3H7OOH+MEK 2.000            12600.00	3.8000e+04
HCO3+NC7-OQOOH=>OH+C2H3CHO+HCO3H+MEK 2.000            6500.00	1.7000e+04
CH3CO3+NC7-OQOOH=>OH+CH3CO3H+C2H3CHO+MEK 2.000            6500.00	1.7000e+04

CH3COCH2+NC7-OQOOH=>OH+C2H3CHO+CH3COCH3+MEK 2.000            8000.00	1.1500e+04
C6H5O+NC7-OQOOH=>OH+C2H3CHO+MEK+C6H5OH 2.000            12500.00	1.3500e+04
C5H7+NC7-OQOOH=>OH+C2H3CHO+MEK+LC5H8 2.000            15000.00	1.3500e+04
C7H7+NC7-OQOOH=>OH+C2H3CHO+MEK+C7H8 2.000            16000.00	6.7500e+03
CH3C6H4+NC7-OQOOH=>OH+C2H3CHO+MEK+C7H8 1.000            2000.00	1.8500e+07
NC7-OQOOH+RCRESOLO=>OH+C2H3CHO+MEK+CRESOL 2.000            12800.00	1.3500e+04
NC7-OQOOH+C10H7=>OH+C2H3CHO+C10H8+MEK 1.000            2000.00	1.8500e+07
NC7-OQOOH+INDENYL=>OH+C2H3CHO+MEK+INDENE 2.000            16000.00	6.5000e+03
NC7-OQOOH+C10H6CH3=>OH+C2H3CHO+MEK+C10H7CH3 1.000            2000.00	1.8500e+07
H+NC7H15OOH=>H2+OH+C7KETONE 2.000            4000.00	6.0000e+06
CH3+NC7H15OOH=>OH+CH4+C7KETONE 2.000            5000.00	6.0000e+04
C2H3+NC7H15OOH=>OH+C2H4+C7KETONE 2.000            3900.00	1.3560e+05
C2H5+NC7H15OOH=>OH+C2H6+C7KETONE 2.000            6700.00	4.0000e+04
NC3H7+NC7H15OOH=>OH+C3H8+C7KETONE 2.000            6700.00	2.7000e+04
IC3H7+NC7H15OOH=>OH+C3H8+C7KETONE 2.000            9900.00	2.7000e+04
C3H5-S+NC7H15OOH=>OH+C3H6+C7KETONE 2.000            4500.00	5.4000e+04
C3H5-T+NC7H15OOH=>OH+C3H6+C7KETONE 2.000            4500.00	5.4000e+04
C3H5-A+NC7H15OOH=>OH+C3H6+C7KETONE 2.000            12800.00	1.0780e+05
C4H5+NC7H15OOH=>OH+C4H6+C7KETONE 2.000            4500.00	5.4000e+04

C4H71-4+NC7H15OOH=>OH+C4H8-1+C7KETONE	2.7000e+04
2.000        6600.00	
C4H71-3+NC7H15OOH=>OH+C4H8-2+C7KETONE	6.8000e+04
2.000        13700.00	
IC4H7+NC7H15OOH=>OH+IC4H8+C7KETONE	5.4000e+04
2.000        13700.00	
C4H3+NC7H15OOH=>OH+C4H4+C7KETONE	8.1800e+04
2.000        5200.00	
C6H5+NC7H15OOH=>OH+C6H6+C7KETONE	7.4000e+07
1.000        2000.00	
O+NC7H15OOH=>2OH+C7KETONE	4.7000e+06
2.000        2500.00	
O2+NC7H15OOH=>OH+HO2+C7KETONE	3.4000e+06
2.000        44000.00	
OH+NC7H15OOH=>H2O+OH+C7KETONE	3.0000e+09
1.000        50.00	
HO2+NC7H15OOH=>OH+H2O2+C7KETONE	1.6000e+06
2.000        16000.00	
CH3O+NC7H15OOH=>OH+CH3OH+C7KETONE	8.5600e+04
2.000        1500.00	
CH2OH+NC7H15OOH=>OH+CH3OH+C7KETONE	5.6600e+04
2.000        10200.00	
HCO+NC7H15OOH=>OH+CH2O+C7KETONE	2.5200e+05
2.000        12300.00	
CH3CO+NC7H15OOH=>OH+CH3CHO+C7KETONE	2.7000e+05
2.000        14000.00	
CH2CHO+NC7H15OOH=>OH+CH3CHO+C7KETONE	4.6000e+04
2.000        11500.00	
C3H3+NC7H15OOH=>OH+C3H4-A+C7KETONE	5.4000e+04
2.000        14000.00	
HCCO+NC7H15OOH=>OH+CH2CO+C7KETONE	8.5600e+04
2.000        5200.00	
CH3O2+NC7H15OOH=>OH+CH3O2H+C7KETONE	1.5200e+05
2.000        12600.00	
C2H5O2+NC7H15OOH=>OH+C2H5O2H+C7KETONE	1.5200e+05
2.000        12600.00	
NC3H7O2+NC7H15OOH=>OH+C3H7OOH+C7KETONE	1.5200e+05
2.000        12600.00	

IC3H7O2+NC7H15OOH=>OH+C3H7OOH+C7KETONE 2.000        12600.00	1.5200e+05
HCO3+NC7H15OOH=>OH+HCO3H+C7KETONE 2.000        6500.00	6.8000e+04
CH3CO3+NC7H15OOH=>OH+CH3CO3H+C7KETONE 2.000        6500.00	6.8000e+04
CH3COCH2+NC7H15OOH=>OH+CH3COCH3+C7KETONE 2.000        8000.00	4.6000e+04
C6H5O+NC7H15OOH=>OH+C6H5OH+C7KETONE 2.000        12500.00	5.4000e+04
C5H7+NC7H15OOH=>OH+LC5H8+C7KETONE 2.000        15000.00	5.4000e+04
C7H7+NC7H15OOH=>OH+C7H8+C7KETONE 2.000        16000.00	2.7000e+04
CH3C6H4+NC7H15OOH=>OH+C7H8+C7KETONE 1.000        2000.00	7.4000e+07
NC7H15OOH+RCRESOLO=>OH+C7KETONE+CRESOL 2.000        12800.00	5.4000e+04
NC7H15OOH+C10H7=>OH+C10H8+C7KETONE 1.000        2000.00	7.4000e+07
NC7H15OOH+INDENYL=>OH+C7KETONE+INDENE 2.000        16000.00	2.6000e+04
NC7H15OOH+C10H6CH3=>OH+C7KETONE+C10H7CH3 1.000        2000.00	7.4000e+07
H+C7DIONE=>H2+C2H4+CH2CO+CH3COCH2 2.000        4000.00	9.0000e+06
CH3+C7DIONE=>CH4+C2H4+CH2CO+CH3COCH2 2.000        5000.00	9.0000e+04
C2H3+C7DIONE=>2C2H4+CH2CO+CH3COCH2 2.000        3900.00	2.0340e+05
C2H5+C7DIONE=>C2H6+C2H4+CH2CO+CH3COCH2 2.000        6700.00	6.0000e+04
NC3H7+C7DIONE=>C2H4+CH2CO+C3H8+CH3COCH2 2.000        6700.00	4.0500e+04
IC3H7+C7DIONE=>C2H4+CH2CO+C3H8+CH3COCH2 2.000        9900.00	4.0500e+04
C3H5-S+C7DIONE=>C2H4+CH2CO+C3H6+CH3COCH2 2.000        4500.00	8.1000e+04

C3H5-T+C7DIONE=>C2H4+CH2CO+C3H6+CH3COCH2 2.000        4500.00	8.1000e+04
C3H5-A+C7DIONE=>C2H4+CH2CO+C3H6+CH3COCH2 2.000        12800.00	1.6170e+05
C4H5+C7DIONE=>C2H4+CH2CO+CH3COCH2+C4H6 2.000        4500.00	8.1000e+04
C4H71-4+C7DIONE=>C2H4+CH2CO+CH3COCH2+C4H8-1 2.000        6600.00	4.0500e+04
C4H71-3+C7DIONE=>C2H4+CH2CO+CH3COCH2+C4H8-2 2.000        13700.00	1.0200e+05
IC4H7+C7DIONE=>C2H4+CH2CO+CH3COCH2+IC4H8 2.000        13700.00	8.1000e+04
C4H3+C7DIONE=>C2H4+CH2CO+CH3COCH2+C4H4 2.000        5200.00	1.2270e+05
C6H5+C7DIONE=>C2H4+CH2CO+CH3COCH2+C6H6 1.000        2000.00	1.1100e+08
O+C7DIONE=>OH+C2H4+CH2CO+CH3COCH2 2.000        2500.00	7.0500e+06
O2+C7DIONE=>HO2+C2H4+CH2CO+CH3COCH2 2.000        44000.00	5.1000e+06
OH+C7DIONE=>H2O+C2H4+CH2CO+CH3COCH2 1.000        50.00	4.5000e+09
HO2+C7DIONE=>H2O2+C2H4+CH2CO+CH3COCH2 2.000        16000.00	2.4000e+06
CH3O+C7DIONE=>CH3OH+C2H4+CH2CO+CH3COCH2 2.000        1500.00	1.2840e+05
CH2OH+C7DIONE=>CH3OH+C2H4+CH2CO+CH3COCH2 2.000        10200.00	8.4900e+04
HCO+C7DIONE=>CH2O+C2H4+CH2CO+CH3COCH2 2.000        12300.00	3.7800e+05
CH3CO+C7DIONE=>C2H4+CH3CHO+CH2CO+CH3COCH2 2.000        14000.00	4.0500e+05
CH2CHO+C7DIONE=>C2H4+CH3CHO+CH2CO+CH3COCH2 2.000        11500.00	6.9000e+04
C3H3+C7DIONE=>C2H4+CH2CO+C3H4-A+CH3COCH2 2.000        14000.00	8.1000e+04
HCCO+C7DIONE=>C2H4+2CH2CO+CH3COCH2 2.000        5200.00	1.2840e+05

CH3O2+C7DIONE=>CH3O2H+C2H4+CH2CO+CH3COCH2 2.000 12600.00	2.2800e+05
C2H5O2+C7DIONE=>C2H5O2H+C2H4+CH2CO+CH3COCH2 2.000 12600.00	2.2800e+05
NC3H7O2+C7DIONE=>C2H4+CH2CO+CH3COCH2+C3H7OOH 2.000 12600.00	2.2800e+05
IC3H7O2+C7DIONE=>C2H4+CH2CO+CH3COCH2+C3H7OOH 2.000 12600.00	2.2800e+05
HCO3+C7DIONE=>C2H4+CH2CO+CH3COCH2+HCO3H 2.000 6500.00	1.0200e+05
CH3CO3+C7DIONE=>C2H4+CH2CO+CH3CO3H+CH3COCH2 2.000 6500.00	1.0200e+05
CH3COCH2+C7DIONE=>C2H4+CH2CO+CH3COCH3+CH3COCH2 2.000 8000.00	6.9000e+04
C6H5O+C7DIONE=>C2H4+CH2CO+CH3COCH2+C6H5OH 2.000 12500.00	8.1000e+04
C5H7+C7DIONE=>C2H4+CH2CO+CH3COCH2+LC5H8 2.000 15000.00	8.1000e+04
C7H7+C7DIONE=>C2H4+CH2CO+CH3COCH2+C7H8 2.000 16000.00	4.0500e+04
CH3C6H4+C7DIONE=>C2H4+CH2CO+CH3COCH2+C7H8 1.000 2000.00	1.1100e+08
C7DIONE+RCRESOLO=>C2H4+CH2CO+CH3COCH2+CRESOL 2.000 12800.00	8.1000e+04
C7DIONE+C10H7=>C2H4+CH2CO+CH3COCH2+C10H8 1.000 2000.00	1.1100e+08
C7DIONE+INDENYL=>C2H4+CH2CO+CH3COCH2+INDENE 2.000 16000.00	3.9000e+04
C7DIONE+C10H6CH3=>C2H4+CH2CO+CH3COCH2+C10H7CH3 1.000 2000.00	1.1100e+08
H+C7DIONE=>H2+0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6 2.000 4000.00	9.0000e+06
CH3+C7DIONE=>CH4+0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6 2.000 5000.00	9.0000e+04
C2H3+C7DIONE=>C2H4+0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6 2.000 3900.00	2.0340e+05
C2H5+C7DIONE=>C2H6+0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6 2.000 6700.00	6.0000e+04

NC3H7+C7DIONE=>0.7CH3CO+1.3CH2CO+C3H8+0.3NC3H7+0.7C3H6	4.0500e+04
2.000 6700.00	
IC3H7+C7DIONE=>0.7CH3CO+1.3CH2CO+C3H8+0.3NC3H7+0.7C3H6	4.0500e+04
2.000 9900.00	
C3H5-S+C7DIONE=>0.7CH3CO+1.3CH2CO+0.3NC3H7+1.7C3H6	8.1000e+04
2.000 4500.00	
C3H5-T+C7DIONE=>0.7CH3CO+1.3CH2CO+0.3NC3H7+1.7C3H6	8.1000e+04
2.000 4500.00	
C3H5-A+C7DIONE=>0.7CH3CO+1.3CH2CO+0.3NC3H7+1.7C3H6	1.6170e+05
2.000 12800.00	
C4H5+C7DIONE=>0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6+C4H6	8.1000e+04
2.000 4500.00	
C4H71-4+C7DIONE=>0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6+C4H8-1	4.0500e+04
2.000 6600.00	
C4H71-3+C7DIONE=>0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6+C4H8-2	1.0200e+05
2.000 13700.00	
IC4H7+C7DIONE=>0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6+IC4H8	8.1000e+04
2.000 13700.00	
C4H3+C7DIONE=>0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6+C4H4	1.2270e+05
2.000 5200.00	
C6H5+C7DIONE=>0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6+C6H6	1.1100e+08
1.000 2000.00	
O+C7DIONE=>OH+0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6	7.0500e+06
2.000 2500.00	
O2+C7DIONE=>HO2+0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6	5.1000e+06
2.000 44000.00	
OH+C7DIONE=>H2O+0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6	4.5000e+09
1.000 50.00	
HO2+C7DIONE=>H2O2+0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6	2.4000e+06
2.000 16000.00	
CH3O+C7DIONE=>CH3OH+0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6	1.2840e+05
2.000 1500.00	
CH2OH+C7DIONE=>CH3OH+0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6	8.4900e+04
2.000 10200.00	
HCO+C7DIONE=>CH2O+0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6	3.7800e+05
2.000 12300.00	
CH3CO+C7DIONE=>CH3CHO+0.7CH3CO+1.3CH2CO+0.3NC3H7+0.7C3H6	4.0500e+05
2.000 14000.00	

$\text{CH}_2\text{CHO} + \text{C}_7\text{DIONE} \Rightarrow 0.7\text{CH}_3\text{CHO} + 0.7\text{CH}_3\text{CO} + 1.3\text{CH}_2\text{CO} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6$  6.9000e+04  
 2.000 11500.00

$\text{C}_3\text{H}_3 + \text{C}_7\text{DIONE} \Rightarrow 0.7\text{CH}_3\text{CO} + 1.3\text{CH}_2\text{CO} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6 + \text{C}_3\text{H}_4\text{-A}$  8.1000e+04  
 2.000 14000.00

$\text{HCCO} + \text{C}_7\text{DIONE} \Rightarrow 0.7\text{CH}_3\text{CO} + 2.3\text{CH}_2\text{CO} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6$  1.2840e+05  
 2.000 5200.00

$\text{CH}_3\text{O}_2 + \text{C}_7\text{DIONE} \Rightarrow \text{CH}_3\text{O}_2\text{H} + 0.7\text{CH}_3\text{CO} + 1.3\text{CH}_2\text{CO} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6$  2.2800e+05  
 2.000 12600.00

$\text{C}_2\text{H}_5\text{O}_2 + \text{C}_7\text{DIONE} \Rightarrow \text{C}_2\text{H}_5\text{O}_2\text{H} + 0.7\text{CH}_3\text{CO} + 1.3\text{CH}_2\text{CO} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6$  2.2800e+05  
 2.000 12600.00

$\text{NC}_3\text{H}_7\text{O}_2 + \text{C}_7\text{DIONE} \Rightarrow 0.7\text{CH}_3\text{CO} + 1.3\text{CH}_2\text{CO} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6 + \text{C}_3\text{H}_7\text{OOH}$  2.2800e+05  
 2.000 12600.00

$\text{IC}_3\text{H}_7\text{O}_2 + \text{C}_7\text{DIONE} \Rightarrow 0.7\text{CH}_3\text{CO} + 1.3\text{CH}_2\text{CO} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6 + \text{C}_3\text{H}_7\text{OOH}$  2.2800e+05  
 2.000 12600.00

$\text{HCO}_3 + \text{C}_7\text{DIONE} \Rightarrow 0.7\text{CH}_3\text{CO} + 1.3\text{CH}_2\text{CO} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6 + \text{HCO}_3\text{H}$  1.0200e+05  
 2.000 6500.00

$\text{CH}_3\text{CO}_3 + \text{C}_7\text{DIONE} \Rightarrow 0.7\text{CH}_3\text{CO} + 1.3\text{CH}_2\text{CO} + \text{CH}_3\text{CO}_3\text{H} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6$  1.0200e+05  
 2.000 6500.00

$\text{CH}_3\text{COCH}_2 + \text{C}_7\text{DIONE} \Rightarrow 0.7\text{CH}_3\text{CO} + 1.3\text{CH}_2\text{CO} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6 + \text{CH}_3\text{COCH}_3$  6.9000e+04  
 2.000 8000.00

$\text{C}_6\text{H}_5\text{O} + \text{C}_7\text{DIONE} \Rightarrow 0.7\text{CH}_3\text{CO} + 1.3\text{CH}_2\text{CO} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6 + \text{C}_6\text{H}_5\text{OH}$  8.1000e+04  
 2.000 12500.00

$\text{C}_5\text{H}_7 + \text{C}_7\text{DIONE} \Rightarrow 0.7\text{CH}_3\text{CO} + 1.3\text{CH}_2\text{CO} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6 + \text{LC}_5\text{H}_8$  8.1000e+04  
 2.000 15000.00

$\text{C}_7\text{H}_7 + \text{C}_7\text{DIONE} \Rightarrow 0.7\text{CH}_3\text{CO} + 1.3\text{CH}_2\text{CO} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6 + \text{C}_7\text{H}_8$  4.0500e+04  
 2.000 16000.00

$\text{CH}_3\text{C}_6\text{H}_4 + \text{C}_7\text{DIONE} \Rightarrow 0.7\text{CH}_3\text{CO} + 1.3\text{CH}_2\text{CO} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6 + \text{C}_7\text{H}_8$  1.1100e+08  
 1.000 2000.00

$\text{C}_7\text{DIONE} + \text{RCRESOLO} \Rightarrow 0.7\text{CH}_3\text{CO} + 1.3\text{CH}_2\text{CO} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6 + \text{CRESOL}$  8.1000e+04  
 2.000 12800.00

$\text{C}_7\text{DIONE} + \text{C}_{10}\text{H}_7 \Rightarrow 0.7\text{CH}_3\text{CO} + 1.3\text{CH}_2\text{CO} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6 + \text{C}_{10}\text{H}_8$  1.1100e+08  
 1.000 2000.00

$\text{C}_7\text{DIONE} + \text{INDENYL} \Rightarrow 0.7\text{CH}_3\text{CO} + 1.3\text{CH}_2\text{CO} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6 + \text{INDENE}$  3.9000e+04  
 2.000 16000.00

$\text{C}_7\text{DIONE} + \text{C}_{10}\text{H}_6\text{CH}_3 \Rightarrow 0.7\text{CH}_3\text{CO} + 1.3\text{CH}_2\text{CO} + 0.3\text{NC}_3\text{H}_7 + 0.7\text{C}_3\text{H}_6 + \text{C}_{10}\text{H}_7\text{CH}_3$  1.1100e+08  
 1.000 2000.00

$\text{H} + \text{C}_7\text{KETONE} \Rightarrow \text{H}_2 + 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  9.0000e+06  
 2.000 4000.00



$\text{CH}_3 + \text{C}_7\text{KETONE} \Rightarrow \text{CH}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  9.0000e+04  
 2.000 5000.00

$\text{C}_2\text{H}_3 + \text{C}_7\text{KETONE} \Rightarrow \text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  2.0340e+05  
 2.000 3900.00

$\text{C}_2\text{H}_5 + \text{C}_7\text{KETONE} \Rightarrow \text{C}_2\text{H}_6 + 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  6.0000e+04  
 2.000 6700.00

$\text{NC}_3\text{H}_7 + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + \text{C}_3\text{H}_8 + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  4.0500e+04  
 2.000 6700.00

$\text{IC}_3\text{H}_7 + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + \text{C}_3\text{H}_8 + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  4.0500e+04  
 2.000 9900.00

$\text{C}_3\text{H}_5\text{-S} + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + \text{C}_3\text{H}_6 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  8.1000e+04  
 2.000 4500.00

$\text{C}_3\text{H}_5\text{-T} + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + \text{C}_3\text{H}_6 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  8.1000e+04  
 2.000 4500.00

$\text{C}_3\text{H}_5\text{-A} + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + \text{C}_3\text{H}_6 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  1.6170e+05  
 2.000 12800.00

$\text{C}_4\text{H}_5 + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + \text{C}_4\text{H}_6 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  8.1000e+04  
 2.000 4500.00

$\text{C}_4\text{H}_7\text{-1} + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + \text{C}_4\text{H}_8\text{-1} + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$   
 4.0500e+04 2.000 6600.00

$\text{C}_4\text{H}_7\text{-3} + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + \text{C}_4\text{H}_8\text{-2} + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$   
 1.0200e+05 2.000 13700.00

$\text{IC}_4\text{H}_7 + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + \text{IC}_4\text{H}_8 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  8.1000e+04  
 2.000 13700.00

$\text{C}_4\text{H}_3 + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + \text{C}_4\text{H}_4 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  1.2270e+05  
 2.000 5200.00

$\text{C}_6\text{H}_5 + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + \text{C}_6\text{H}_6 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  1.1100e+08  
 1.000 2000.00

$\text{O} + \text{C}_7\text{KETONE} \Rightarrow \text{OH} + 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  7.0500e+06  
 2.000 2500.00

$\text{O}_2 + \text{C}_7\text{KETONE} \Rightarrow \text{HO}_2 + 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  5.1000e+06  
 2.000 44000.00

$\text{OH} + \text{C}_7\text{KETONE} \Rightarrow \text{H}_2\text{O} + 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  4.5000e+09  
 1.000 50.00

$\text{HO}_2 + \text{C}_7\text{KETONE} \Rightarrow \text{H}_2\text{O}_2 + 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  2.4000e+06  
 2.000 16000.00

$\text{CH}_3\text{O} + \text{C}_7\text{KETONE} \Rightarrow \text{CH}_3\text{OH} + 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  1.2840e+05  
 2.000 1500.00

$\text{CH}_2\text{OH} + \text{C}_7\text{KETONE} \Rightarrow \text{CH}_3\text{OH} + 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  8.4900e+04  
 2.000 10200.00

$\text{HCO} + \text{C}_7\text{KETONE} \Rightarrow \text{CH}_2\text{O} + 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  3.7800e+05  
 2.000 12300.00

$\text{CH}_3\text{CO} + \text{C}_7\text{KETONE} \Rightarrow \text{CH}_3\text{CHO} + 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  4.0500e+05  
 2.000 14000.00

$\text{CH}_2\text{CHO} + \text{C}_7\text{KETONE} \Rightarrow \text{CH}_3\text{CHO} + 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  6.9000e+04  
 2.000 11500.00

$\text{C}_3\text{H}_3 + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + \text{C}_3\text{H}_4\text{-A} + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  8.1000e+04  
 2.000 14000.00

$\text{HCCO} + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + \text{CH}_2\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  1.2840e+05  
 2.000 5200.00

$\text{CH}_3\text{O}_2 + \text{C}_7\text{KETONE} \Rightarrow \text{CH}_3\text{O}_2\text{H} + 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  2.2800e+05  
 2.000 12600.00

$\text{C}_2\text{H}_5\text{O}_2 + \text{C}_7\text{KETONE} \Rightarrow \text{C}_2\text{H}_5\text{O}_2\text{H} + 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$   
 2.2800e+05 2.000 12600.00

$\text{NC}_3\text{H}_7\text{O}_2 + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + \text{C}_3\text{H}_7\text{OOH} + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$   
 2.2800e+05 2.000 12600.00

$\text{IC}_3\text{H}_7\text{O}_2 + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + \text{C}_3\text{H}_7\text{OOH} + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$   
 2.2800e+05 2.000 12600.00

$\text{HCO}_3 + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + \text{HCO}_3\text{H} + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  1.0200e+05  
 2.000 6500.00

$\text{CH}_3\text{CO}_3 + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + \text{CH}_3\text{CO}_3\text{H} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$   
 1.0200e+05 2.000 6500.00

$\text{CH}_3\text{COCH}_2 + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + \text{CH}_3\text{COCH}_3 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$   
 6.9000e+04 2.000 8000.00

$\text{C}_6\text{H}_5\text{O} + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10} + \text{C}_6\text{H}_5\text{OH}$  8.1000e+04  
 2.000 12500.00

$\text{C}_5\text{H}_7 + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10} + \text{LC}_5\text{H}_8$  8.1000e+04  
 2.000 15000.00

$\text{C}_7\text{H}_7 + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10} + \text{C}_7\text{H}_8$  4.0500e+04  
 2.000 16000.00

$\text{CH}_3\text{C}_6\text{H}_4 + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10} + \text{C}_7\text{H}_8$  1.1100e+08  
 1.000 2000.00

$\text{C}_7\text{KETONE} + \text{RCRESOLO} \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10} + \text{CRESOL}$   
 8.1000e+04 2.000 12800.00

$\text{C}_7\text{KETONE} + \text{C}_{10}\text{H}_7 \Rightarrow 0.5\text{CH}_3\text{CO} + 0.5\text{NC}_3\text{H}_7 + \text{C}_{10}\text{H}_8 + 0.5\text{C}_3\text{H}_5\text{CHO} + 0.5\text{NC}_5\text{H}_{10}$  1.1100e+08  
 1.000 2000.00

C7KETONE+INDENYL=>0.5CH3CO+0.5NC3H7+0.5C3H5CHO+0.5NC5H10+INDENE  
 3.9000e+04      2.000      16000.00

C7KETONE+C10H6CH3=>0.5CH3CO+0.5NC3H7+0.5C3H5CHO+0.5NC5H10+C10H7CH3  
 1.1100e+08      1.000      2000.00

H+C7KETONE=>H2+0.5C2H4+0.5CH3CO+0.5C3H6+0.5CH3COCH2+0.5C4H8-1 9.0000e+06  
 2.000      4000.00

CH3+C7KETONE=>CH4+0.5C2H4+0.5CH3CO+0.5C3H6+0.5CH3COCH2+0.5C4H8-1  
 9.0000e+04      2.000      5000.00

C2H3+C7KETONE=>1.5C2H4+0.5CH3CO+0.5C3H6+0.5CH3COCH2+0.5C4H8-1 2.0340e+05  
 2.000      3900.00

C2H5+C7KETONE=>C2H6+0.5C2H4+0.5CH3CO+0.5C3H6+0.5CH3COCH2+0.5C4H8-1  
 6.0000e+04      2.000      6700.00

NC3H7+C7KETONE=>0.5C2H4+0.5CH3CO+C3H8+0.5C3H6+0.5CH3COCH2+0.5C4H8-1  
 4.0500e+04      2.000      6700.00

IC3H7+C7KETONE=>0.5C2H4+0.5CH3CO+C3H8+0.5C3H6+0.5CH3COCH2+0.5C4H8-1  
 4.0500e+04      2.000      9900.00

C3H5-S+C7KETONE=>0.5C2H4+0.5CH3CO+1.5C3H6+0.5CH3COCH2+0.5C4H8-1  
 8.1000e+04      2.000      4500.00

C3H5-T+C7KETONE=>0.5C2H4+0.5CH3CO+1.5C3H6+0.5CH3COCH2+0.5C4H8-1  
 8.1000e+04      2.000      4500.00

C3H5-A+C7KETONE=>0.5C2H4+0.5CH3CO+1.5C3H6+0.5CH3COCH2+0.5C4H8-1  
 1.6170e+05      2.000      12800.00

C4H5+C7KETONE=>0.5C2H4+0.5CH3CO+0.5C3H6+0.5CH3COCH2+0.5C4H8-1+C4H6  
 8.1000e+04      2.000      4500.00

C4H71-4+C7KETONE=>0.5C2H4+0.5CH3CO+0.5C3H6+0.5CH3COCH2+1.5C4H8-1  
 4.0500e+04      2.000      6600.00

C4H71-3+C7KETONE=>0.5C2H4+0.5CH3CO+0.5C3H6+0.5CH3COCH2+0.5C4H8-1+C4H8-2  
 1.0200e+05      2.000      13700.00

IC4H7+C7KETONE=>0.5C2H4+0.5CH3CO+0.5C3H6+0.5CH3COCH2+IC4H8+0.5C4H8-1  
 8.1000e+04      2.000      13700.00

C4H3+C7KETONE=>0.5C2H4+0.5CH3CO+0.5C3H6+0.5CH3COCH2+0.5C4H8-1+C4H4  
 1.2270e+05      2.000      5200.00

C6H5+C7KETONE=>0.5C2H4+0.5CH3CO+0.5C3H6+0.5CH3COCH2+0.5C4H8-1+C6H6  
 1.1100e+08      1.000      2000.00

O+C7KETONE=>OH+0.5C2H4+0.5CH3CO+0.5C3H6+0.5CH3COCH2+0.5C4H8-1 7.0500e+06  
 2.000      2500.00

O2+C7KETONE=>HO2+0.5C2H4+0.5CH3CO+0.5C3H6+0.5CH3COCH2+0.5C4H8-1  
 5.1000e+06      2.000      44000.00

$\text{OH} + \text{C7KETONE} \Rightarrow \text{H}_2\text{O} + 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1$   
 4.5000e+09      1.000      50.00

$\text{HO}_2 + \text{C7KETONE} \Rightarrow \text{H}_2\text{O}_2 + 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1$   
 2.4000e+06      2.000      16000.00

$\text{CH}_3\text{O} + \text{C7KETONE} \Rightarrow \text{CH}_3\text{OH} + 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1$   
 1.2840e+05      2.000      1500.00

$\text{CH}_2\text{OH} + \text{C7KETONE} \Rightarrow \text{CH}_3\text{OH} + 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1$   
 8.4900e+04      2.000      10200.00

$\text{HCO} + \text{C7KETONE} \Rightarrow \text{CH}_2\text{O} + 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1$   
 3.7800e+05      2.000      12300.00

$\text{CH}_3\text{CO} + \text{C7KETONE} \Rightarrow 0.5\text{C}_2\text{H}_4 + \text{CH}_3\text{CHO} + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1$   
 4.0500e+05      2.000      14000.00

$\text{CH}_2\text{CHO} + \text{C7KETONE} \Rightarrow 0.5\text{C}_2\text{H}_4 + \text{CH}_3\text{CHO} + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1$   
 6.9000e+04      2.000      11500.00

$\text{C}_3\text{H}_3 + \text{C7KETONE} \Rightarrow 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + \text{C}_3\text{H}_4 - \text{A} + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1$   
 8.1000e+04      2.000      14000.00

$\text{HCCO} + \text{C7KETONE} \Rightarrow 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + \text{CH}_2\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1$   
 1.2840e+05      2.000      5200.00

$\text{CH}_3\text{O}_2 + \text{C7KETONE} \Rightarrow \text{CH}_3\text{O}_2\text{H} + 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1$   
 2.2800e+05      2.000      12600.00

$\text{C}_2\text{H}_5\text{O}_2 + \text{C7KETONE} \Rightarrow \text{C}_2\text{H}_5\text{O}_2\text{H} + 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1$   
 2.2800e+05      2.000      12600.00

$\text{NC}_3\text{H}_7\text{O}_2 + \text{C7KETONE} \Rightarrow 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1 + \text{C}_3\text{H}_7\text{OOH}$   
 2.2800e+05      2.000      12600.00

$\text{IC}_3\text{H}_7\text{O}_2 + \text{C7KETONE} \Rightarrow 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1 + \text{C}_3\text{H}_7\text{OOH}$   
 2.2800e+05      2.000      12600.00

$\text{HCO}_3 + \text{C7KETONE} \Rightarrow 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1 + \text{HCO}_3\text{H}$   
 1.0200e+05      2.000      6500.00

$\text{CH}_3\text{CO}_3 + \text{C7KETONE} \Rightarrow 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + \text{CH}_3\text{CO}_3\text{H} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1$   
 1.0200e+05      2.000      6500.00

$\text{CH}_3\text{COCH}_2 + \text{C7KETONE} \Rightarrow 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + \text{CH}_3\text{COCH}_3 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1$   
 6.9000e+04      2.000      8000.00

$\text{C}_6\text{H}_5\text{O} + \text{C7KETONE} \Rightarrow 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1 + \text{C}_6\text{H}_5\text{OH}$   
 8.1000e+04      2.000      12500.00

$\text{C}_5\text{H}_7 + \text{C7KETONE} \Rightarrow 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1 + \text{LC}_5\text{H}_8$   
 8.1000e+04      2.000      15000.00

$\text{C}_7\text{H}_7 + \text{C7KETONE} \Rightarrow 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1 + \text{C}_7\text{H}_8$   
 4.0500e+04      2.000      16000.00

$\text{CH}_3\text{C}_6\text{H}_4 + \text{C}_7\text{KETONE} \Rightarrow 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1 + \text{C}_7\text{H}_8$   
 1.1100e+08      1.000      2000.00

$\text{C}_7\text{KETONE} + \text{RCRESOLO} \Rightarrow 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1 + \text{CRESOL}$   
 8.1000e+04      2.000      12800.00

$\text{C}_7\text{KETONE} + \text{C}_{10}\text{H}_7 \Rightarrow 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1 + \text{C}_{10}\text{H}_8$   
 1.1100e+08      1.000      2000.00

$\text{C}_7\text{KETONE} + \text{INDENYL} \Rightarrow 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1 + \text{INDENE}$   
 3.9000e+04      2.000      16000.00

$\text{C}_7\text{KETONE} + \text{C}_{10}\text{H}_6\text{CH}_3 \Rightarrow 0.5\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{CO} + 0.5\text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2 + 0.5\text{C}_4\text{H}_8 - 1 + \text{C}_{10}\text{H}_7\text{CH}_3$   
 1.1100e+08      1.000      2000.00

$\text{H} + \text{NC}_5\text{H}_{10}\text{-O} \Rightarrow \text{H}_2 + 0.5\text{CO} + 0.5\text{C}_2\text{H}_5 + \text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{COCH}_2$       7.8000e+06  
 2.000      4000.00

$\text{CH}_3 + \text{NC}_5\text{H}_{10}\text{-O} \Rightarrow 0.5\text{CO} + \text{CH}_4 + 0.5\text{C}_2\text{H}_5 + \text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{COCH}_2$       7.8000e+04  
 2.000      5000.00

$\text{C}_2\text{H}_3 + \text{NC}_5\text{H}_{10}\text{-O} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_5 + 2\text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{COCH}_2$       1.7628e+05  
 2.000      3900.00

$\text{C}_2\text{H}_5 + \text{NC}_5\text{H}_{10}\text{-O} \Rightarrow 0.5\text{CO} + \text{C}_2\text{H}_6 + 0.5\text{C}_2\text{H}_5 + \text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{COCH}_2$       5.2000e+04  
 2.000      6700.00

$\text{NC}_3\text{H}_7 + \text{NC}_5\text{H}_{10}\text{-O} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_5 + \text{C}_2\text{H}_4 + \text{C}_3\text{H}_8 + 0.5\text{CH}_3\text{COCH}_2$       3.5100e+04  
 2.000      6700.00

$\text{IC}_3\text{H}_7 + \text{NC}_5\text{H}_{10}\text{-O} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_5 + \text{C}_2\text{H}_4 + \text{C}_3\text{H}_8 + 0.5\text{CH}_3\text{COCH}_2$       3.5100e+04  
 2.000      9900.00

$\text{C}_3\text{H}_5\text{-S} + \text{NC}_5\text{H}_{10}\text{-O} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_5 + \text{C}_2\text{H}_4 + \text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2$       7.0200e+04  
 2.000      4500.00

$\text{C}_3\text{H}_5\text{-T} + \text{NC}_5\text{H}_{10}\text{-O} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_5 + \text{C}_2\text{H}_4 + \text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2$       7.0200e+04  
 2.000      4500.00

$\text{C}_3\text{H}_5\text{-A} + \text{NC}_5\text{H}_{10}\text{-O} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_5 + \text{C}_2\text{H}_4 + \text{C}_3\text{H}_6 + 0.5\text{CH}_3\text{COCH}_2$       1.4014e+05  
 2.000      12800.00

$\text{C}_4\text{H}_5 + \text{NC}_5\text{H}_{10}\text{-O} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_5 + \text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{COCH}_2 + \text{C}_4\text{H}_6$       7.0200e+04  
 2.000      4500.00

$\text{C}_4\text{H}_{71-4} + \text{NC}_5\text{H}_{10}\text{-O} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_5 + \text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{COCH}_2 + \text{C}_4\text{H}_8 - 1$       3.5100e+04  
 2.000      6600.00

$\text{C}_4\text{H}_{71-3} + \text{NC}_5\text{H}_{10}\text{-O} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_5 + \text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{COCH}_2 + \text{C}_4\text{H}_8 - 2$       8.8400e+04  
 2.000      13700.00

$\text{IC}_4\text{H}_7 + \text{NC}_5\text{H}_{10}\text{-O} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_5 + \text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{COCH}_2 + \text{IC}_4\text{H}_8$       7.0200e+04  
 2.000      13700.00

$\text{C}_4\text{H}_3 + \text{NC}_5\text{H}_{10}\text{-O} \Rightarrow 0.5\text{CO} + 0.5\text{C}_2\text{H}_5 + \text{C}_2\text{H}_4 + 0.5\text{CH}_3\text{COCH}_2 + \text{C}_4\text{H}_4$       1.0634e+05  
 2.000      5200.00

C6H5+NC5H10-O=>0.5CO+0.5C2H5+C2H4+0.5CH3COCH2+C6H6	9.6200e+07
1.000 2000.00	
O+NC5H10-O=>OH+0.5CO+0.5C2H5+C2H4+0.5CH3COCH2	6.1100e+06
2.000 2500.00	
O2+NC5H10-O=>HO2+0.5CO+0.5C2H5+C2H4+0.5CH3COCH2	4.4200e+06
2.000 44000.00	
OH+NC5H10-O=>H2O+0.5CO+0.5C2H5+C2H4+0.5CH3COCH2	3.9000e+09
1.000 50.00	
HO2+NC5H10-O=>H2O2+0.5CO+0.5C2H5+C2H4+0.5CH3COCH2	2.0800e+06
2.000 16000.00	
CH3O+NC5H10-O=>0.5CO+CH3OH+0.5C2H5+C2H4+0.5CH3COCH2	1.1128e+05
2.000 1500.00	
CH2OH+NC5H10-O=>0.5CO+CH3OH+0.5C2H5+C2H4+0.5CH3COCH2	7.3580e+04
2.000 10200.00	
HCO+NC5H10-O=>0.5CO+CH2O+0.5C2H5+C2H4+0.5CH3COCH2	3.2760e+05
2.000 12300.00	
CH3CO+NC5H10-O=>0.5CO+0.5C2H5+C2H4+CH3CHO+0.5CH3COCH2	3.5100e+05
2.000 14000.00	
CH2CHO+NC5H10-O=>0.5CO+0.5C2H5+C2H4+CH3CHO+0.5CH3COCH2	5.9800e+04
2.000 11500.00	
C3H3+NC5H10-O=>0.5CO+0.5C2H5+C2H4+C3H4-A+0.5CH3COCH2	7.0200e+04
2.000 14000.00	
HCCO+NC5H10-O=>0.5CO+0.5C2H5+C2H4+CH2CO+0.5CH3COCH2	1.1128e+05
2.000 5200.00	
CH3O2+NC5H10-O=>0.5CO+CH3O2H+0.5C2H5+C2H4+0.5CH3COCH2	1.9760e+05
2.000 12600.00	
C2H5O2+NC5H10-O=>0.5CO+0.5C2H5+C2H5O2H+C2H4+0.5CH3COCH2	1.9760e+05
2.000 12600.00	
NC3H7O2+NC5H10-O=>0.5CO+0.5C2H5+C2H4+0.5CH3COCH2+C3H7OOH	1.9760e+05
2.000 12600.00	
IC3H7O2+NC5H10-O=>0.5CO+0.5C2H5+C2H4+0.5CH3COCH2+C3H7OOH	1.9760e+05
2.000 12600.00	
HCO3+NC5H10-O=>0.5CO+0.5C2H5+C2H4+0.5CH3COCH2+HCO3H	8.8400e+04
2.000 6500.00	
CH3CO3+NC5H10-O=>0.5CO+0.5C2H5+C2H4+CH3CO3H+0.5CH3COCH2	8.8400e+04
2.000 6500.00	
CH3COCH2+NC5H10-O=>0.5CO+0.5C2H5+C2H4+CH3COCH3+0.5CH3COCH2	5.9800e+04
2.000 8000.00	

NC5H10-O+C6H5O=>0.5CO+0.5C2H5+C2H4+0.5CH3COCH2+C6H5OH 7.0200e+04  
 2.000 12500.00

NC5H10-O+C5H7=>0.5CO+0.5C2H5+C2H4+0.5CH3COCH2+LC5H8 7.0200e+04  
 2.000 15000.00

NC5H10-O+C7H7=>0.5CO+0.5C2H5+C2H4+0.5CH3COCH2+C7H8 3.5100e+04  
 2.000 16000.00

NC5H10-O+CH3C6H4=>0.5CO+0.5C2H5+C2H4+0.5CH3COCH2+C7H8 9.6200e+07  
 1.000 2000.00

NC5H10-O+RCRESOLO=>0.5CO+0.5C2H5+C2H4+0.5CH3COCH2+CRE SOL 7.0200e+04  
 2.000 12800.00

NC5H10-O+C10H7=>0.5CO+0.5C2H5+C2H4+0.5CH3COCH2+C10H8 9.6200e+07  
 1.000 2000.00

NC5H10-O+INDENYL=>0.5CO+0.5C2H5+C2H4+0.5CH3COCH2+INDENE 3.3800e+04  
 2.000 16000.00

NC5H10-O+C10H6CH3=>0.5CO+0.5C2H5+C2H4+0.5CH3COCH2+C10H7CH3 9.6200e+07  
 1.000 2000.00

H+NC5H10-O=>H2+0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO  
 1.3500e+07 2.000 4000.00

CH3+NC5H10-O=>CH4+0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO  
 1.3500e+05 2.000 5000.00

C2H3+NC5H10-O=>0.25C2H5+C2H4+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO  
 3.0510e+05 2.000 3900.00

C2H5+NC5H10-O=>C2H6+0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO  
 9.0000e+04 2.000 6700.00

NC3H7+NC5H10-O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+C3H8+0.75C3H6+0.25C2H3CHO  
 6.0750e+04 2.000 6700.00

IC3H7+NC5H10-O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+C3H8+0.75C3H6+0.25C2H3CHO  
 6.0750e+04 2.000 9900.00

C3H5-S+NC5H10-O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+1.75C3H6+0.25C2H3CHO  
 1.2150e+05 2.000 4500.00

C3H5-T+NC5H10-O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+1.75C3H6+0.25C2H3CHO  
 1.2150e+05 2.000 4500.00

C3H5-A+NC5H10-O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+1.75C3H6+0.25C2H3CHO  
 2.4255e+05 2.000 12800.00

C4H5+NC5H10-O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+C4H6  
 1.2150e+05 2.000 4500.00

C4H71-4+NC5H10-O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+C4H8-  
 1 6.0750e+04 2.000 6600.00

C4H71-3+NC5H10-O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+C4H8-  
2 1.5300e+05 2.000 13700.00

IC4H7+NC5H10-O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+IC4H8  
1.2150e+05 2.000 13700.00

C4H3+NC5H10-O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+C4H4  
1.8405e+05 2.000 5200.00

C6H5+NC5H10-O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+C6H6  
1.6650e+08 1.000 2000.00

O+NC5H10-O=>OH+0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO  
1.0575e+07 2.000 2500.00

O2+NC5H10-O=>HO2+0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO  
7.6500e+06 2.000 44000.00

OH+NC5H10-O=>H2O+0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO  
6.7500e+09 1.000 50.00

HO2+NC5H10-O=>H2O2+0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO  
3.6000e+06 2.000 16000.00

CH3O+NC5H10-O=>CH3OH+0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO  
1.9260e+05 2.000 1500.00

CH2OH+NC5H10-O=>CH3OH+0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO  
1.2735e+05 2.000 10200.00

HCO+NC5H10-O=>CH2O+0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO  
5.6700e+05 2.000 12300.00

CH3CO+NC5H10-O=>0.25C2H5+CH3CHO+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO  
6.0750e+05 2.000 14000.00

CH2CHO+NC5H10-O=>0.25C2H5+CH3CHO+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO  
1.0350e+05 2.000 11500.00

C3H3+NC5H10-O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+C3H4-A+0.25C2H3CHO  
1.2150e+05 2.000 14000.00

HCCO+NC5H10-O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+CH2CO+0.75C3H6+0.25C2H3CHO  
1.9260e+05 2.000 5200.00

CH3O2+NC5H10-O=>CH3O2H+0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO  
3.4200e+05 2.000 12600.00

C2H5O2+NC5H10-  
O=>0.25C2H5+C2H5O2H+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO 3.4200e+05  
2.000 12600.00

NC3H7O2+NC5H10-  
O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+C3H7OOH 3.4200e+05  
2.000 12600.00



IC3H7O2+NC5H10-  
 O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+C3H7OOH 3.4200e+05  
 2.000 12600.00

HCO3+NC5H10-O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+HCO3H  
 1.5300e+05 2.000 6500.00

CH3CO3+NC5H10-  
 O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+CH3CO3H+0.75C3H6+0.25C2H3CHO 1.5300e+05  
 2.000 6500.00

CH3COCH2+NC5H10-  
 O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+CH3COCH3 1.0350e+05  
 2.000 8000.00

NC5H10-O+C6H5O=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+C6H5OH  
 1.2150e+05 2.000 12500.00

NC5H10-O+C5H7=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+LC5H8  
 1.2150e+05 2.000 15000.00

NC5H10-O+C7H7=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+C7H8  
 6.0750e+04 2.000 16000.00

NC5H10-O+CH3C6H4=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+C7H8  
 1.6650e+08 1.000 2000.00

NC5H10-  
 O+RCRESOLO=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+CRESOL  
 1.2150e+05 2.000 12800.00

NC5H10-O+C10H7=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+C10H8  
 1.6650e+08 1.000 2000.00

NC5H10-  
 O+INDENYL=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+INDENE  
 5.8500e+04 2.000 16000.00

NC5H10-  
 O+C10H6CH3=>0.25C2H5+0.45CH3CO+0.3CH2CHO+0.75C3H6+0.25C2H3CHO+C10H7CH3  
 1.6650e+08 1.000 2000.00

H+NC5H10-O=>H2+CH3CHO+0.7C3H5-A+0.3C3H5-S 5.7000e+06  
 2.000 4000.00

CH3+NC5H10-O=>CH4+CH3CHO+0.7C3H5-A+0.3C3H5-S 5.7000e+04  
 2.000 5000.00

C2H3+NC5H10-O=>C2H4+CH3CHO+0.7C3H5-A+0.3C3H5-S 1.2882e+05  
 2.000 3900.00

C2H5+NC5H10-O=>C2H6+CH3CHO+0.7C3H5-A+0.3C3H5-S 3.8000e+04  
 2.000 6700.00

NC3H7+NC5H10-O=>CH3CHO+C3H8+0.7C3H5-A+0.3C3H5-S 2.5650e+04  
 2.000 6700.00

IC3H7+NC5H10-O=>CH3CHO+C3H8+0.7C3H5-A+0.3C3H5-S 2.000            9900.00	2.5650e+04
C3H5-S+NC5H10-O=>CH3CHO+C3H6+0.7C3H5-A+0.3C3H5-S 2.000            4500.00	5.1300e+04
C3H5-T+NC5H10-O=>CH3CHO+C3H6+0.7C3H5-A+0.3C3H5-S 2.000            4500.00	5.1300e+04
C3H5-A+NC5H10-O=>CH3CHO+C3H6+0.7C3H5-A+0.3C3H5-S 2.000            12800.00	1.0241e+05
C4H5+NC5H10-O=>CH3CHO+0.7C3H5-A+0.3C3H5-S+C4H6 2.000            4500.00	5.1300e+04
C4H71-4+NC5H10-O=>CH3CHO+0.7C3H5-A+0.3C3H5-S+C4H8-1 2.000            6600.00	2.5650e+04
C4H71-3+NC5H10-O=>CH3CHO+0.7C3H5-A+0.3C3H5-S+C4H8-2 2.000            13700.00	6.4600e+04
IC4H7+NC5H10-O=>CH3CHO+0.7C3H5-A+0.3C3H5-S+IC4H8 2.000            13700.00	5.1300e+04
C4H3+NC5H10-O=>CH3CHO+0.7C3H5-A+0.3C3H5-S+C4H4 2.000            5200.00	7.7710e+04
C6H5+NC5H10-O=>CH3CHO+0.7C3H5-A+0.3C3H5-S+C6H6 1.000            2000.00	7.0300e+07
O+NC5H10-O=>OH+CH3CHO+0.7C3H5-A+0.3C3H5-S 2.000            2500.00	4.4650e+06
O2+NC5H10-O=>HO2+CH3CHO+0.7C3H5-A+0.3C3H5-S 2.000            44000.00	3.2300e+06
OH+NC5H10-O=>H2O+CH3CHO+0.7C3H5-A+0.3C3H5-S 1.000            50.00	2.8500e+09
HO2+NC5H10-O=>H2O2+CH3CHO+0.7C3H5-A+0.3C3H5-S 2.000            16000.00	1.5200e+06
CH3O+NC5H10-O=>CH3OH+CH3CHO+0.7C3H5-A+0.3C3H5-S 2.000            1500.00	8.1320e+04
CH2OH+NC5H10-O=>CH3OH+CH3CHO+0.7C3H5-A+0.3C3H5-S 2.000            10200.00	5.3770e+04
HCO+NC5H10-O=>CH2O+CH3CHO+0.7C3H5-A+0.3C3H5-S 2.000            12300.00	2.3940e+05
CH3CO+NC5H10-O=>2CH3CHO+0.7C3H5-A+0.3C3H5-S 2.000            14000.00	2.5650e+05
CH2CHO+NC5H10-O=>2CH3CHO+0.7C3H5-A+0.3C3H5-S 2.000            11500.00	4.3700e+04

C3H3+NC5H10-O=>CH3CHO+0.7C3H5-A+0.3C3H5-S+C3H4-A 2.000        14000.00	5.1300e+04
HCCO+NC5H10-O=>CH3CHO+CH2CO+0.7C3H5-A+0.3C3H5-S 2.000        5200.00	8.1320e+04
CH3O2+NC5H10-O=>CH3O2H+CH3CHO+0.7C3H5-A+0.3C3H5-S 2.000        12600.00	1.4440e+05
C2H5O2+NC5H10-O=>C2H5O2H+CH3CHO+0.7C3H5-A+0.3C3H5-S 2.000        12600.00	1.4440e+05
NC3H7O2+NC5H10-O=>CH3CHO+0.7C3H5-A+0.3C3H5-S+C3H7OOH 2.000        12600.00	1.4440e+05
IC3H7O2+NC5H10-O=>CH3CHO+0.7C3H5-A+0.3C3H5-S+C3H7OOH 2.000        12600.00	1.4440e+05
HCO3+NC5H10-O=>CH3CHO+0.7C3H5-A+0.3C3H5-S+HCO3H 2.000        6500.00	6.4600e+04
CH3CO3+NC5H10-O=>CH3CHO+CH3CO3H+0.7C3H5-A+0.3C3H5-S 2.000        6500.00	6.4600e+04
CH3COCH2+NC5H10-O=>CH3CHO+0.7C3H5-A+0.3C3H5-S+CH3COCH3 2.000        8000.00	4.3700e+04
NC5H10-O+C6H5O=>CH3CHO+0.7C3H5-A+0.3C3H5-S+C6H5OH 2.000        12500.00	5.1300e+04
NC5H10-O+C5H7=>CH3CHO+0.7C3H5-A+0.3C3H5-S+LC5H8 2.000        15000.00	5.1300e+04
NC5H10-O+C7H7=>CH3CHO+0.7C3H5-A+0.3C3H5-S+C7H8 2.000        16000.00	2.5650e+04
NC5H10-O+CH3C6H4=>CH3CHO+0.7C3H5-A+0.3C3H5-S+C7H8 1.000        2000.00	7.0300e+07
NC5H10-O+RCRESOLO=>CH3CHO+0.7C3H5-A+0.3C3H5-S+CRESOL 2.000        12800.00	5.1300e+04
NC5H10-O+C10H7=>CH3CHO+0.7C3H5-A+0.3C3H5-S+C10H8 1.000        2000.00	7.0300e+07
NC5H10-O+INDENYL=>CH3CHO+0.7C3H5-A+0.3C3H5-S+INDENE 2.000        16000.00	2.4700e+04
NC5H10-O+C10H6CH3=>CH3CHO+0.7C3H5-A+0.3C3H5-S+C10H7CH3 1.000        2000.00	7.0300e+07
H+NC5H10-O=>H2+CH2O+0.63C4H71-3+0.37C4H71-4 2.000        4000.00	6.0000e+06
CH3+NC5H10-O=>CH4+CH2O+0.63C4H71-3+0.37C4H71-4 2.000        5000.00	6.0000e+04

C2H3+NC5H10-O=>CH2O+C2H4+0.63C4H71-3+0.37C4H71-4 2.000            3900.00	1.3560e+05
C2H5+NC5H10-O=>CH2O+C2H6+0.63C4H71-3+0.37C4H71-4 2.000            6700.00	4.0000e+04
NC3H7+NC5H10-O=>CH2O+C3H8+0.63C4H71-3+0.37C4H71-4 2.000            6700.00	2.7000e+04
IC3H7+NC5H10-O=>CH2O+C3H8+0.63C4H71-3+0.37C4H71-4 2.000            9900.00	2.7000e+04
C3H5-S+NC5H10-O=>CH2O+C3H6+0.63C4H71-3+0.37C4H71-4 2.000            4500.00	5.4000e+04
C3H5-T+NC5H10-O=>CH2O+C3H6+0.63C4H71-3+0.37C4H71-4 2.000            4500.00	5.4000e+04
C3H5-A+NC5H10-O=>CH2O+C3H6+0.63C4H71-3+0.37C4H71-4 2.000            12800.00	1.0780e+05
C4H5+NC5H10-O=>CH2O+0.63C4H71-3+0.37C4H71-4+C4H6 2.000            4500.00	5.4000e+04
C4H71-4+NC5H10-O=>CH2O+C4H8-1+0.63C4H71-3+0.37C4H71-4 2.000            6600.00	2.7000e+04
C4H71-3+NC5H10-O=>CH2O+C4H8-2+0.63C4H71-3+0.37C4H71-4 2.000            13700.00	6.8000e+04
IC4H7+NC5H10-O=>CH2O+IC4H8+0.63C4H71-3+0.37C4H71-4 2.000            13700.00	5.4000e+04
C4H3+NC5H10-O=>CH2O+0.63C4H71-3+0.37C4H71-4+C4H4 2.000            5200.00	8.1800e+04
C6H5+NC5H10-O=>CH2O+0.63C4H71-3+0.37C4H71-4+C6H6 1.000            2000.00	7.4000e+07
O+NC5H10-O=>OH+CH2O+0.63C4H71-3+0.37C4H71-4 2.000            2500.00	4.7000e+06
O2+NC5H10-O=>HO2+CH2O+0.63C4H71-3+0.37C4H71-4 2.000            44000.00	3.4000e+06
OH+NC5H10-O=>H2O+CH2O+0.63C4H71-3+0.37C4H71-4 1.000            50.00	3.0000e+09
HO2+NC5H10-O=>H2O2+CH2O+0.63C4H71-3+0.37C4H71-4 2.000            16000.00	1.6000e+06
CH3O+NC5H10-O=>CH3OH+CH2O+0.63C4H71-3+0.37C4H71-4 2.000            1500.00	8.5600e+04
CH2OH+NC5H10-O=>CH3OH+CH2O+0.63C4H71-3+0.37C4H71-4 2.000            10200.00	5.6600e+04

HCO+NC5H10-O=>2CH2O+0.63C4H71-3+0.37C4H71-4 2.000 12300.00	2.5200e+05
CH3CO+NC5H10-O=>CH2O+CH3CHO+0.63C4H71-3+0.37C4H71-4 2.000 14000.00	2.7000e+05
CH2CHO+NC5H10-O=>CH2O+CH3CHO+0.63C4H71-3+0.37C4H71-4 2.000 11500.00	4.6000e+04
C3H3+NC5H10-O=>CH2O+C3H4-A+0.63C4H71-3+0.37C4H71-4 2.000 14000.00	5.4000e+04
HCCO+NC5H10-O=>CH2O+CH2CO+0.63C4H71-3+0.37C4H71-4 2.000 5200.00	8.5600e+04
CH3O2+NC5H10-O=>CH3O2H+CH2O+0.63C4H71-3+0.37C4H71-4 2.000 12600.00	1.5200e+05
C2H5O2+NC5H10-O=>CH2O+C2H5O2H+0.63C4H71-3+0.37C4H71-4 2.000 12600.00	1.5200e+05
NC3H7O2+NC5H10-O=>CH2O+0.63C4H71-3+0.37C4H71-4+C3H7OOH 2.000 12600.00	1.5200e+05
IC3H7O2+NC5H10-O=>CH2O+0.63C4H71-3+0.37C4H71-4+C3H7OOH 2.000 12600.00	1.5200e+05
HCO3+NC5H10-O=>CH2O+0.63C4H71-3+0.37C4H71-4+HCO3H 2.000 6500.00	6.8000e+04
CH3CO3+NC5H10-O=>CH2O+CH3CO3H+0.63C4H71-3+0.37C4H71-4 2.000 6500.00	6.8000e+04
CH3COCH2+NC5H10-O=>CH2O+CH3COCH3+0.63C4H71-3+0.37C4H71-4 2.000 8000.00	4.6000e+04
NC5H10-O+C6H5O=>CH2O+0.63C4H71-3+0.37C4H71-4+C6H5OH 2.000 12500.00	5.4000e+04
NC5H10-O+C5H7=>CH2O+0.63C4H71-3+0.37C4H71-4+LC5H8 2.000 15000.00	5.4000e+04
NC5H10-O+C7H7=>CH2O+0.63C4H71-3+0.37C4H71-4+C7H8 2.000 16000.00	2.7000e+04
NC5H10-O+CH3C6H4=>CH2O+0.63C4H71-3+0.37C4H71-4+C7H8 1.000 2000.00	7.4000e+07
NC5H10-O+RCRESOLO=>CH2O+0.63C4H71-3+0.37C4H71-4+CRE SOL 2.000 12800.00	5.4000e+04
NC5H10-O+C10H7=>CH2O+0.63C4H71-3+0.37C4H71-4+C10H8 1.000 2000.00	7.4000e+07
NC5H10-O+INDENYL=>CH2O+0.63C4H71-3+0.37C4H71-4+INDENE 2.000 16000.00	2.6000e+04

NC5H10-O+C10H6CH3=>CH2O+0.63C4H71-3+0.37C4H71-4+C10H7CH3 7.4000e+07  
1.000 2000.00

H+NEOC5H10-O=>H2+0.917CH3+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO  
1.4400e+07 2.000 4000.00

CH3+NEOC5H10-O=>CH4+0.917CH3+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO  
1.4400e+05 2.000 5000.00

C2H3+NEOC5H10-O=>0.917CH3+1.083C2H4+0.083CH3COCH2+0.917IC3H5CHO  
3.2544e+05 2.000 3900.00

C2H5+NEOC5H10-O=>0.917CH3+C2H6+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO  
9.6000e+04 2.000 6700.00

NC3H7+NEOC5H10-O=>0.917CH3+0.083C2H4+C3H8+0.083CH3COCH2+0.917IC3H5CHO  
6.4800e+04 2.000 6700.00

IC3H7+NEOC5H10-O=>0.917CH3+0.083C2H4+C3H8+0.083CH3COCH2+0.917IC3H5CHO  
6.4800e+04 2.000 9900.00

C3H5-S+NEOC5H10-O=>0.917CH3+0.083C2H4+C3H6+0.083CH3COCH2+0.917IC3H5CHO  
1.2960e+05 2.000 4500.00

C3H5-T+NEOC5H10-O=>0.917CH3+0.083C2H4+C3H6+0.083CH3COCH2+0.917IC3H5CHO  
1.2960e+05 2.000 4500.00

C3H5-A+NEOC5H10-O=>0.917CH3+0.083C2H4+C3H6+0.083CH3COCH2+0.917IC3H5CHO  
2.5872e+05 2.000 12800.00

C4H5+NEOC5H10-O=>0.917CH3+0.083C2H4+0.083CH3COCH2+C4H6+0.917IC3H5CHO  
1.2960e+05 2.000 4500.00

C4H71-4+NEOC5H10-O=>0.917CH3+0.083C2H4+0.083CH3COCH2+C4H8-1+0.917IC3H5CHO  
6.4800e+04 2.000 6600.00

C4H71-3+NEOC5H10-O=>0.917CH3+0.083C2H4+0.083CH3COCH2+C4H8-2+0.917IC3H5CHO  
1.6320e+05 2.000 13700.00

IC4H7+NEOC5H10-O=>0.917CH3+0.083C2H4+0.083CH3COCH2+IC4H8+0.917IC3H5CHO  
1.2960e+05 2.000 13700.00

C4H3+NEOC5H10-O=>0.917CH3+0.083C2H4+0.083CH3COCH2+C4H4+0.917IC3H5CHO  
1.9632e+05 2.000 5200.00

C6H5+NEOC5H10-O=>0.917CH3+0.083C2H4+0.083CH3COCH2+C6H6+0.917IC3H5CHO  
1.7760e+08 1.000 2000.00

O+NEOC5H10-O=>OH+0.917CH3+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO  
1.1280e+07 2.000 2500.00

O2+NEOC5H10-O=>HO2+0.917CH3+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO  
8.1600e+06 2.000 44000.00

OH+NEOC5H10-O=>H2O+0.917CH3+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO  
7.2000e+09 1.000 50.00

HO2+NEOC5H10-O=>H2O2+0.917CH3+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO  
3.8400e+06 2.000 16000.00

CH3O+NEOC5H10-O=>0.917CH3+CH3OH+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO  
2.0544e+05 2.000 1500.00

CH2OH+NEOC5H10-O=>0.917CH3+CH3OH+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO  
1.3584e+05 2.000 10200.00

HCO+NEOC5H10-O=>0.917CH3+CH2O+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO  
6.0480e+05 2.000 12300.00

CH3CO+NEOC5H10-O=>0.917CH3+0.083C2H4+CH3CHO+0.083CH3COCH2+0.917IC3H5CHO  
6.4800e+05 2.000 14000.00

CH2CHO+NEOC5H10-O=>0.917CH3+0.083C2H4+CH3CHO+0.083CH3COCH2+0.917IC3H5CHO  
1.1040e+05 2.000 11500.00

C3H3+NEOC5H10-O=>0.917CH3+0.083C2H4+C3H4-A+0.083CH3COCH2+0.917IC3H5CHO  
1.2960e+05 2.000 14000.00

HCCO+NEOC5H10-O=>0.917CH3+0.083C2H4+CH2CO+0.083CH3COCH2+0.917IC3H5CHO  
2.0544e+05 2.000 5200.00

CH3O2+NEOC5H10-O=>0.917CH3+CH3O2H+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO  
3.6480e+05 2.000 12600.00

C2H5O2+NEOC5H10-O=>0.917CH3+C2H5O2H+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO  
3.6480e+05 2.000 12600.00

NC3H7O2+NEOC5H10-  
O=>0.917CH3+0.083C2H4+0.083CH3COCH2+C3H7OOH+0.917IC3H5CHO 3.6480e+05  
2.000 12600.00

IC3H7O2+NEOC5H10-  
O=>0.917CH3+0.083C2H4+0.083CH3COCH2+C3H7OOH+0.917IC3H5CHO 3.6480e+05  
2.000 12600.00

HCO3+NEOC5H10-O=>0.917CH3+0.083C2H4+0.083CH3COCH2+HCO3H+0.917IC3H5CHO  
1.6320e+05 2.000 6500.00

CH3CO3+NEOC5H10-O=>0.917CH3+0.083C2H4+CH3CO3H+0.083CH3COCH2+0.917IC3H5CHO  
1.6320e+05 2.000 6500.00

CH3COCH2+NEOC5H10-  
O=>0.917CH3+0.083C2H4+CH3COCH3+0.083CH3COCH2+0.917IC3H5CHO 1.1040e+05  
2.000 8000.00

NEOC5H10-O+C6H5O=>0.917CH3+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO+C6H5OH  
1.2960e+05 2.000 12500.00

NEOC5H10-O+C5H7=>0.917CH3+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO+LC5H8  
1.2960e+05 2.000 15000.00

NEOC5H10-O+C7H7=>0.917CH3+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO+C7H8  
6.4800e+04 2.000 16000.00

NEOC5H10-O+CH3C6H4=>0.917CH3+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO+C7H8  
1.7760e+08 1.000 2000.00

NEOC5H10-O+RCRESOLO=>0.917CH3+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO+CRESOL  
1.2960e+05 2.000 12800.00

NEOC5H10-O+C10H7=>0.917CH3+0.083C2H4+0.083CH3COCH2+C10H8+0.917IC3H5CHO  
1.7760e+08 1.000 2000.00

NEOC5H10-O+INDENYL=>0.917CH3+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO+INDENE  
6.2400e+04 2.000 16000.00

NEOC5H10-O+C10H6CH3=>0.917CH3+0.083C2H4+0.083CH3COCH2+0.917IC3H5CHO+C10H7CH3  
1.7760e+08 1.000 2000.00

H+NEOC5H10-O=>H2+0.75CH2O+0.25CH3CO+0.25C3H6+0.75IC4H7 9.6000e+06  
2.000 4000.00

CH3+NEOC5H10-O=>CH4+0.75CH2O+0.25CH3CO+0.25C3H6+0.75IC4H7 9.6000e+04  
2.000 5000.00

C2H3+NEOC5H10-O=>0.75CH2O+C2H4+0.25CH3CO+0.25C3H6+0.75IC4H7 2.1696e+05  
2.000 3900.00

C2H5+NEOC5H10-O=>0.75CH2O+C2H6+0.25CH3CO+0.25C3H6+0.75IC4H7 6.4000e+04  
2.000 6700.00

NC3H7+NEOC5H10-O=>0.75CH2O+0.25CH3CO+C3H8+0.25C3H6+0.75IC4H7 4.3200e+04  
2.000 6700.00

IC3H7+NEOC5H10-O=>0.75CH2O+0.25CH3CO+C3H8+0.25C3H6+0.75IC4H7 4.3200e+04  
2.000 9900.00

C3H5-S+NEOC5H10-O=>0.75CH2O+0.25CH3CO+1.25C3H6+0.75IC4H7 8.6400e+04  
2.000 4500.00

C3H5-T+NEOC5H10-O=>0.75CH2O+0.25CH3CO+1.25C3H6+0.75IC4H7 8.6400e+04  
2.000 4500.00

C3H5-A+NEOC5H10-O=>0.75CH2O+0.25CH3CO+1.25C3H6+0.75IC4H7 1.7248e+05  
2.000 12800.00

C4H5+NEOC5H10-O=>0.75CH2O+0.25CH3CO+0.25C3H6+0.75IC4H7+C4H6 8.6400e+04  
2.000 4500.00

C4H71-4+NEOC5H10-O=>0.75CH2O+0.25CH3CO+0.25C3H6+0.75IC4H7+C4H8-1  
4.3200e+04 2.000 6600.00

C4H71-3+NEOC5H10-O=>0.75CH2O+0.25CH3CO+0.25C3H6+0.75IC4H7+C4H8-2  
1.0880e+05 2.000 13700.00

IC4H7+NEOC5H10-O=>0.75CH2O+0.25CH3CO+0.25C3H6+IC4H8+0.75IC4H7 8.6400e+04  
2.000 13700.00

C4H3+NEOC5H10-O=>0.75CH2O+0.25CH3CO+0.25C3H6+0.75IC4H7+C4H4 1.3088e+05  
2.000 5200.00



$C_6H_5 + NEOC_5H_{10}-O \Rightarrow 0.75CH_2O + 0.25CH_3CO + 0.25C_3H_6 + 0.75IC_4H_7 + C_6H_6$  1.1840e+08  
 1.000 2000.00

$O + NEOC_5H_{10}-O \Rightarrow OH + 0.75CH_2O + 0.25CH_3CO + 0.25C_3H_6 + 0.75IC_4H_7$  7.5200e+06  
 2.000 2500.00

$O_2 + NEOC_5H_{10}-O \Rightarrow HO_2 + 0.75CH_2O + 0.25CH_3CO + 0.25C_3H_6 + 0.75IC_4H_7$  5.4400e+06  
 2.000 44000.00

$OH + NEOC_5H_{10}-O \Rightarrow H_2O + 0.75CH_2O + 0.25CH_3CO + 0.25C_3H_6 + 0.75IC_4H_7$  4.8000e+09  
 1.000 50.00

$HO_2 + NEOC_5H_{10}-O \Rightarrow H_2O_2 + 0.75CH_2O + 0.25CH_3CO + 0.25C_3H_6 + 0.75IC_4H_7$  2.5600e+06  
 2.000 16000.00

$CH_3O + NEOC_5H_{10}-O \Rightarrow CH_3OH + 0.75CH_2O + 0.25CH_3CO + 0.25C_3H_6 + 0.75IC_4H_7$  1.3696e+05  
 2.000 1500.00

$CH_2OH + NEOC_5H_{10}-O \Rightarrow CH_3OH + 0.75CH_2O + 0.25CH_3CO + 0.25C_3H_6 + 0.75IC_4H_7$  9.0560e+04  
 2.000 10200.00

$HCO + NEOC_5H_{10}-O \Rightarrow 1.75CH_2O + 0.25CH_3CO + 0.25C_3H_6 + 0.75IC_4H_7$  4.0320e+05  
 2.000 12300.00

$CH_3CO + NEOC_5H_{10}-O \Rightarrow 0.75CH_2O + CH_3CHO + 0.25CH_3CO + 0.25C_3H_6 + 0.75IC_4H_7$  4.3200e+05  
 2.000 14000.00

$CH_2CHO + NEOC_5H_{10}-O \Rightarrow 0.75CH_2O + CH_3CHO + 0.25CH_3CO + 0.25C_3H_6 + 0.75IC_4H_7$   
 7.3600e+04 2.000 11500.00

$C_3H_3 + NEOC_5H_{10}-O \Rightarrow 0.75CH_2O + 0.25CH_3CO + 0.25C_3H_6 + C_3H_4-A + 0.75IC_4H_7$  8.6400e+04  
 2.000 14000.00

$HCCO + NEOC_5H_{10}-O \Rightarrow 0.75CH_2O + 0.25CH_3CO + CH_2CO + 0.25C_3H_6 + 0.75IC_4H_7$  1.3696e+05  
 2.000 5200.00

$CH_3O_2 + NEOC_5H_{10}-O \Rightarrow CH_3O_2H + 0.75CH_2O + 0.25CH_3CO + 0.25C_3H_6 + 0.75IC_4H_7$  2.4320e+05  
 2.000 12600.00

$C_2H_5O_2 + NEOC_5H_{10}-O \Rightarrow 0.75CH_2O + C_2H_5O_2H + 0.25CH_3CO + 0.25C_3H_6 + 0.75IC_4H_7$   
 2.4320e+05 2.000 12600.00

$NC_3H_7O_2 + NEOC_5H_{10}-O \Rightarrow 0.75CH_2O + 0.25CH_3CO + 0.25C_3H_6 + 0.75IC_4H_7 + C_3H_7OOH$   
 2.4320e+05 2.000 12600.00

$IC_3H_7O_2 + NEOC_5H_{10}-O \Rightarrow 0.75CH_2O + 0.25CH_3CO + 0.25C_3H_6 + 0.75IC_4H_7 + C_3H_7OOH$   
 2.4320e+05 2.000 12600.00

$HCO_3 + NEOC_5H_{10}-O \Rightarrow 0.75CH_2O + 0.25CH_3CO + 0.25C_3H_6 + 0.75IC_4H_7 + HCO_3H$  1.0880e+05  
 2.000 6500.00

$CH_3CO_3 + NEOC_5H_{10}-O \Rightarrow 0.75CH_2O + 0.25CH_3CO + CH_3CO_3H + 0.25C_3H_6 + 0.75IC_4H_7$   
 1.0880e+05 2.000 6500.00

$CH_3COCH_2 + NEOC_5H_{10}-O \Rightarrow 0.75CH_2O + 0.25CH_3CO + 0.25C_3H_6 + CH_3COCH_3 + 0.75IC_4H_7$   
 7.3600e+04 2.000 8000.00

NEOC5H10-O+C6H5O=>0.75CH2O+0.25CH3CO+0.25C3H6+0.75IC4H7+C6H5OH 8.6400e+04  
 2.000 12500.00

NEOC5H10-O+C5H7=>0.75CH2O+0.25CH3CO+0.25C3H6+0.75IC4H7+LC5H8 8.6400e+04  
 2.000 15000.00

NEOC5H10-O+C7H7=>0.75CH2O+0.25CH3CO+0.25C3H6+0.75IC4H7+C7H8 4.3200e+04  
 2.000 16000.00

NEOC5H10-O+CH3C6H4=>0.75CH2O+0.25CH3CO+0.25C3H6+0.75IC4H7+C7H8 1.1840e+08  
 1.000 2000.00

NEOC5H10-O+RCRESOLO=>0.75CH2O+0.25CH3CO+0.25C3H6+0.75IC4H7+CRESOL  
 8.6400e+04 2.000 12800.00

NEOC5H10-O+C10H7=>0.75CH2O+0.25CH3CO+0.25C3H6+0.75IC4H7+C10H8 1.1840e+08  
 1.000 2000.00

NEOC5H10-O+INDENYL=>0.75CH2O+0.25CH3CO+0.25C3H6+0.75IC4H7+INDENE  
 4.1600e+04 2.000 16000.00

NEOC5H10-O+C10H6CH3=>0.75CH2O+0.25CH3CO+0.25C3H6+0.75IC4H7+C10H7CH3  
 1.1840e+08 1.000 2000.00

H+NC7H14O=>H2+CH2O+C2H4+C4H71-3 7.5000e+06  
 2.000 4000.00

CH3+NC7H14O=>CH4+CH2O+C2H4+C4H71-3 7.5000e+04  
 2.000 5000.00

C2H3+NC7H14O=>CH2O+2C2H4+C4H71-3 1.6950e+05  
 2.000 3900.00

C2H5+NC7H14O=>CH2O+C2H6+C2H4+C4H71-3 5.0000e+04  
 2.000 6700.00

NC3H7+NC7H14O=>CH2O+C2H4+C3H8+C4H71-3 3.3750e+04  
 2.000 6700.00

IC3H7+NC7H14O=>CH2O+C2H4+C3H8+C4H71-3 3.3750e+04  
 2.000 9900.00

C3H5-S+NC7H14O=>CH2O+C2H4+C3H6+C4H71-3 6.7500e+04  
 2.000 4500.00

C3H5-T+NC7H14O=>CH2O+C2H4+C3H6+C4H71-3 6.7500e+04  
 2.000 4500.00

C3H5-A+NC7H14O=>CH2O+C2H4+C3H6+C4H71-3 1.3475e+05  
 2.000 12800.00

C4H5+NC7H14O=>CH2O+C2H4+C4H71-3+C4H6 6.7500e+04  
 2.000 4500.00

C4H71-4+NC7H14O=>CH2O+C2H4+C4H8-1+C4H71-3 3.3750e+04  
 2.000 6600.00

C4H71-3+NC7H14O=>CH2O+C2H4+C4H8-2+C4H71-3	8.5000e+04
2.000 13700.00	
IC4H7+NC7H14O=>CH2O+C2H4+IC4H8+C4H71-3	6.7500e+04
2.000 13700.00	
C4H3+NC7H14O=>CH2O+C2H4+C4H71-3+C4H4	1.0225e+05
2.000 5200.00	
C6H5+NC7H14O=>CH2O+C2H4+C4H71-3+C6H6	9.2500e+07
1.000 2000.00	
O+NC7H14O=>OH+CH2O+C2H4+C4H71-3	5.8750e+06
2.000 2500.00	
O2+NC7H14O=>HO2+CH2O+C2H4+C4H71-3	4.2500e+06
2.000 44000.00	
OH+NC7H14O=>H2O+CH2O+C2H4+C4H71-3	3.7500e+09
1.000 50.00	
HO2+NC7H14O=>H2O2+CH2O+C2H4+C4H71-3	2.0000e+06
2.000 16000.00	
CH3O+NC7H14O=>CH3OH+CH2O+C2H4+C4H71-3	1.0700e+05
2.000 1500.00	
CH2OH+NC7H14O=>CH3OH+CH2O+C2H4+C4H71-3	7.0750e+04
2.000 10200.00	
HCO+NC7H14O=>2CH2O+C2H4+C4H71-3	3.1500e+05
2.000 12300.00	
CH3CO+NC7H14O=>CH2O+C2H4+CH3CHO+C4H71-3	3.3750e+05
2.000 14000.00	
CH2CHO+NC7H14O=>CH2O+C2H4+CH3CHO+C4H71-3	5.7500e+04
2.000 11500.00	
C3H3+NC7H14O=>CH2O+C2H4+C3H4-A+C4H71-3	6.7500e+04
2.000 14000.00	
HCCO+NC7H14O=>CH2O+C2H4+CH2CO+C4H71-3	1.0700e+05
2.000 5200.00	
CH3O2+NC7H14O=>CH3O2H+CH2O+C2H4+C4H71-3	1.9000e+05
2.000 12600.00	
C2H5O2+NC7H14O=>CH2O+C2H5O2H+C2H4+C4H71-3	1.9000e+05
2.000 12600.00	
NC3H7O2+NC7H14O=>CH2O+C2H4+C4H71-3+C3H7OOH	1.9000e+05
2.000 12600.00	
IC3H7O2+NC7H14O=>CH2O+C2H4+C4H71-3+C3H7OOH	1.9000e+05
2.000 12600.00	

HCO3+NC7H14O=>CH2O+C2H4+C4H71-3+HCO3H	8.5000e+04
2.000            6500.00	
CH3CO3+NC7H14O=>CH2O+C2H4+CH3CO3H+C4H71-3	8.5000e+04
2.000            6500.00	
CH3COCH2+NC7H14O=>CH2O+C2H4+CH3COCH3+C4H71-3	5.7500e+04
2.000            8000.00	
C6H5O+NC7H14O=>CH2O+C2H4+C4H71-3+C6H5OH	6.7500e+04
2.000            12500.00	
C5H7+NC7H14O=>CH2O+C2H4+C4H71-3+LC5H8	6.7500e+04
2.000            15000.00	
C7H7+NC7H14O=>CH2O+C2H4+C4H71-3+C7H8	3.3750e+04
2.000            16000.00	
CH3C6H4+NC7H14O=>CH2O+C2H4+C4H71-3+C7H8	9.2500e+07
1.000            2000.00	
NC7H14O+RCRESOLO=>CH2O+C2H4+C4H71-3+CRESOL	6.7500e+04
2.000            12800.00	
NC7H14O+C10H7=>CH2O+C2H4+C4H71-3+C10H8	9.2500e+07
1.000            2000.00	
NC7H14O+INDENYL=>CH2O+C2H4+C4H71-3+INDENE	3.2500e+04
2.000            16000.00	
NC7H14O+C10H6CH3=>CH2O+C2H4+C4H71-3+C10H7CH3	9.2500e+07
1.000            2000.00	
H+NC7H14O=>H2+0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2	1.0800e+07
2.000            4000.00	
CH3+NC7H14O=>0.4CO+CH4+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2	1.0800e+05
2.000            5000.00	
C2H3+NC7H14O=>0.4CO+0.4C2H5+1.5C2H4+C3H6+0.6CH3COCH2	2.4408e+05
2.000            3900.00	
C2H5+NC7H14O=>0.4CO+C2H6+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2	7.2000e+04
2.000            6700.00	
NC3H7+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+C3H8+C3H6+0.6CH3COCH2	4.8600e+04
2.000            6700.00	
IC3H7+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+C3H8+C3H6+0.6CH3COCH2	4.8600e+04
2.000            9900.00	
C3H5-S+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+2C3H6+0.6CH3COCH2	9.7200e+04
2.000            4500.00	
C3H5-T+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+2C3H6+0.6CH3COCH2	9.7200e+04
2.000            4500.00	

C3H5-A+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+2C3H6+0.6CH3COCH2 1.9404e+05  
2.000 12800.00

C4H5+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2+C4H6 9.7200e+04  
2.000 4500.00

C4H71-4+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2+C4H8-1 4.8600e+04  
2.000 6600.00

C4H71-3+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2+C4H8-2 1.2240e+05  
2.000 13700.00

IC4H7+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2+IC4H8 9.7200e+04  
2.000 13700.00

C4H3+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2+C4H4 1.4724e+05  
2.000 5200.00

C6H5+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2+C6H6 1.3320e+08  
1.000 2000.00

O+NC7H14O=>OH+0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2 8.4600e+06  
2.000 2500.00

O2+NC7H14O=>HO2+0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2 6.1200e+06  
2.000 44000.00

OH+NC7H14O=>H2O+0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2 5.4000e+09  
1.000 50.00

HO2+NC7H14O=>H2O2+0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2 2.8800e+06  
2.000 16000.00

CH3O+NC7H14O=>0.4CO+CH3OH+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2 1.5408e+05  
2.000 1500.00

CH2OH+NC7H14O=>0.4CO+CH3OH+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2 1.0188e+05  
2.000 10200.00

HCO+NC7H14O=>0.4CO+CH2O+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2 4.5360e+05  
2.000 12300.00

CH3CO+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+CH3CHO+C3H6+0.6CH3COCH2 4.8600e+05  
2.000 14000.00

CH2CHO+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+CH3CHO+C3H6+0.6CH3COCH2 8.2800e+04  
2.000 11500.00

C3H3+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+C3H6+C3H4-A+0.6CH3COCH2 9.7200e+04  
2.000 14000.00

HCCO+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+CH2CO+C3H6+0.6CH3COCH2 1.5408e+05  
2.000 5200.00

CH3O2+NC7H14O=>0.4CO+CH3O2H+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2 2.7360e+05  
2.000 12600.00

C2H5O2+NC7H14O=>0.4CO+0.4C2H5+C2H5O2H+0.5C2H4+C3H6+0.6CH3COCH2 2.7360e+05  
2.000 12600.00

NC3H7O2+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2+C3H7OOH  
2.7360e+05 2.000 12600.00

IC3H7O2+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2+C3H7OOH  
2.7360e+05 2.000 12600.00

HCO3+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2+HCO3H 1.2240e+05  
2.000 6500.00

CH3CO3+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+CH3CO3H+C3H6+0.6CH3COCH2 1.2240e+05  
2.000 6500.00

CH3COCH2+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+C3H6+CH3COCH3+0.6CH3COCH2  
8.2800e+04 2.000 8000.00

C6H5O+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2+C6H5OH 9.7200e+04  
2.000 12500.00

C5H7+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2+LC5H8 9.7200e+04  
2.000 15000.00

C7H7+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2+C7H8 4.8600e+04  
2.000 16000.00

CH3C6H4+NC7H14O=>0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2+C7H8 1.3320e+08  
1.000 2000.00

NC7H14O+RCRESOLO=>0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2+CRESOL  
9.7200e+04 2.000 12800.00

NC7H14O+C10H7=>0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2+C10H8 1.3320e+08  
1.000 2000.00

NC7H14O+INDENYL=>0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2+INDENE 4.6800e+04  
2.000 16000.00

NC7H14O+C10H6CH3=>0.4CO+0.4C2H5+0.5C2H4+C3H6+0.6CH3COCH2+C10H7CH3  
1.3320e+08 1.000 2000.00

H+NC7H14O=>H2+0.6CH3CO+0.4CH2CHO+0.6125C4H8-1+0.3NC5H10+0.15NC7H14  
8.1000e+06 2.000 4000.00

CH3+NC7H14O=>CH4+0.6CH3CO+0.4CH2CHO+0.6125C4H8-1+0.3NC5H10+0.15NC7H14  
8.1000e+04 2.000 5000.00

C2H3+NC7H14O=>C2H4+0.6CH3CO+0.4CH2CHO+0.6125C4H8-1+0.3NC5H10+0.15NC7H14  
1.8306e+05 2.000 3900.00

C2H5+NC7H14O=>C2H6+0.6CH3CO+0.4CH2CHO+0.6125C4H8-1+0.3NC5H10+0.15NC7H14  
5.4000e+04 2.000 6700.00

NC3H7+NC7H14O=>0.6CH3CO+0.4CH2CHO+C3H8+0.6125C4H8-1+0.3NC5H10+0.15NC7H14  
3.6450e+04 2.000 6700.00

$\text{IC3H7+NC7H14O} \Rightarrow 0.6\text{CH3CO} + 0.4\text{CH2CHO} + \text{C3H8} + 0.6125\text{C4H8-1} + 0.3\text{NC5H10} + 0.15\text{NC7H14}$   
 $3.6450\text{e}+04 \quad 2.000 \quad 9900.00$

$\text{C3H5-S+NC7H14O} \Rightarrow 0.6\text{CH3CO} + 0.4\text{CH2CHO} + \text{C3H6} + 0.6125\text{C4H8-1} + 0.3\text{NC5H10} + 0.15\text{NC7H14}$   
 $7.2900\text{e}+04 \quad 2.000 \quad 4500.00$

$\text{C3H5-T+NC7H14O} \Rightarrow 0.6\text{CH3CO} + 0.4\text{CH2CHO} + \text{C3H6} + 0.6125\text{C4H8-1} + 0.3\text{NC5H10} + 0.15\text{NC7H14}$   
 $7.2900\text{e}+04 \quad 2.000 \quad 4500.00$

$\text{C3H5-A+NC7H14O} \Rightarrow 0.6\text{CH3CO} + 0.4\text{CH2CHO} + \text{C3H6} + 0.6125\text{C4H8-1} + 0.3\text{NC5H10} + 0.15\text{NC7H14}$   
 $1.4553\text{e}+05 \quad 2.000 \quad 12800.00$

$\text{C4H5+NC7H14O} \Rightarrow 0.6\text{CH3CO} + 0.4\text{CH2CHO} + 0.6125\text{C4H8-1} + \text{C4H6} + 0.3\text{NC5H10} + 0.15\text{NC7H14}$   
 $7.2900\text{e}+04 \quad 2.000 \quad 4500.00$

$\text{C4H71-4+NC7H14O} \Rightarrow 0.6\text{CH3CO} + 0.4\text{CH2CHO} + 1.6125\text{C4H8-1} + 0.3\text{NC5H10} + 0.15\text{NC7H14}$   
 $3.6450\text{e}+04 \quad 2.000 \quad 6600.00$

$\text{C4H71-3+NC7H14O} \Rightarrow 0.6\text{CH3CO} + 0.4\text{CH2CHO} + 0.6125\text{C4H8-1} + \text{C4H8-}$   
 $2 + 0.3\text{NC5H10} + 0.15\text{NC7H14} \quad 9.1800\text{e}+04 \quad 2.000 \quad 13700.00$

$\text{IC4H7+NC7H14O} \Rightarrow 0.6\text{CH3CO} + 0.4\text{CH2CHO} + \text{IC4H8} + 0.6125\text{C4H8-1} + 0.3\text{NC5H10} + 0.15\text{NC7H14}$   
 $7.2900\text{e}+04 \quad 2.000 \quad 13700.00$

$\text{C4H3+NC7H14O} \Rightarrow 0.6\text{CH3CO} + 0.4\text{CH2CHO} + 0.6125\text{C4H8-1} + \text{C4H4} + 0.3\text{NC5H10} + 0.15\text{NC7H14}$   
 $1.1043\text{e}+05 \quad 2.000 \quad 5200.00$

$\text{C6H5+NC7H14O} \Rightarrow 0.6\text{CH3CO} + 0.4\text{CH2CHO} + 0.6125\text{C4H8-1} + \text{C6H6} + 0.3\text{NC5H10} + 0.15\text{NC7H14}$   
 $9.9900\text{e}+07 \quad 1.000 \quad 2000.00$

$\text{O+NC7H14O} \Rightarrow \text{OH} + 0.6\text{CH3CO} + 0.4\text{CH2CHO} + 0.6125\text{C4H8-1} + 0.3\text{NC5H10} + 0.15\text{NC7H14}$   
 $6.3450\text{e}+06 \quad 2.000 \quad 2500.00$

$\text{O2+NC7H14O} \Rightarrow \text{HO2} + 0.6\text{CH3CO} + 0.4\text{CH2CHO} + 0.6125\text{C4H8-1} + 0.3\text{NC5H10} + 0.15\text{NC7H14}$   
 $4.5900\text{e}+06 \quad 2.000 \quad 44000.00$

$\text{OH+NC7H14O} \Rightarrow \text{H2O} + 0.6\text{CH3CO} + 0.4\text{CH2CHO} + 0.6125\text{C4H8-1} + 0.3\text{NC5H10} + 0.15\text{NC7H14}$   
 $4.0500\text{e}+09 \quad 1.000 \quad 50.00$

$\text{HO2+NC7H14O} \Rightarrow \text{H2O2} + 0.6\text{CH3CO} + 0.4\text{CH2CHO} + 0.6125\text{C4H8-1} + 0.3\text{NC5H10} + 0.15\text{NC7H14}$   
 $2.1600\text{e}+06 \quad 2.000 \quad 16000.00$

$\text{CH3O+NC7H14O} \Rightarrow \text{CH3OH} + 0.6\text{CH3CO} + 0.4\text{CH2CHO} + 0.6125\text{C4H8-1} + 0.3\text{NC5H10} + 0.15\text{NC7H14}$   
 $1.1556\text{e}+05 \quad 2.000 \quad 1500.00$

$\text{CH2OH+NC7H14O} \Rightarrow \text{CH3OH} + 0.6\text{CH3CO} + 0.4\text{CH2CHO} + 0.6125\text{C4H8-1} + 0.3\text{NC5H10} + 0.15\text{NC7H14}$   
 $7.6410\text{e}+04 \quad 2.000 \quad 10200.00$

$\text{HCO+NC7H14O} \Rightarrow \text{CH2O} + 0.6\text{CH3CO} + 0.4\text{CH2CHO} + 0.6125\text{C4H8-1} + 0.3\text{NC5H10} + 0.15\text{NC7H14}$   
 $3.4020\text{e}+05 \quad 2.000 \quad 12300.00$

$\text{CH3CO+NC7H14O} \Rightarrow \text{CH3CHO} + 0.6\text{CH3CO} + 0.4\text{CH2CHO} + 0.6125\text{C4H8-}$   
 $1 + 0.3\text{NC5H10} + 0.15\text{NC7H14} \quad 3.6450\text{e}+05 \quad 2.000 \quad 14000.00$

$\text{CH2CHO+NC7H14O} \Rightarrow \text{CH3CHO} + 0.6\text{CH3CO} + 0.4\text{CH2CHO} + 0.6125\text{C4H8-}$   
 $1 + 0.3\text{NC5H10} + 0.15\text{NC7H14} \quad 6.2100\text{e}+04 \quad 2.000 \quad 11500.00$

C3H3+NC7H14O=>0.6CH3CO+0.4CH2CHO+C3H4-A+0.6125C4H8-1+0.3NC5H10+0.15NC7H14  
7.2900e+04 2.000 14000.00

HCCO+NC7H14O=>0.6CH3CO+0.4CH2CHO+CH2CO+0.6125C4H8-1+0.3NC5H10+0.15NC7H14  
1.1556e+05 2.000 5200.00

CH3O2+NC7H14O=>CH3O2H+0.6CH3CO+0.4CH2CHO+0.6125C4H8-  
1+0.3NC5H10+0.15NC7H14 2.0520e+05 2.000 12600.00

C2H5O2+NC7H14O=>C2H5O2H+0.6CH3CO+0.4CH2CHO+0.6125C4H8-  
1+0.3NC5H10+0.15NC7H14 2.0520e+05 2.000 12600.00

NC3H7O2+NC7H14O=>0.6CH3CO+0.4CH2CHO+0.6125C4H8-  
1+C3H7OOH+0.3NC5H10+0.15NC7H14 2.0520e+05 2.000 12600.00

IC3H7O2+NC7H14O=>0.6CH3CO+0.4CH2CHO+0.6125C4H8-  
1+C3H7OOH+0.3NC5H10+0.15NC7H14 2.0520e+05 2.000 12600.00

HCO3+NC7H14O=>0.6CH3CO+0.4CH2CHO+0.6125C4H8-1+HCO3H+0.3NC5H10+0.15NC7H14  
9.1800e+04 2.000 6500.00

CH3CO3+NC7H14O=>0.6CH3CO+0.4CH2CHO+CH3CO3H+0.6125C4H8-  
1+0.3NC5H10+0.15NC7H14 9.1800e+04 2.000 6500.00

CH3COCH2+NC7H14O=>0.6CH3CO+0.4CH2CHO+CH3COCH3+0.6125C4H8-  
1+0.3NC5H10+0.15NC7H14 6.2100e+04 2.000 8000.00

C6H5O+NC7H14O=>0.6CH3CO+0.4CH2CHO+0.6125C4H8-  
1+0.3NC5H10+0.15NC7H14+C6H5OH 7.2900e+04 2.000 12500.00

C5H7+NC7H14O=>0.6CH3CO+0.4CH2CHO+0.6125C4H8-1+0.3NC5H10+LC5H8+0.15NC7H14  
7.2900e+04 2.000 15000.00

C7H7+NC7H14O=>0.6CH3CO+0.4CH2CHO+0.6125C4H8-1+0.3NC5H10+0.15NC7H14+C7H8  
3.6450e+04 2.000 16000.00

CH3C6H4+NC7H14O=>0.6CH3CO+0.4CH2CHO+0.6125C4H8-  
1+0.3NC5H10+0.15NC7H14+C7H8 9.9900e+07 1.000 2000.00

NC7H14O+RCRESOLO=>0.6CH3CO+0.4CH2CHO+0.6125C4H8-  
1+0.3NC5H10+0.15NC7H14+CRESOL 7.2900e+04 2.000 12800.00

NC7H14O+C10H7=>0.6CH3CO+0.4CH2CHO+0.6125C4H8-1+C10H8+0.3NC5H10+0.15NC7H14  
9.9900e+07 1.000 2000.00

NC7H14O+INDENYL=>0.6CH3CO+0.4CH2CHO+0.6125C4H8-  
1+0.3NC5H10+0.15NC7H14+INDENE 3.5100e+04 2.000 16000.00

NC7H14O+C10H6CH3=>0.6CH3CO+0.4CH2CHO+0.6125C4H8-  
1+0.3NC5H10+0.15NC7H14+C10H7CH3 9.9900e+07 1.000 2000.00

H+NC7H14O=>H2+0.7CH3CHO+0.1C3H6+C3H5-A+0.3C2H5CHO+0.35C4H8-1 6.6000e+06  
2.000 4000.00

CH3+NC7H14O=>CH4+0.7CH3CHO+0.1C3H6+C3H5-A+0.3C2H5CHO+0.35C4H8-1  
6.6000e+04 2.000 5000.00



$C_2H_3 + NC_7H_{14}O \Rightarrow C_2H_4 + 0.7CH_3CHO + 0.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 0.35C_4H_8 - 1$   
 1.4916e+05      2.000      3900.00

$C_2H_5 + NC_7H_{14}O \Rightarrow C_2H_6 + 0.7CH_3CHO + 0.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 0.35C_4H_8 - 1$   
 4.4000e+04      2.000      6700.00

$NC_3H_7 + NC_7H_{14}O \Rightarrow 0.7CH_3CHO + C_3H_8 + 0.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 0.35C_4H_8 - 1$   
 2.9700e+04      2.000      6700.00

$IC_3H_7 + NC_7H_{14}O \Rightarrow 0.7CH_3CHO + C_3H_8 + 0.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 0.35C_4H_8 - 1$   
 2.9700e+04      2.000      9900.00

$C_3H_5 - S + NC_7H_{14}O \Rightarrow 0.7CH_3CHO + 1.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 0.35C_4H_8 - 1$  5.9400e+04  
 2.000      4500.00

$C_3H_5 - T + NC_7H_{14}O \Rightarrow 0.7CH_3CHO + 1.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 0.35C_4H_8 - 1$  5.9400e+04  
 2.000      4500.00

$C_3H_5 - A + NC_7H_{14}O \Rightarrow 0.7CH_3CHO + 1.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 0.35C_4H_8 - 1$  1.1858e+05  
 2.000      12800.00

$C_4H_5 + NC_7H_{14}O \Rightarrow 0.7CH_3CHO + 0.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 0.35C_4H_8 - 1 + C_4H_6$   
 5.9400e+04      2.000      4500.00

$C_4H_7 - 4 + NC_7H_{14}O \Rightarrow 0.7CH_3CHO + 0.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 1.35C_4H_8 - 1$   
 2.9700e+04      2.000      6600.00

$C_4H_7 - 3 + NC_7H_{14}O \Rightarrow 0.7CH_3CHO + 0.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 0.35C_4H_8 - 1 + C_4H_8 - 2$   
 7.4800e+04      2.000      13700.00

$IC_4H_7 + NC_7H_{14}O \Rightarrow 0.7CH_3CHO + 0.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + IC_4H_8 + 0.35C_4H_8 - 1$   
 5.9400e+04      2.000      13700.00

$C_4H_3 + NC_7H_{14}O \Rightarrow 0.7CH_3CHO + 0.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 0.35C_4H_8 - 1 + C_4H_4$   
 8.9980e+04      2.000      5200.00

$C_6H_5 + NC_7H_{14}O \Rightarrow 0.7CH_3CHO + 0.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 0.35C_4H_8 - 1 + C_6H_6$   
 8.1400e+07      1.000      2000.00

$O + NC_7H_{14}O \Rightarrow OH + 0.7CH_3CHO + 0.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 0.35C_4H_8 - 1$  5.1700e+06  
 2.000      2500.00

$O_2 + NC_7H_{14}O \Rightarrow HO_2 + 0.7CH_3CHO + 0.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 0.35C_4H_8 - 1$  3.7400e+06  
 2.000      44000.00

$OH + NC_7H_{14}O \Rightarrow H_2O + 0.7CH_3CHO + 0.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 0.35C_4H_8 - 1$  3.3000e+09  
 1.000      50.00

$HO_2 + NC_7H_{14}O \Rightarrow H_2O_2 + 0.7CH_3CHO + 0.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 0.35C_4H_8 - 1$   
 1.7600e+06      2.000      16000.00

$CH_3O + NC_7H_{14}O \Rightarrow CH_3OH + 0.7CH_3CHO + 0.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 0.35C_4H_8 - 1$   
 9.4160e+04      2.000      1500.00

$CH_2OH + NC_7H_{14}O \Rightarrow CH_3OH + 0.7CH_3CHO + 0.1C_3H_6 + C_3H_5 - A + 0.3C_2H_5CHO + 0.35C_4H_8 - 1$   
 6.2260e+04      2.000      10200.00

$\text{HCO} + \text{NC7H14O} \Rightarrow 0.7\text{CH3CHO} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1}$   
 2.7720e+05      2.000      12300.00

$\text{CH3CO} + \text{NC7H14O} \Rightarrow 1.7\text{CH3CHO} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1}$  2.9700e+05  
 2.000      14000.00

$\text{CH2CHO} + \text{NC7H14O} \Rightarrow 1.7\text{CH3CHO} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1}$  5.0600e+04  
 2.000      11500.00

$\text{C3H3} + \text{NC7H14O} \Rightarrow 0.7\text{CH3CHO} + 0.1\text{C3H6} + \text{C3H5-A} + \text{C3H4-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1}$   
 5.9400e+04      2.000      14000.00

$\text{HCCO} + \text{NC7H14O} \Rightarrow 0.7\text{CH3CHO} + \text{CH2CO} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1}$   
 9.4160e+04      2.000      5200.00

$\text{CH3O2} + \text{NC7H14O} \Rightarrow \text{CH3O2H} + 0.7\text{CH3CHO} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1}$   
 1.6720e+05      2.000      12600.00

$\text{C2H5O2} + \text{NC7H14O} \Rightarrow \text{C2H5O2H} + 0.7\text{CH3CHO} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1}$   
 1.6720e+05      2.000      12600.00

$\text{NC3H7O2} + \text{NC7H14O} \Rightarrow 0.7\text{CH3CHO} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1} + \text{C3H7OOH}$   
 1.6720e+05      2.000      12600.00

$\text{IC3H7O2} + \text{NC7H14O} \Rightarrow 0.7\text{CH3CHO} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1} + \text{C3H7OOH}$   
 1.6720e+05      2.000      12600.00

$\text{HCO3} + \text{NC7H14O} \Rightarrow 0.7\text{CH3CHO} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1} + \text{HCO3H}$   
 7.4800e+04      2.000      6500.00

$\text{CH3CO3} + \text{NC7H14O} \Rightarrow 0.7\text{CH3CHO} + \text{CH3CO3H} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1}$   
 7.4800e+04      2.000      6500.00

$\text{CH3COCH2} + \text{NC7H14O} \Rightarrow 0.7\text{CH3CHO} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + \text{CH3COCH3} + 0.35\text{C4H8-1}$   
 5.0600e+04      2.000      8000.00

$\text{C6H5O} + \text{NC7H14O} \Rightarrow 0.7\text{CH3CHO} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1} + \text{C6H5OH}$   
 5.9400e+04      2.000      12500.00

$\text{C5H7} + \text{NC7H14O} \Rightarrow 0.7\text{CH3CHO} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1} + \text{LC5H8}$   
 5.9400e+04      2.000      15000.00

$\text{C7H7} + \text{NC7H14O} \Rightarrow 0.7\text{CH3CHO} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1} + \text{C7H8}$   
 2.9700e+04      2.000      16000.00

$\text{CH3C6H4} + \text{NC7H14O} \Rightarrow 0.7\text{CH3CHO} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1} + \text{C7H8}$   
 8.1400e+07      1.000      2000.00

$\text{NC7H14O} + \text{RCRESOLO} \Rightarrow 0.7\text{CH3CHO} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1} + \text{CRESOL}$   
 5.9400e+04      2.000      12800.00

$\text{NC7H14O} + \text{C10H7} \Rightarrow 0.7\text{CH3CHO} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1} + \text{C10H8}$   
 8.1400e+07      1.000      2000.00

$\text{NC7H14O} + \text{INDENYL} \Rightarrow 0.7\text{CH3CHO} + 0.1\text{C3H6} + \text{C3H5-A} + 0.3\text{C2H5CHO} + 0.35\text{C4H8-1} + \text{INDENE}$   
 2.8600e+04      2.000      16000.00

NC7H14O+C10H6CH3=>0.7CH3CHO+0.1C3H6+C3H5-A+0.3C2H5CHO+0.35C4H8-1+C10H7CH3		
8.1400e+07	1.000	2000.00
H+NC7H14O=>H2+H+C2H5CHO+C4H6		2.1000e+06
2.000	4000.00	
CH3+NC7H14O=>H+CH4+C2H5CHO+C4H6		2.1000e+04
2.000	5000.00	
C2H3+NC7H14O=>H+C2H4+C2H5CHO+C4H6		4.7460e+04
2.000	3900.00	
C2H5+NC7H14O=>H+C2H6+C2H5CHO+C4H6		1.4000e+04
2.000	6700.00	
NC3H7+NC7H14O=>H+C3H8+C2H5CHO+C4H6		9.4500e+03
2.000	6700.00	
IC3H7+NC7H14O=>H+C3H8+C2H5CHO+C4H6		9.4500e+03
2.000	9900.00	
C3H5-S+NC7H14O=>H+C3H6+C2H5CHO+C4H6		1.8900e+04
2.000	4500.00	
C3H5-T+NC7H14O=>H+C3H6+C2H5CHO+C4H6		1.8900e+04
2.000	4500.00	
C3H5-A+NC7H14O=>H+C3H6+C2H5CHO+C4H6		3.7730e+04
2.000	12800.00	
C4H5+NC7H14O=>H+C2H5CHO+2C4H6		1.8900e+04
2.000	4500.00	
C4H71-4+NC7H14O=>H+C2H5CHO+C4H8-1+C4H6		9.4500e+03
2.000	6600.00	
C4H71-3+NC7H14O=>H+C2H5CHO+C4H8-2+C4H6		2.3800e+04
2.000	13700.00	
IC4H7+NC7H14O=>H+C2H5CHO+IC4H8+C4H6		1.8900e+04
2.000	13700.00	
C4H3+NC7H14O=>H+C2H5CHO+C4H6+C4H4		2.8630e+04
2.000	5200.00	
C6H5+NC7H14O=>H+C2H5CHO+C4H6+C6H6		2.5900e+07
1.000	2000.00	
O+NC7H14O=>H+OH+C2H5CHO+C4H6		1.6450e+06
2.000	2500.00	
O2+NC7H14O=>H+HO2+C2H5CHO+C4H6		1.1900e+06
2.000	44000.00	
OH+NC7H14O=>H+H2O+C2H5CHO+C4H6		1.0500e+09
1.000	50.00	

HO2+NC7H14O=>H+H2O2+C2H5CHO+C4H6	5.6000e+05
2.000 16000.00	
CH3O+NC7H14O=>H+CH3OH+C2H5CHO+C4H6	2.9960e+04
2.000 1500.00	
CH2OH+NC7H14O=>H+CH3OH+C2H5CHO+C4H6	1.9810e+04
2.000 10200.00	
HCO+NC7H14O=>H+CH2O+C2H5CHO+C4H6	8.8200e+04
2.000 12300.00	
CH3CO+NC7H14O=>H+CH3CHO+C2H5CHO+C4H6	9.4500e+04
2.000 14000.00	
CH2CHO+NC7H14O=>H+CH3CHO+C2H5CHO+C4H6	1.6100e+04
2.000 11500.00	
C3H3+NC7H14O=>H+C3H4-A+C2H5CHO+C4H6	1.8900e+04
2.000 14000.00	
HCCO+NC7H14O=>H+CH2CO+C2H5CHO+C4H6	2.9960e+04
2.000 5200.00	
CH3O2+NC7H14O=>H+CH3O2H+C2H5CHO+C4H6	5.3200e+04
2.000 12600.00	
C2H5O2+NC7H14O=>H+C2H5O2H+C2H5CHO+C4H6	5.3200e+04
2.000 12600.00	
NC3H7O2+NC7H14O=>H+C2H5CHO+C4H6+C3H7OOH	5.3200e+04
2.000 12600.00	
IC3H7O2+NC7H14O=>H+C2H5CHO+C4H6+C3H7OOH	5.3200e+04
2.000 12600.00	
HCO3+NC7H14O=>H+C2H5CHO+C4H6+HCO3H	2.3800e+04
2.000 6500.00	
CH3CO3+NC7H14O=>H+CH3CO3H+C2H5CHO+C4H6	2.3800e+04
2.000 6500.00	
CH3COCH2+NC7H14O=>H+C2H5CHO+CH3COCH3+C4H6	1.6100e+04
2.000 8000.00	
C6H5O+NC7H14O=>H+C2H5CHO+C4H6+C6H5OH	1.8900e+04
2.000 12500.00	
C5H7+NC7H14O=>H+C2H5CHO+C4H6+LC5H8	1.8900e+04
2.000 15000.00	
C7H7+NC7H14O=>H+C2H5CHO+C4H6+C7H8	9.4500e+03
2.000 16000.00	
CH3C6H4+NC7H14O=>H+C2H5CHO+C4H6+C7H8	2.5900e+07
1.000 2000.00	

NC7H14O+RCRESOLO=>H+C2H5CHO+C4H6+CRESOL 2.000 12800.00	1.8900e+04
NC7H14O+C10H7=>H+C2H5CHO+C4H6+C10H8 1.000 2000.00	2.5900e+07
NC7H14O+INDENYL=>H+C2H5CHO+C4H6+INDENE 2.000 16000.00	9.1000e+03
NC7H14O+C10H6CH3=>H+C2H5CHO+C4H6+C10H7CH3 1.000 2000.00	2.5900e+07
H+NC7H14O=>H2+C2H5+C2H4+C2H3CHO 2.000 4000.00	3.9000e+06
CH3+NC7H14O=>CH4+C2H5+C2H4+C2H3CHO 2.000 5000.00	3.9000e+04
C2H3+NC7H14O=>C2H5+2C2H4+C2H3CHO 2.000 3900.00	8.8140e+04
C2H5+NC7H14O=>C2H6+C2H5+C2H4+C2H3CHO 2.000 6700.00	2.6000e+04
NC3H7+NC7H14O=>C2H5+C2H4+C3H8+C2H3CHO 2.000 6700.00	1.7550e+04
IC3H7+NC7H14O=>C2H5+C2H4+C3H8+C2H3CHO 2.000 9900.00	1.7550e+04
C3H5-S+NC7H14O=>C2H5+C2H4+C3H6+C2H3CHO 2.000 4500.00	3.5100e+04
C3H5-T+NC7H14O=>C2H5+C2H4+C3H6+C2H3CHO 2.000 4500.00	3.5100e+04
C3H5-A+NC7H14O=>C2H5+C2H4+C3H6+C2H3CHO 2.000 12800.00	7.0070e+04
C4H5+NC7H14O=>C2H5+C2H4+C2H3CHO+C4H6 2.000 4500.00	3.5100e+04
C4H71-4+NC7H14O=>C2H5+C2H4+C2H3CHO+C4H8-1 2.000 6600.00	1.7550e+04
C4H71-3+NC7H14O=>C2H5+C2H4+C2H3CHO+C4H8-2 2.000 13700.00	4.4200e+04
IC4H7+NC7H14O=>C2H5+C2H4+C2H3CHO+IC4H8 2.000 13700.00	3.5100e+04
C4H3+NC7H14O=>C2H5+C2H4+C2H3CHO+C4H4 2.000 5200.00	5.3170e+04
C6H5+NC7H14O=>C2H5+C2H4+C2H3CHO+C6H6 1.000 2000.00	4.8100e+07

O+NC7H14O=>OH+C2H5+C2H4+C2H3CHO	3.0550e+06
2.000        2500.00	
O2+NC7H14O=>HO2+C2H5+C2H4+C2H3CHO	2.2100e+06
2.000        44000.00	
OH+NC7H14O=>H2O+C2H5+C2H4+C2H3CHO	1.9500e+09
1.000        50.00	
HO2+NC7H14O=>H2O2+C2H5+C2H4+C2H3CHO	1.0400e+06
2.000        16000.00	
CH3O+NC7H14O=>CH3OH+C2H5+C2H4+C2H3CHO	5.5640e+04
2.000        1500.00	
CH2OH+NC7H14O=>CH3OH+C2H5+C2H4+C2H3CHO	3.6790e+04
2.000        10200.00	
HCO+NC7H14O=>CH2O+C2H5+C2H4+C2H3CHO	1.6380e+05
2.000        12300.00	
CH3CO+NC7H14O=>C2H5+C2H4+CH3CHO+C2H3CHO	1.7550e+05
2.000        14000.00	
CH2CHO+NC7H14O=>C2H5+C2H4+CH3CHO+C2H3CHO	2.9900e+04
2.000        11500.00	
C3H3+NC7H14O=>C2H5+C2H4+C3H4-A+C2H3CHO	3.5100e+04
2.000        14000.00	
HCCO+NC7H14O=>C2H5+C2H4+CH2CO+C2H3CHO	5.5640e+04
2.000        5200.00	
CH3O2+NC7H14O=>CH3O2H+C2H5+C2H4+C2H3CHO	9.8800e+04
2.000        12600.00	
C2H5O2+NC7H14O=>C2H5+C2H5O2H+C2H4+C2H3CHO	9.8800e+04
2.000        12600.00	
NC3H7O2+NC7H14O=>C2H5+C2H4+C2H3CHO+C3H7OOH	9.8800e+04
2.000        12600.00	
IC3H7O2+NC7H14O=>C2H5+C2H4+C2H3CHO+C3H7OOH	9.8800e+04
2.000        12600.00	
HCO3+NC7H14O=>C2H5+C2H4+C2H3CHO+HCO3H	4.4200e+04
2.000        6500.00	
CH3CO3+NC7H14O=>C2H5+C2H4+CH3CO3H+C2H3CHO	4.4200e+04
2.000        6500.00	
CH3COCH2+NC7H14O=>C2H5+C2H4+C2H3CHO+CH3COCH3	2.9900e+04
2.000        8000.00	
C6H5O+NC7H14O=>C2H5+C2H4+C2H3CHO+C6H5OH	3.5100e+04
2.000        12500.00	

C5H7+NC7H14O=>C2H5+C2H4+C2H3CHO+LC5H8	3.5100e+04
2.000 15000.00	
C7H7+NC7H14O=>C2H5+C2H4+C2H3CHO+C7H8	1.7550e+04
2.000 16000.00	
CH3C6H4+NC7H14O=>C2H5+C2H4+C2H3CHO+C7H8	4.8100e+07
1.000 2000.00	
NC7H14O+RCRESOLO=>C2H5+C2H4+C2H3CHO+CRESOL	3.5100e+04
2.000 12800.00	
NC7H14O+C10H7=>C2H5+C2H4+C2H3CHO+C10H8	4.8100e+07
1.000 2000.00	
NC7H14O+INDENYL=>C2H5+C2H4+C2H3CHO+INDENE	1.6900e+04
2.000 16000.00	
NC7H14O+C10H6CH3=>C2H5+C2H4+C2H3CHO+C10H7CH3	4.8100e+07
1.000 2000.00	
H+IC8H16O=>H2+CH3+0.5C3H4-A+0.5C2H3CHO+0.5IC4H8+0.5IC3H7CHO	7.2000e+06
2.000 4000.00	
CH3+IC8H16O=>CH4+CH3+0.5C3H4-A+0.5C2H3CHO+0.5IC4H8+0.5IC3H7CHO	7.2000e+04
2.000 5000.00	
C2H3+IC8H16O=>CH3+C2H4+0.5C3H4-A+0.5C2H3CHO+0.5IC4H8+0.5IC3H7CHO	
1.6272e+05 2.000 3900.00	
C2H5+IC8H16O=>CH3+C2H6+0.5C3H4-A+0.5C2H3CHO+0.5IC4H8+0.5IC3H7CHO	
4.8000e+04 2.000 6700.00	
NC3H7+IC8H16O=>CH3+C3H8+0.5C3H4-A+0.5C2H3CHO+0.5IC4H8+0.5IC3H7CHO	
3.2400e+04 2.000 6700.00	
IC3H7+IC8H16O=>CH3+C3H8+0.5C3H4-A+0.5C2H3CHO+0.5IC4H8+0.5IC3H7CHO	
3.2400e+04 2.000 9900.00	
C3H5-S+IC8H16O=>CH3+C3H6+0.5C3H4-A+0.5C2H3CHO+0.5IC4H8+0.5IC3H7CHO	
6.4800e+04 2.000 4500.00	
C3H5-T+IC8H16O=>CH3+C3H6+0.5C3H4-A+0.5C2H3CHO+0.5IC4H8+0.5IC3H7CHO	
6.4800e+04 2.000 4500.00	
C3H5-A+IC8H16O=>CH3+C3H6+0.5C3H4-A+0.5C2H3CHO+0.5IC4H8+0.5IC3H7CHO	
1.2936e+05 2.000 12800.00	
C4H5+IC8H16O=>CH3+0.5C3H4-A+0.5C2H3CHO+0.5IC4H8+C4H6+0.5IC3H7CHO	
6.4800e+04 2.000 4500.00	
C4H71-4+IC8H16O=>CH3+0.5C3H4-A+0.5C2H3CHO+0.5IC4H8+C4H8-1+0.5IC3H7CHO	
3.2400e+04 2.000 6600.00	
C4H71-3+IC8H16O=>CH3+0.5C3H4-A+0.5C2H3CHO+0.5IC4H8+C4H8-2+0.5IC3H7CHO	
8.1600e+04 2.000 13700.00	

$\text{IC4H7} + \text{IC8H16O} \Rightarrow \text{CH3} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 1.5\text{IC4H8} + 0.5\text{IC3H7CHO}$  6.4800e+04  
 2.000 13700.00

$\text{C4H3} + \text{IC8H16O} \Rightarrow \text{CH3} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + \text{C4H4} + 0.5\text{IC3H7CHO}$   
 9.8160e+04 2.000 5200.00

$\text{C6H5} + \text{IC8H16O} \Rightarrow \text{CH3} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + \text{C6H6} + 0.5\text{IC3H7CHO}$   
 8.8800e+07 1.000 2000.00

$\text{O} + \text{IC8H16O} \Rightarrow \text{OH} + \text{CH3} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + 0.5\text{IC3H7CHO}$  5.6400e+06  
 2.000 2500.00

$\text{O2} + \text{IC8H16O} \Rightarrow \text{HO2} + \text{CH3} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + 0.5\text{IC3H7CHO}$  4.0800e+06  
 2.000 44000.00

$\text{OH} + \text{IC8H16O} \Rightarrow \text{H2O} + \text{CH3} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + 0.5\text{IC3H7CHO}$  3.6000e+09  
 1.000 50.00

$\text{HO2} + \text{IC8H16O} \Rightarrow \text{H2O2} + \text{CH3} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + 0.5\text{IC3H7CHO}$   
 1.9200e+06 2.000 16000.00

$\text{CH3O} + \text{IC8H16O} \Rightarrow \text{CH3} + \text{CH3OH} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + 0.5\text{IC3H7CHO}$   
 1.0272e+05 2.000 1500.00

$\text{CH2OH} + \text{IC8H16O} \Rightarrow \text{CH3} + \text{CH3OH} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + 0.5\text{IC3H7CHO}$   
 6.7920e+04 2.000 10200.00

$\text{HCO} + \text{IC8H16O} \Rightarrow \text{CH3} + \text{CH2O} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + 0.5\text{IC3H7CHO}$   
 3.0240e+05 2.000 12300.00

$\text{CH3CO} + \text{IC8H16O} \Rightarrow \text{CH3} + \text{CH3CHO} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + 0.5\text{IC3H7CHO}$   
 3.2400e+05 2.000 14000.00

$\text{CH2CHO} + \text{IC8H16O} \Rightarrow \text{CH3} + \text{CH3CHO} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + 0.5\text{IC3H7CHO}$   
 5.5200e+04 2.000 11500.00

$\text{C3H3} + \text{IC8H16O} \Rightarrow \text{CH3} + 1.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + 0.5\text{IC3H7CHO}$  6.4800e+04  
 2.000 14000.00

$\text{HCCO} + \text{IC8H16O} \Rightarrow \text{CH3} + \text{CH2CO} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + 0.5\text{IC3H7CHO}$   
 1.0272e+05 2.000 5200.00

$\text{CH3O2} + \text{IC8H16O} \Rightarrow \text{CH3} + \text{CH3O2H} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + 0.5\text{IC3H7CHO}$   
 1.8240e+05 2.000 12600.00

$\text{C2H5O2} + \text{IC8H16O} \Rightarrow \text{CH3} + \text{C2H5O2H} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + 0.5\text{IC3H7CHO}$   
 1.8240e+05 2.000 12600.00

$\text{NC3H7O2} + \text{IC8H16O} \Rightarrow \text{CH3} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + \text{C3H7OOH} + 0.5\text{IC3H7CHO}$   
 1.8240e+05 2.000 12600.00

$\text{IC3H7O2} + \text{IC8H16O} \Rightarrow \text{CH3} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + \text{C3H7OOH} + 0.5\text{IC3H7CHO}$   
 1.8240e+05 2.000 12600.00

$\text{HCO3} + \text{IC8H16O} \Rightarrow \text{CH3} + 0.5\text{C3H4-A} + 0.5\text{C2H3CHO} + 0.5\text{IC4H8} + \text{HCO3H} + 0.5\text{IC3H7CHO}$   
 8.1600e+04 2.000 6500.00



$\text{CH}_3\text{CO}_3 + \text{IC}_8\text{H}_{16} \Rightarrow \text{CH}_3 + \text{CH}_3\text{CO}_3\text{H} + 0.5\text{C}_3\text{H}_4\text{-A} + 0.5\text{C}_2\text{H}_3\text{CHO} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_3\text{H}_7\text{CHO}$   
 8.1600e+04      2.000      6500.00

$\text{CH}_3\text{COCH}_2 + \text{IC}_8\text{H}_{16} \Rightarrow \text{CH}_3 + 0.5\text{C}_3\text{H}_4\text{-A} + 0.5\text{C}_2\text{H}_3\text{CHO} + \text{CH}_3\text{COCH}_3 + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_3\text{H}_7\text{CHO}$   
 5.5200e+04      2.000      8000.00

$\text{C}_6\text{H}_5\text{O} + \text{IC}_8\text{H}_{16} \Rightarrow \text{CH}_3 + 0.5\text{C}_3\text{H}_4\text{-A} + 0.5\text{C}_2\text{H}_3\text{CHO} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_3\text{H}_7\text{CHO} + \text{C}_6\text{H}_5\text{OH}$   
 6.4800e+04      2.000      12500.00

$\text{C}_5\text{H}_7 + \text{IC}_8\text{H}_{16} \Rightarrow \text{CH}_3 + 0.5\text{C}_3\text{H}_4\text{-A} + 0.5\text{C}_2\text{H}_3\text{CHO} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_3\text{H}_7\text{CHO} + \text{LC}_5\text{H}_8$   
 6.4800e+04      2.000      15000.00

$\text{C}_7\text{H}_7 + \text{IC}_8\text{H}_{16} \Rightarrow \text{CH}_3 + 0.5\text{C}_3\text{H}_4\text{-A} + 0.5\text{C}_2\text{H}_3\text{CHO} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_3\text{H}_7\text{CHO} + \text{C}_7\text{H}_8$   
 3.2400e+04      2.000      16000.00

$\text{CH}_3\text{C}_6\text{H}_4 + \text{IC}_8\text{H}_{16} \Rightarrow \text{CH}_3 + 0.5\text{C}_3\text{H}_4\text{-A} + 0.5\text{C}_2\text{H}_3\text{CHO} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_3\text{H}_7\text{CHO} + \text{C}_7\text{H}_8$   
 8.8800e+07      1.000      2000.00

$\text{IC}_8\text{H}_{16} + \text{RCRESOLO} \Rightarrow \text{CH}_3 + 0.5\text{C}_3\text{H}_4\text{-A} + 0.5\text{C}_2\text{H}_3\text{CHO} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_3\text{H}_7\text{CHO} + \text{CRESOL}$   
 6.4800e+04      2.000      12800.00

$\text{IC}_8\text{H}_{16} + \text{C}_{10}\text{H}_7 \Rightarrow \text{CH}_3 + 0.5\text{C}_3\text{H}_4\text{-A} + 0.5\text{C}_2\text{H}_3\text{CHO} + 0.5\text{IC}_4\text{H}_8 + \text{C}_{10}\text{H}_8 + 0.5\text{IC}_3\text{H}_7\text{CHO}$   
 8.8800e+07      1.000      2000.00

$\text{IC}_8\text{H}_{16} + \text{INDENYL} \Rightarrow \text{CH}_3 + 0.5\text{C}_3\text{H}_4\text{-A} + 0.5\text{C}_2\text{H}_3\text{CHO} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_3\text{H}_7\text{CHO} + \text{INDENE}$   
 3.1200e+04      2.000      16000.00

$\text{IC}_8\text{H}_{16} + \text{C}_{10}\text{H}_6\text{CH}_3 \Rightarrow \text{CH}_3 + 0.5\text{C}_3\text{H}_4\text{-A} + 0.5\text{C}_2\text{H}_3\text{CHO} + 0.5\text{IC}_4\text{H}_8 + 0.5\text{IC}_3\text{H}_7\text{CHO} + \text{C}_{10}\text{H}_7\text{CH}_3$   
 8.8800e+07      1.000      2000.00

$\text{H} + \text{IC}_8\text{H}_{16} \Rightarrow \text{H}_2 + \text{H} + \text{IC}_4\text{H}_8 + \text{IC}_3\text{H}_5\text{CHO}$       4.8000e+06  
 2.000      4000.00

$\text{CH}_3 + \text{IC}_8\text{H}_{16} \Rightarrow \text{H} + \text{CH}_4 + \text{IC}_4\text{H}_8 + \text{IC}_3\text{H}_5\text{CHO}$       4.8000e+04  
 2.000      5000.00

$\text{C}_2\text{H}_3 + \text{IC}_8\text{H}_{16} \Rightarrow \text{H} + \text{C}_2\text{H}_4 + \text{IC}_4\text{H}_8 + \text{IC}_3\text{H}_5\text{CHO}$       1.0848e+05  
 2.000      3900.00

$\text{C}_2\text{H}_5 + \text{IC}_8\text{H}_{16} \Rightarrow \text{H} + \text{C}_2\text{H}_6 + \text{IC}_4\text{H}_8 + \text{IC}_3\text{H}_5\text{CHO}$       3.2000e+04  
 2.000      6700.00

$\text{NC}_3\text{H}_7 + \text{IC}_8\text{H}_{16} \Rightarrow \text{H} + \text{C}_3\text{H}_8 + \text{IC}_4\text{H}_8 + \text{IC}_3\text{H}_5\text{CHO}$       2.1600e+04  
 2.000      6700.00

$\text{IC}_3\text{H}_7 + \text{IC}_8\text{H}_{16} \Rightarrow \text{H} + \text{C}_3\text{H}_8 + \text{IC}_4\text{H}_8 + \text{IC}_3\text{H}_5\text{CHO}$       2.1600e+04  
 2.000      9900.00

$\text{C}_3\text{H}_5\text{-S} + \text{IC}_8\text{H}_{16} \Rightarrow \text{H} + \text{C}_3\text{H}_6 + \text{IC}_4\text{H}_8 + \text{IC}_3\text{H}_5\text{CHO}$       4.3200e+04  
 2.000      4500.00

$\text{C}_3\text{H}_5\text{-T} + \text{IC}_8\text{H}_{16} \Rightarrow \text{H} + \text{C}_3\text{H}_6 + \text{IC}_4\text{H}_8 + \text{IC}_3\text{H}_5\text{CHO}$       4.3200e+04  
 2.000      4500.00

$\text{C}_3\text{H}_5\text{-A} + \text{IC}_8\text{H}_{16} \Rightarrow \text{H} + \text{C}_3\text{H}_6 + \text{IC}_4\text{H}_8 + \text{IC}_3\text{H}_5\text{CHO}$       8.6240e+04  
 2.000      12800.00

C4H5+IC8H16O=>H+IC4H8+C4H6+IC3H5CHO	4.3200e+04
2.000 4500.00	
C4H71-4+IC8H16O=>H+IC4H8+C4H8-1+IC3H5CHO	2.1600e+04
2.000 6600.00	
C4H71-3+IC8H16O=>H+IC4H8+C4H8-2+IC3H5CHO	5.4400e+04
2.000 13700.00	
IC4H7+IC8H16O=>H+2IC4H8+IC3H5CHO	4.3200e+04
2.000 13700.00	
C4H3+IC8H16O=>H+IC4H8+C4H4+IC3H5CHO	6.5440e+04
2.000 5200.00	
C6H5+IC8H16O=>H+IC4H8+C6H6+IC3H5CHO	5.9200e+07
1.000 2000.00	
O+IC8H16O=>H+OH+IC4H8+IC3H5CHO	3.7600e+06
2.000 2500.00	
O2+IC8H16O=>H+HO2+IC4H8+IC3H5CHO	2.7200e+06
2.000 44000.00	
OH+IC8H16O=>H+H2O+IC4H8+IC3H5CHO	2.4000e+09
1.000 50.00	
HO2+IC8H16O=>H+H2O2+IC4H8+IC3H5CHO	1.2800e+06
2.000 16000.00	
CH3O+IC8H16O=>H+CH3OH+IC4H8+IC3H5CHO	6.8480e+04
2.000 1500.00	
CH2OH+IC8H16O=>H+CH3OH+IC4H8+IC3H5CHO	4.5280e+04
2.000 10200.00	
HCO+IC8H16O=>H+CH2O+IC4H8+IC3H5CHO	2.0160e+05
2.000 12300.00	
CH3CO+IC8H16O=>H+CH3CHO+IC4H8+IC3H5CHO	2.1600e+05
2.000 14000.00	
CH2CHO+IC8H16O=>H+CH3CHO+IC4H8+IC3H5CHO	3.6800e+04
2.000 11500.00	
C3H3+IC8H16O=>H+C3H4-A+IC4H8+IC3H5CHO	4.3200e+04
2.000 14000.00	
HCCO+IC8H16O=>H+CH2CO+IC4H8+IC3H5CHO	6.8480e+04
2.000 5200.00	
CH3O2+IC8H16O=>H+CH3O2H+IC4H8+IC3H5CHO	1.2160e+05
2.000 12600.00	
C2H5O2+IC8H16O=>H+C2H5O2H+IC4H8+IC3H5CHO	1.2160e+05
2.000 12600.00	

NC3H7O2+IC8H16O=>H+IC4H8+C3H7OOH+IC3H5CHO 2.000        12600.00	1.2160e+05
IC3H7O2+IC8H16O=>H+IC4H8+C3H7OOH+IC3H5CHO 2.000        12600.00	1.2160e+05
HCO3+IC8H16O=>H+IC4H8+HCO3H+IC3H5CHO 2.000        6500.00	5.4400e+04
CH3CO3+IC8H16O=>H+CH3CO3H+IC4H8+IC3H5CHO 2.000        6500.00	5.4400e+04
CH3COCH2+IC8H16O=>H+CH3COCH3+IC4H8+IC3H5CHO 2.000        8000.00	3.6800e+04
C6H5O+IC8H16O=>H+IC4H8+IC3H5CHO+C6H5OH 2.000        12500.00	4.3200e+04
C5H7+IC8H16O=>H+IC4H8+IC3H5CHO+LC5H8 2.000        15000.00	4.3200e+04
C7H7+IC8H16O=>H+IC4H8+IC3H5CHO+C7H8 2.000        16000.00	2.1600e+04
CH3C6H4+IC8H16O=>H+IC4H8+IC3H5CHO+C7H8 1.000        2000.00	5.9200e+07
IC8H16O+RCRESOLO=>H+IC4H8+IC3H5CHO+CRE SOL 2.000        12800.00	4.3200e+04
IC8H16O+C10H7=>H+IC4H8+C10H8+IC3H5CHO 1.000        2000.00	5.9200e+07
IC8H16O+INDENYL=>H+IC4H8+IC3H5CHO+INDENE 2.000        16000.00	2.0800e+04
IC8H16O+C10H6CH3=>H+IC4H8+IC3H5CHO+C10H7CH3 1.000        2000.00	5.9200e+07
H+IC8H16O=>H2+CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7 2.000        4000.00	1.2000e+07
CH3+IC8H16O=>CH4+CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7 2.000        5000.00	1.2000e+05
C2H3+IC8H16O=>CH2O+C2H4+0.8C3H5-S+0.95IC4H8+0.2IC4H7 2.000        3900.00	2.7120e+05
C2H5+IC8H16O=>CH2O+C2H6+0.8C3H5-S+0.95IC4H8+0.2IC4H7 2.000        6700.00	8.0000e+04
NC3H7+IC8H16O=>CH2O+C3H8+0.8C3H5-S+0.95IC4H8+0.2IC4H7 2.000        6700.00	5.4000e+04
IC3H7+IC8H16O=>CH2O+C3H8+0.8C3H5-S+0.95IC4H8+0.2IC4H7 2.000        9900.00	5.4000e+04

C3H5-S+IC8H16O=>CH2O+C3H6+0.8C3H5-S+0.95IC4H8+0.2IC4H7	1.0800e+05
2.000 4500.00	
C3H5-T+IC8H16O=>CH2O+C3H6+0.8C3H5-S+0.95IC4H8+0.2IC4H7	1.0800e+05
2.000 4500.00	
C3H5-A+IC8H16O=>CH2O+C3H6+0.8C3H5-S+0.95IC4H8+0.2IC4H7	2.1560e+05
2.000 12800.00	
C4H5+IC8H16O=>CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7+C4H6	1.0800e+05
2.000 4500.00	
C4H71-4+IC8H16O=>CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7+C4H8-1	5.4000e+04
2.000 6600.00	
C4H71-3+IC8H16O=>CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7+C4H8-2	1.3600e+05
2.000 13700.00	
IC4H7+IC8H16O=>CH2O+0.8C3H5-S+1.95IC4H8+0.2IC4H7	1.0800e+05
2.000 13700.00	
C4H3+IC8H16O=>CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7+C4H4	1.6360e+05
2.000 5200.00	
C6H5+IC8H16O=>CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7+C6H6	1.4800e+08
1.000 2000.00	
O+IC8H16O=>OH+CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7	9.4000e+06
2.000 2500.00	
O2+IC8H16O=>HO2+CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7	6.8000e+06
2.000 44000.00	
OH+IC8H16O=>H2O+CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7	6.0000e+09
1.000 50.00	
HO2+IC8H16O=>H2O2+CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7	3.2000e+06
2.000 16000.00	
CH3O+IC8H16O=>CH3OH+CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7	1.7120e+05
2.000 1500.00	
CH2OH+IC8H16O=>CH3OH+CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7	1.1320e+05
2.000 10200.00	
HCO+IC8H16O=>2CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7	5.0400e+05
2.000 12300.00	
CH3CO+IC8H16O=>CH2O+CH3CHO+0.8C3H5-S+0.95IC4H8+0.2IC4H7	5.4000e+05
2.000 14000.00	
CH2CHO+IC8H16O=>CH2O+CH3CHO+0.8C3H5-S+0.95IC4H8+0.2IC4H7	9.2000e+04
2.000 11500.00	
C3H3+IC8H16O=>CH2O+0.8C3H5-S+C3H4-A+0.95IC4H8+0.2IC4H7	1.0800e+05
2.000 14000.00	

HCCO+IC8H16O=>CH2O+CH2CO+0.8C3H5-S+0.95IC4H8+0.2IC4H7 1.7120e+05  
2.000 5200.00

CH3O2+IC8H16O=>CH3O2H+CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7 3.0400e+05  
2.000 12600.00

C2H5O2+IC8H16O=>CH2O+C2H5O2H+0.8C3H5-S+0.95IC4H8+0.2IC4H7 3.0400e+05  
2.000 12600.00

NC3H7O2+IC8H16O=>CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7+C3H7OOH 3.0400e+05  
2.000 12600.00

IC3H7O2+IC8H16O=>CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7+C3H7OOH 3.0400e+05  
2.000 12600.00

HCO3+IC8H16O=>CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7+HCO3H 1.3600e+05  
2.000 6500.00

CH3CO3+IC8H16O=>CH2O+CH3CO3H+0.8C3H5-S+0.95IC4H8+0.2IC4H7 1.3600e+05  
2.000 6500.00

CH3COCH2+IC8H16O=>CH2O+0.8C3H5-S+CH3COCH3+0.95IC4H8+0.2IC4H7 9.2000e+04  
2.000 8000.00

C6H5O+IC8H16O=>CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7+C6H5OH 1.0800e+05  
2.000 12500.00

C5H7+IC8H16O=>CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7+LC5H8 1.0800e+05  
2.000 15000.00

C7H7+IC8H16O=>CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7+C7H8 5.4000e+04  
2.000 16000.00

CH3C6H4+IC8H16O=>CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7+C7H8 1.4800e+08  
1.000 2000.00

IC8H16O+RCRESOLO=>CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7+CRE SOL 1.0800e+05  
2.000 12800.00

IC8H16O+C10H7=>CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7+C10H8 1.4800e+08  
1.000 2000.00

IC8H16O+INDENYL=>CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7+INDENE 5.2000e+04  
2.000 16000.00

IC8H16O+C10H6CH3=>CH2O+0.8C3H5-S+0.95IC4H8+0.2IC4H7+C10H7CH3 1.4800e+08  
1.000 2000.00

H+C5H9CHO=>H2+0.5CO+0.5C2H4+0.5CH2CHO+0.5C3H5-A+0.5C4H6 3.6000e+07  
2.000 4000.00

CH3+C5H9CHO=>0.5CO+CH4+0.5C2H4+0.5CH2CHO+0.5C3H5-A+0.5C4H6 3.6000e+05  
2.000 5000.00

C2H3+C5H9CHO=>0.5CO+1.5C2H4+0.5CH2CHO+0.5C3H5-A+0.5C4H6 8.1360e+05  
2.000 3900.00

C2H5+C5H9CHO=>0.5CO+C2H6+0.5C2H4+0.5CH2CHO+0.5C3H5-A+0.5C4H6 2.4000e+05  
2.000 6700.00

NC3H7+C5H9CHO=>0.5CO+0.5C2H4+0.5CH2CHO+C3H8+0.5C3H5-A+0.5C4H6 1.6200e+05  
2.000 6700.00

IC3H7+C5H9CHO=>0.5CO+0.5C2H4+0.5CH2CHO+C3H8+0.5C3H5-A+0.5C4H6 1.6200e+05  
2.000 9900.00

C3H5-S+C5H9CHO=>0.5CO+0.5C2H4+0.5CH2CHO+C3H6+0.5C3H5-A+0.5C4H6 3.2400e+05  
2.000 4500.00

C3H5-T+C5H9CHO=>0.5CO+0.5C2H4+0.5CH2CHO+C3H6+0.5C3H5-A+0.5C4H6 3.2400e+05  
2.000 4500.00

C3H5-A+C5H9CHO=>0.5CO+0.5C2H4+0.5CH2CHO+C3H6+0.5C3H5-A+0.5C4H6 6.4680e+05  
2.000 12800.00

C4H5+C5H9CHO=>0.5CO+0.5C2H4+0.5CH2CHO+0.5C3H5-A+1.5C4H6 3.2400e+05  
2.000 4500.00

C4H71-4+C5H9CHO=>0.5CO+0.5C2H4+0.5CH2CHO+0.5C3H5-A+C4H8-1+0.5C4H6  
1.6200e+05 2.000 6600.00

C4H71-3+C5H9CHO=>0.5CO+0.5C2H4+0.5CH2CHO+0.5C3H5-A+C4H8-2+0.5C4H6  
4.0800e+05 2.000 13700.00

IC4H7+C5H9CHO=>0.5CO+0.5C2H4+0.5CH2CHO+0.5C3H5-A+IC4H8+0.5C4H6 3.2400e+05  
2.000 13700.00

C4H3+C5H9CHO=>0.5CO+0.5C2H4+0.5CH2CHO+0.5C3H5-A+0.5C4H6+C4H4 4.9080e+05  
2.000 5200.00

C6H5+C5H9CHO=>0.5CO+0.5C2H4+0.5CH2CHO+0.5C3H5-A+0.5C4H6+C6H6 4.4400e+08  
1.000 2000.00

O+C5H9CHO=>OH+0.5CO+0.5C2H4+0.5CH2CHO+0.5C3H5-A+0.5C4H6 2.8200e+07  
2.000 2500.00

O2+C5H9CHO=>HO2+0.5CO+0.5C2H4+0.5CH2CHO+0.5C3H5-A+0.5C4H6 2.0400e+07  
2.000 44000.00

OH+C5H9CHO=>H2O+0.5CO+0.5C2H4+0.5CH2CHO+0.5C3H5-A+0.5C4H6 1.8000e+10  
1.000 50.00

HO2+C5H9CHO=>H2O2+0.5CO+0.5C2H4+0.5CH2CHO+0.5C3H5-A+0.5C4H6 9.6000e+06  
2.000 16000.00

CH3O+C5H9CHO=>0.5CO+CH3OH+0.5C2H4+0.5CH2CHO+0.5C3H5-A+0.5C4H6 5.1360e+05  
2.000 1500.00

CH2OH+C5H9CHO=>0.5CO+CH3OH+0.5C2H4+0.5CH2CHO+0.5C3H5-A+0.5C4H6 3.3960e+05  
2.000 10200.00

HCO+C5H9CHO=>0.5CO+CH2O+0.5C2H4+0.5CH2CHO+0.5C3H5-A+0.5C4H6 1.5120e+06  
2.000 12300.00



$H+C_5H_9CHO \Rightarrow H_2 + 0.5HCO + 0.5C_3H_5-A + 0.5C_2H_3CHO + 0.5LC_5H_8$  9.0000e+06  
 2.000 4000.00

$CH_3+C_5H_9CHO \Rightarrow CH_4 + 0.5HCO + 0.5C_3H_5-A + 0.5C_2H_3CHO + 0.5LC_5H_8$  9.0000e+04  
 2.000 5000.00

$C_2H_3+C_5H_9CHO \Rightarrow 0.5HCO + C_2H_4 + 0.5C_3H_5-A + 0.5C_2H_3CHO + 0.5LC_5H_8$  2.0340e+05  
 2.000 3900.00

$C_2H_5+C_5H_9CHO \Rightarrow 0.5HCO + C_2H_6 + 0.5C_3H_5-A + 0.5C_2H_3CHO + 0.5LC_5H_8$  6.0000e+04  
 2.000 6700.00

$NC_3H_7+C_5H_9CHO \Rightarrow 0.5HCO + C_3H_8 + 0.5C_3H_5-A + 0.5C_2H_3CHO + 0.5LC_5H_8$  4.0500e+04  
 2.000 6700.00

$IC_3H_7+C_5H_9CHO \Rightarrow 0.5HCO + C_3H_8 + 0.5C_3H_5-A + 0.5C_2H_3CHO + 0.5LC_5H_8$  4.0500e+04  
 2.000 9900.00

$C_3H_5-S+C_5H_9CHO \Rightarrow 0.5HCO + C_3H_6 + 0.5C_3H_5-A + 0.5C_2H_3CHO + 0.5LC_5H_8$  8.1000e+04  
 2.000 4500.00

$C_3H_5-T+C_5H_9CHO \Rightarrow 0.5HCO + C_3H_6 + 0.5C_3H_5-A + 0.5C_2H_3CHO + 0.5LC_5H_8$  8.1000e+04  
 2.000 4500.00

$C_3H_5-A+C_5H_9CHO \Rightarrow 0.5HCO + C_3H_6 + 0.5C_3H_5-A + 0.5C_2H_3CHO + 0.5LC_5H_8$  1.6170e+05  
 2.000 12800.00

$C_4H_5+C_5H_9CHO \Rightarrow 0.5HCO + 0.5C_3H_5-A + 0.5C_2H_3CHO + C_4H_6 + 0.5LC_5H_8$  8.1000e+04  
 2.000 4500.00

$C_4H_7-1+C_5H_9CHO \Rightarrow 0.5HCO + 0.5C_3H_5-A + 0.5C_2H_3CHO + C_4H_8-1 + 0.5LC_5H_8$  4.0500e+04  
 2.000 6600.00

$C_4H_7-3+C_5H_9CHO \Rightarrow 0.5HCO + 0.5C_3H_5-A + 0.5C_2H_3CHO + C_4H_8-2 + 0.5LC_5H_8$  1.0200e+05  
 2.000 13700.00

$IC_4H_7+C_5H_9CHO \Rightarrow 0.5HCO + 0.5C_3H_5-A + 0.5C_2H_3CHO + IC_4H_8 + 0.5LC_5H_8$  8.1000e+04  
 2.000 13700.00

$C_4H_3+C_5H_9CHO \Rightarrow 0.5HCO + 0.5C_3H_5-A + 0.5C_2H_3CHO + C_4H_4 + 0.5LC_5H_8$  1.2270e+05  
 2.000 5200.00

$C_6H_5+C_5H_9CHO \Rightarrow 0.5HCO + 0.5C_3H_5-A + 0.5C_2H_3CHO + C_6H_6 + 0.5LC_5H_8$  1.1100e+08  
 1.000 2000.00

$O+C_5H_9CHO \Rightarrow OH + 0.5HCO + 0.5C_3H_5-A + 0.5C_2H_3CHO + 0.5LC_5H_8$  7.0500e+06  
 2.000 2500.00

$O_2+C_5H_9CHO \Rightarrow HO_2 + 0.5HCO + 0.5C_3H_5-A + 0.5C_2H_3CHO + 0.5LC_5H_8$  5.1000e+06  
 2.000 44000.00

$OH+C_5H_9CHO \Rightarrow H_2O + 0.5HCO + 0.5C_3H_5-A + 0.5C_2H_3CHO + 0.5LC_5H_8$  4.5000e+09  
 1.000 50.00

$HO_2+C_5H_9CHO \Rightarrow H_2O_2 + 0.5HCO + 0.5C_3H_5-A + 0.5C_2H_3CHO + 0.5LC_5H_8$  2.4000e+06  
 2.000 16000.00



$\text{CH}_3\text{O}+\text{C}_5\text{H}_9\text{CHO} \Rightarrow \text{CH}_3\text{OH}+0.5\text{HCO}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+0.5\text{LC}_5\text{H}_8$  1.2840e+05  
 2.000 1500.00

$\text{CH}_2\text{OH}+\text{C}_5\text{H}_9\text{CHO} \Rightarrow \text{CH}_3\text{OH}+0.5\text{HCO}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+0.5\text{LC}_5\text{H}_8$  8.4900e+04  
 2.000 10200.00

$\text{HCO}+\text{C}_5\text{H}_9\text{CHO} \Rightarrow \text{CH}_2\text{O}+0.5\text{HCO}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+0.5\text{LC}_5\text{H}_8$  3.7800e+05  
 2.000 12300.00

$\text{CH}_3\text{CO}+\text{C}_5\text{H}_9\text{CHO} \Rightarrow 0.5\text{HCO}+\text{CH}_3\text{CHO}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+0.5\text{LC}_5\text{H}_8$  4.0500e+05  
 2.000 14000.00

$\text{CH}_2\text{CHO}+\text{C}_5\text{H}_9\text{CHO} \Rightarrow 0.5\text{HCO}+\text{CH}_3\text{CHO}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+0.5\text{LC}_5\text{H}_8$  6.9000e+04  
 2.000 11500.00

$\text{C}_3\text{H}_3+\text{C}_5\text{H}_9\text{CHO} \Rightarrow 0.5\text{HCO}+0.5\text{C}_3\text{H}_5\text{-A}+\text{C}_3\text{H}_4\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+0.5\text{LC}_5\text{H}_8$  8.1000e+04  
 2.000 14000.00

$\text{HCCO}+\text{C}_5\text{H}_9\text{CHO} \Rightarrow 0.5\text{HCO}+\text{CH}_2\text{CO}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+0.5\text{LC}_5\text{H}_8$  1.2840e+05  
 2.000 5200.00

$\text{CH}_3\text{O}_2+\text{C}_5\text{H}_9\text{CHO} \Rightarrow \text{CH}_3\text{O}_2\text{H}+0.5\text{HCO}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+0.5\text{LC}_5\text{H}_8$  2.2800e+05  
 2.000 12600.00

$\text{C}_2\text{H}_5\text{O}_2+\text{C}_5\text{H}_9\text{CHO} \Rightarrow 0.5\text{HCO}+\text{C}_2\text{H}_5\text{O}_2\text{H}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+0.5\text{LC}_5\text{H}_8$  2.2800e+05  
 2.000 12600.00

$\text{NC}_3\text{H}_7\text{O}_2+\text{C}_5\text{H}_9\text{CHO} \Rightarrow 0.5\text{HCO}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+\text{C}_3\text{H}_7\text{OOH}+0.5\text{LC}_5\text{H}_8$  2.2800e+05  
 2.000 12600.00

$\text{IC}_3\text{H}_7\text{O}_2+\text{C}_5\text{H}_9\text{CHO} \Rightarrow 0.5\text{HCO}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+\text{C}_3\text{H}_7\text{OOH}+0.5\text{LC}_5\text{H}_8$  2.2800e+05  
 2.000 12600.00

$\text{HCO}_3+\text{C}_5\text{H}_9\text{CHO} \Rightarrow 0.5\text{HCO}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+\text{HCO}_3\text{H}+0.5\text{LC}_5\text{H}_8$  1.0200e+05  
 2.000 6500.00

$\text{CH}_3\text{CO}_3+\text{C}_5\text{H}_9\text{CHO} \Rightarrow 0.5\text{HCO}+\text{CH}_3\text{CO}_3\text{H}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+0.5\text{LC}_5\text{H}_8$  1.0200e+05  
 2.000 6500.00

$\text{CH}_3\text{COCH}_2+\text{C}_5\text{H}_9\text{CHO} \Rightarrow 0.5\text{HCO}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+\text{CH}_3\text{COCH}_3+0.5\text{LC}_5\text{H}_8$   
 6.9000e+04 2.000 8000.00

$\text{C}_6\text{H}_5\text{O}+\text{C}_5\text{H}_9\text{CHO} \Rightarrow 0.5\text{HCO}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+0.5\text{LC}_5\text{H}_8+\text{C}_6\text{H}_5\text{OH}$  8.1000e+04  
 2.000 12500.00

$\text{C}_5\text{H}_7+\text{C}_5\text{H}_9\text{CHO} \Rightarrow 0.5\text{HCO}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+1.5\text{LC}_5\text{H}_8$  8.1000e+04  
 2.000 15000.00

$\text{C}_7\text{H}_7+\text{C}_5\text{H}_9\text{CHO} \Rightarrow 0.5\text{HCO}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+0.5\text{LC}_5\text{H}_8+\text{C}_7\text{H}_8$  4.0500e+04  
 2.000 16000.00

$\text{CH}_3\text{C}_6\text{H}_4+\text{C}_5\text{H}_9\text{CHO} \Rightarrow 0.5\text{HCO}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+0.5\text{LC}_5\text{H}_8+\text{C}_7\text{H}_8$  1.1100e+08  
 1.000 2000.00

$\text{C}_5\text{H}_9\text{CHO}+\text{RCRESOLO} \Rightarrow 0.5\text{HCO}+0.5\text{C}_3\text{H}_5\text{-A}+0.5\text{C}_2\text{H}_3\text{CHO}+0.5\text{LC}_5\text{H}_8+\text{CRESOL}$  8.1000e+04  
 2.000 12800.00

C5H9CHO+C10H7=>0.5HCO+0.5C3H5-A+0.5C2H3CHO+C10H8+0.5LC5H8	1.1100e+08
1.000 2000.00	
C5H9CHO+INDENYL=>0.5HCO+0.5C3H5-A+0.5C2H3CHO+0.5LC5H8+INDENE	3.9000e+04
2.000 16000.00	
C5H9CHO+C10H6CH3=>0.5HCO+0.5C3H5-A+0.5C2H3CHO+0.5LC5H8+C10H7CH3	
1.1100e+08 1.000 2000.00	
H+CYC6H10-ONE=>H2+H+CO+CYC5H8	3.0000e+07
2.000 4000.00	
CH3+CYC6H10-ONE=>H+CO+CH4+CYC5H8	3.0000e+05
2.000 5000.00	
C2H3+CYC6H10-ONE=>H+CO+C2H4+CYC5H8	6.7800e+05
2.000 3900.00	
C2H5+CYC6H10-ONE=>H+CO+C2H6+CYC5H8	2.0000e+05
2.000 6700.00	
NC3H7+CYC6H10-ONE=>H+CO+C3H8+CYC5H8	1.3500e+05
2.000 6700.00	
IC3H7+CYC6H10-ONE=>H+CO+C3H8+CYC5H8	1.3500e+05
2.000 9900.00	
C3H5-S+CYC6H10-ONE=>H+CO+C3H6+CYC5H8	2.7000e+05
2.000 4500.00	
C3H5-T+CYC6H10-ONE=>H+CO+C3H6+CYC5H8	2.7000e+05
2.000 4500.00	
C3H5-A+CYC6H10-ONE=>H+CO+C3H6+CYC5H8	5.3900e+05
2.000 12800.00	
C4H5+CYC6H10-ONE=>H+CO+C4H6+CYC5H8	2.7000e+05
2.000 4500.00	
C4H71-4+CYC6H10-ONE=>H+CO+C4H8-1+CYC5H8	1.3500e+05
2.000 6600.00	
C4H71-3+CYC6H10-ONE=>H+CO+C4H8-2+CYC5H8	3.4000e+05
2.000 13700.00	
IC4H7+CYC6H10-ONE=>H+CO+IC4H8+CYC5H8	2.7000e+05
2.000 13700.00	
C4H3+CYC6H10-ONE=>H+CO+C4H4+CYC5H8	4.0900e+05
2.000 5200.00	
C6H5+CYC6H10-ONE=>H+CO+C6H6+CYC5H8	3.7000e+08
1.000 2000.00	
O+CYC6H10-ONE=>H+OH+CO+CYC5H8	2.3500e+07
2.000 2500.00	

O2+CYC6H10-ONE=>H+HO2+CO+CYC5H8 2.000        44000.00	1.7000e+07
OH+CYC6H10-ONE=>H+H2O+CO+CYC5H8 1.000        50.00	1.5000e+10
HO2+CYC6H10-ONE=>H+H2O2+CO+CYC5H8 2.000        16000.00	8.0000e+06
CH3O+CYC6H10-ONE=>H+CO+CH3OH+CYC5H8 2.000        1500.00	4.2800e+05
CH2OH+CYC6H10-ONE=>H+CO+CH3OH+CYC5H8 2.000        10200.00	2.8300e+05
HCO+CYC6H10-ONE=>H+CO+CH2O+CYC5H8 2.000        12300.00	1.2600e+06
CH3CO+CYC6H10-ONE=>H+CO+CH3CHO+CYC5H8 2.000        14000.00	1.3500e+06
CH2CHO+CYC6H10-ONE=>H+CO+CH3CHO+CYC5H8 2.000        11500.00	2.3000e+05
C3H3+CYC6H10-ONE=>H+CO+C3H4-A+CYC5H8 2.000        14000.00	2.7000e+05
HCCO+CYC6H10-ONE=>H+CO+CH2CO+CYC5H8 2.000        5200.00	4.2800e+05
CH3O2+CYC6H10-ONE=>H+CO+CH3O2H+CYC5H8 2.000        12600.00	7.6000e+05
C2H5O2+CYC6H10-ONE=>H+CO+C2H5O2H+CYC5H8 2.000        12600.00	7.6000e+05
NC3H7O2+CYC6H10-ONE=>H+CO+C3H7OOH+CYC5H8 2.000        12600.00	7.6000e+05
IC3H7O2+CYC6H10-ONE=>H+CO+C3H7OOH+CYC5H8 2.000        12600.00	7.6000e+05
HCO3+CYC6H10-ONE=>H+CO+HCO3H+CYC5H8 2.000        6500.00	3.4000e+05
CH3CO3+CYC6H10-ONE=>H+CO+CH3CO3H+CYC5H8 2.000        6500.00	3.4000e+05
CH3COCH2+CYC6H10-ONE=>H+CO+CH3COCH3+CYC5H8 2.000        8000.00	2.3000e+05
C6H5O+CYC6H10-ONE=>H+CO+CYC5H8+C6H5OH 2.000        12500.00	2.7000e+05
C5H7+CYC6H10-ONE=>H+CO+CYC5H8+LC5H8 2.000        15000.00	2.7000e+05

C7H7+CYC6H10-ONE=>H+CO+CYC5H8+C7H8 2.000      16000.00	1.3500e+05
CH3C6H4+CYC6H10-ONE=>H+CO+CYC5H8+C7H8 1.000      2000.00	3.7000e+08
CYC6H10-ONE+RCRESOLO=>H+CO+CYC5H8+CRESOL 2.000      12800.00	2.7000e+05
CYC6H10-ONE+C10H7=>H+CO+C10H8+CYC5H8 1.000      2000.00	3.7000e+08
CYC6H10-ONE+INDENYL=>H+CO+CYC5H8+INDENE 2.000      16000.00	1.3000e+05
CYC6H10-ONE+C10H6CH3=>H+CO+CYC5H8+C10H7CH3 1.000      2000.00	3.7000e+08
H+CYC6H10-O-12=>H2+C3H5-A+C2H3CHO 2.000      4000.00	1.2000e+07
CH3+CYC6H10-O-12=>CH4+C3H5-A+C2H3CHO 2.000      5000.00	1.2000e+05
C2H3+CYC6H10-O-12=>C2H4+C3H5-A+C2H3CHO 2.000      3900.00	2.7120e+05
C2H5+CYC6H10-O-12=>C2H6+C3H5-A+C2H3CHO 2.000      6700.00	8.0000e+04
NC3H7+CYC6H10-O-12=>C3H8+C3H5-A+C2H3CHO 2.000      6700.00	5.4000e+04
IC3H7+CYC6H10-O-12=>C3H8+C3H5-A+C2H3CHO 2.000      9900.00	5.4000e+04
C3H5-S+CYC6H10-O-12=>C3H6+C3H5-A+C2H3CHO 2.000      4500.00	1.0800e+05
C3H5-T+CYC6H10-O-12=>C3H6+C3H5-A+C2H3CHO 2.000      4500.00	1.0800e+05
C3H5-A+CYC6H10-O-12=>C3H6+C3H5-A+C2H3CHO 2.000      12800.00	2.1560e+05
C4H5+CYC6H10-O-12=>C3H5-A+C2H3CHO+C4H6 2.000      4500.00	1.0800e+05
C4H71-4+CYC6H10-O-12=>C3H5-A+C2H3CHO+C4H8-1 2.000      6600.00	5.4000e+04
C4H71-3+CYC6H10-O-12=>C3H5-A+C2H3CHO+C4H8-2 2.000      13700.00	1.3600e+05
IC4H7+CYC6H10-O-12=>C3H5-A+C2H3CHO+IC4H8 2.000      13700.00	1.0800e+05

C4H3+CYC6H10-O-12=>C3H5-A+C2H3CHO+C4H4	1.6360e+05
2.000        5200.00	
C6H5+CYC6H10-O-12=>C3H5-A+C2H3CHO+C6H6	1.4800e+08
1.000        2000.00	
O+CYC6H10-O-12=>OH+C3H5-A+C2H3CHO	9.4000e+06
2.000        2500.00	
O2+CYC6H10-O-12=>HO2+C3H5-A+C2H3CHO	6.8000e+06
2.000        44000.00	
OH+CYC6H10-O-12=>H2O+C3H5-A+C2H3CHO	6.0000e+09
1.000        50.00	
HO2+CYC6H10-O-12=>H2O2+C3H5-A+C2H3CHO	3.2000e+06
2.000        16000.00	
CH3O+CYC6H10-O-12=>CH3OH+C3H5-A+C2H3CHO	1.7120e+05
2.000        1500.00	
CH2OH+CYC6H10-O-12=>CH3OH+C3H5-A+C2H3CHO	1.1320e+05
2.000        10200.00	
HCO+CYC6H10-O-12=>CH2O+C3H5-A+C2H3CHO	5.0400e+05
2.000        12300.00	
CH3CO+CYC6H10-O-12=>CH3CHO+C3H5-A+C2H3CHO	5.4000e+05
2.000        14000.00	
CH2CHO+CYC6H10-O-12=>CH3CHO+C3H5-A+C2H3CHO	9.2000e+04
2.000        11500.00	
C3H3+CYC6H10-O-12=>C3H5-A+C3H4-A+C2H3CHO	1.0800e+05
2.000        14000.00	
HCCO+CYC6H10-O-12=>CH2CO+C3H5-A+C2H3CHO	1.7120e+05
2.000        5200.00	
CH3O2+CYC6H10-O-12=>CH3O2H+C3H5-A+C2H3CHO	3.0400e+05
2.000        12600.00	
C2H5O2+CYC6H10-O-12=>C2H5O2H+C3H5-A+C2H3CHO	3.0400e+05
2.000        12600.00	
NC3H7O2+CYC6H10-O-12=>C3H5-A+C2H3CHO+C3H7OOH	3.0400e+05
2.000        12600.00	
IC3H7O2+CYC6H10-O-12=>C3H5-A+C2H3CHO+C3H7OOH	3.0400e+05
2.000        12600.00	
HCO3+CYC6H10-O-12=>C3H5-A+C2H3CHO+HCO3H	1.3600e+05
2.000        6500.00	
CH3CO3+CYC6H10-O-12=>CH3CO3H+C3H5-A+C2H3CHO	1.3600e+05
2.000        6500.00	

CH3COCH2+CYC6H10-O-12=>C3H5-A+C2H3CHO+CH3COCH3	9.2000e+04
2.000            8000.00	
C6H5O+CYC6H10-O-12=>C3H5-A+C2H3CHO+C6H5OH	1.0800e+05
2.000            12500.00	
C5H7+CYC6H10-O-12=>C3H5-A+C2H3CHO+LC5H8	1.0800e+05
2.000            15000.00	
C7H7+CYC6H10-O-12=>C3H5-A+C2H3CHO+C7H8	5.4000e+04
2.000            16000.00	
CH3C6H4+CYC6H10-O-12=>C3H5-A+C2H3CHO+C7H8	1.4800e+08
1.000            2000.00	
CYC6H10-O-12+RCRESOLO=>C3H5-A+C2H3CHO+CRESOL	1.0800e+05
2.000            12800.00	
CYC6H10-O-12+C10H7=>C3H5-A+C2H3CHO+C10H8	1.4800e+08
1.000            2000.00	
CYC6H10-O-12+INDENYL=>C3H5-A+C2H3CHO+INDENE	5.2000e+04
2.000            16000.00	
CYC6H10-O-12+C10H6CH3=>C3H5-A+C2H3CHO+C10H7CH3	1.4800e+08
1.000            2000.00	
H+CYC6H10-O-12=>H2+0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A	3.0000e+07
2.000            4000.00	
CH3+CYC6H10-O-12=>0.5CO+CH4+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A	3.0000e+05
2.000            5000.00	
C2H3+CYC6H10-O-12=>0.5CO+0.5HCO+2C2H4+0.5C3H5-S+0.5C3H4-A	6.7800e+05
2.000            3900.00	
C2H5+CYC6H10-O-12=>0.5CO+0.5HCO+C2H6+C2H4+0.5C3H5-S+0.5C3H4-A	2.0000e+05
2.000            6700.00	
NC3H7+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+C3H8+0.5C3H5-S+0.5C3H4-A	1.3500e+05
2.000            6700.00	
IC3H7+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+C3H8+0.5C3H5-S+0.5C3H4-A	1.3500e+05
2.000            9900.00	
C3H5-S+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+C3H6+0.5C3H5-S+0.5C3H4-A	
2.7000e+05    2.000            4500.00	
C3H5-T+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+C3H6+0.5C3H5-S+0.5C3H4-A	
2.7000e+05    2.000            4500.00	
C3H5-A+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+C3H6+0.5C3H5-S+0.5C3H4-A	
5.3900e+05    2.000            12800.00	
C4H5+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+C4H6	2.7000e+05
2.000            4500.00	

C4H71-4+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+C4H8-1  
1.3500e+05 2.000 6600.00

C4H71-3+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+C4H8-2  
3.4000e+05 2.000 13700.00

IC4H7+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+IC4H8  
2.7000e+05 2.000 13700.00

C4H3+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+C4H4 4.0900e+05  
2.000 5200.00

C6H5+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+C6H6 3.7000e+08  
1.000 2000.00

O+CYC6H10-O-12=>OH+0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A 2.3500e+07  
2.000 2500.00

O2+CYC6H10-O-12=>HO2+0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A 1.7000e+07  
2.000 44000.00

OH+CYC6H10-O-12=>H2O+0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A 1.5000e+10  
1.000 50.00

HO2+CYC6H10-O-12=>H2O2+0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A 8.0000e+06  
2.000 16000.00

CH3O+CYC6H10-O-12=>0.5CO+CH3OH+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A 4.2800e+05  
2.000 1500.00

CH2OH+CYC6H10-O-12=>0.5CO+CH3OH+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A  
2.8300e+05 2.000 10200.00

HCO+CYC6H10-O-12=>0.5CO+CH2O+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A 1.2600e+06  
2.000 12300.00

CH3CO+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+CH3CHO+0.5C3H5-S+0.5C3H4-A  
1.3500e+06 2.000 14000.00

CH2CHO+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+CH3CHO+0.5C3H5-S+0.5C3H4-A  
2.3000e+05 2.000 11500.00

C3H3+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+1.5C3H4-A 2.7000e+05  
2.000 14000.00

HCCO+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+CH2CO+0.5C3H5-S+0.5C3H4-A 4.2800e+05  
2.000 5200.00

CH3O2+CYC6H10-O-12=>0.5CO+CH3O2H+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A  
7.6000e+05 2.000 12600.00

C2H5O2+CYC6H10-O-12=>0.5CO+0.5HCO+C2H5O2H+C2H4+0.5C3H5-S+0.5C3H4-A  
7.6000e+05 2.000 12600.00

NC3H7O2+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+C3H7OOH  
7.6000e+05 2.000 12600.00

IC3H7O2+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+C3H7OOH  
7.6000e+05 2.000 12600.00

HCO3+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+HCO3H 3.4000e+05  
2.000 6500.00

CH3CO3+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+CH3CO3H+0.5C3H5-S+0.5C3H4-A  
3.4000e+05 2.000 6500.00

CH3COCH2+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+CH3COCH3  
2.3000e+05 2.000 8000.00

C6H5O+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+C6H5OH  
2.7000e+05 2.000 12500.00

C5H7+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+LC5H8 2.7000e+05  
2.000 15000.00

C7H7+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+C7H8 1.3500e+05  
2.000 16000.00

CH3C6H4+CYC6H10-O-12=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+C7H8  
3.7000e+08 1.000 2000.00

CYC6H10-O-12+RCRESOLO=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+CRESOL  
2.7000e+05 2.000 12800.00

CYC6H10-O-12+C10H7=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+C10H8  
3.7000e+08 1.000 2000.00

CYC6H10-O-12+INDENYL=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+INDENE  
1.3000e+05 2.000 16000.00

CYC6H10-O-12+C10H6CH3=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+C10H7CH3  
3.7000e+08 1.000 2000.00

H+CYC6H10-O-13=>H2+CH2CO+C4H71-4 6.0000e+06  
2.000 2825.33

CH3+CYC6H10-O-13=>CH4+CH2CO+C4H71-4 6.0000e+04  
2.000 3778.15

C2H3+CYC6H10-O-13=>C2H4+CH2CO+C4H71-4 1.3560e+05  
2.000 2730.26

C2H5+CYC6H10-O-13=>C2H6+CH2CO+C4H71-4 4.0000e+04  
2.000 5405.42

NC3H7+CYC6H10-O-13=>CH2CO+C3H8+C4H71-4 2.7000e+04  
2.000 5405.42

IC3H7+CYC6H10-O-13=>CH2CO+C3H8+C4H71-4 2.7000e+04  
2.000 8487.19

C3H5-S+CYC6H10-O-13=>CH2CO+C3H6+C4H71-4 5.4000e+04  
2.000 3301.28



C3H5-T+CYC6H10-O-13=>CH2CO+C3H6+C4H71-4 2.000            3301.28	5.4000e+04
C3H5-A+CYC6H10-O-13=>CH2CO+C3H6+C4H71-4 2.000            11294.92	1.0780e+05
C4H5+CYC6H10-O-13=>CH2CO+C4H71-4+C4H6 2.000            3301.28	5.4000e+04
C4H71-4+CYC6H10-O-13=>CH2CO+C4H8-1+C4H71-4 2.000            5309.47	2.7000e+04
C4H71-3+CYC6H10-O-13=>CH2CO+C4H8-2+C4H71-4 2.000            12168.47	6.8000e+04
IC4H7+CYC6H10-O-13=>CH2CO+IC4H8+C4H71-4 2.000            12168.47	5.4000e+04
C4H3+CYC6H10-O-13=>CH2CO+C4H71-4+C4H4 2.000            3969.14	8.1800e+04
C6H5+CYC6H10-O-13=>CH2CO+C4H71-4+C6H6 1.000            1067.64	7.4000e+07
O+CYC6H10-O-13=>OH+CH2CO+C4H71-4 2.000            1404.15	4.7000e+06
O2+CYC6H10-O-13=>HO2+CH2CO+C4H71-4 2.000            41863.68	3.4000e+06
OH+CYC6H10-O-13=>H2O+CH2CO+C4H71-4 1.000            -695.37	3.0000e+09
HO2+CYC6H10-O-13=>H2O2+CH2CO+C4H71-4 2.000            14404.74	1.6000e+06
CH3O+CYC6H10-O-13=>CH3OH+CH2CO+C4H71-4 2.000            463.75	8.5600e+04
CH2OH+CYC6H10-O-13=>CH3OH+CH2CO+C4H71-4 2.000            8777.08	5.6600e+04
HCO+CYC6H10-O-13=>CH2O+CH2CO+C4H71-4 2.000            10810.03	2.5200e+05
CH3CO+CYC6H10-O-13=>CH3CHO+CH2CO+C4H71-4 2.000            12459.86	2.7000e+05
CH2CHO+CYC6H10-O-13=>CH3CHO+CH2CO+C4H71-4 2.000            10034.85	4.6000e+04
C3H3+CYC6H10-O-13=>CH2CO+C3H4-A+C4H71-4 2.000            12459.86	5.4000e+04
HCCO+CYC6H10-O-13=>2CH2CO+C4H71-4 2.000            3969.14	8.5600e+04

CH3O2+CYC6H10-O-13=>CH3O2H+CH2CO+C4H71-4	1.5200e+05
2.000 11100.93	
C2H5O2+CYC6H10-O-13=>C2H5O2H+CH2CO+C4H71-4	1.5200e+05
2.000 11100.93	
NC3H7O2+CYC6H10-O-13=>CH2CO+C4H71-4+C3H7OOH	1.5200e+05
2.000 11100.93	
IC3H7O2+CYC6H10-O-13=>CH2CO+C4H71-4+C3H7OOH	1.5200e+05
2.000 11100.93	
HCO3+CYC6H10-O-13=>CH2CO+C4H71-4+HCO3H	6.8000e+04
2.000 5213.56	
CH3CO3+CYC6H10-O-13=>CH2CO+CH3CO3H+C4H71-4	6.8000e+04
2.000 5213.56	
CH3COCH2+CYC6H10-O-13=>CH2CO+CH3COCH3+C4H71-4	4.6000e+04
2.000 6654.87	
C6H5O+CYC6H10-O-13=>CH2CO+C4H71-4+C6H5OH	5.4000e+04
2.000 11003.95	
C5H7+CYC6H10-O-13=>CH2CO+C4H71-4+LC5H8	5.4000e+04
2.000 13431.81	
C7H7+CYC6H10-O-13=>CH2CO+C4H71-4+C7H8	2.7000e+04
2.000 14404.74	
CH3C6H4+CYC6H10-O-13=>CH2CO+C4H71-4+C7H8	7.4000e+07
1.000 1067.64	
CYC6H10-O-13+RCRESOLO=>CH2CO+C4H71-4+CRESOL	5.4000e+04
2.000 11294.92	
CYC6H10-O-13+C10H7=>CH2CO+C4H71-4+C10H8	7.4000e+07
1.000 1067.64	
CYC6H10-O-13+INDENYL=>CH2CO+C4H71-4+INDENE	2.6000e+04
2.000 14404.74	
CYC6H10-O-13+C10H6CH3=>CH2CO+C4H71-4+C10H7CH3	7.4000e+07
1.000 1067.64	
H+CYC6H10-O-13=>H2+0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A	6.0000e+06
2.000 4000.00	
CH3+CYC6H10-O-13=>0.5CO+CH4+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A	6.0000e+04
2.000 5000.00	
C2H3+CYC6H10-O-13=>0.5CO+0.5HCO+2C2H4+0.5C3H5-S+0.5C3H4-A	1.3560e+05
2.000 3900.00	
C2H5+CYC6H10-O-13=>0.5CO+0.5HCO+C2H6+C2H4+0.5C3H5-S+0.5C3H4-A	4.0000e+04
2.000 6700.00	

NC3H7+CYC6H10-O-13=>0.5CO+0.5HCO+C2H4+C3H8+0.5C3H5-S+0.5C3H4-A 2.7000e+04  
2.000 6700.00

IC3H7+CYC6H10-O-13=>0.5CO+0.5HCO+C2H4+C3H8+0.5C3H5-S+0.5C3H4-A 2.7000e+04  
2.000 9900.00

C3H5-S+CYC6H10-O-13=>0.5CO+0.5HCO+C2H4+C3H6+0.5C3H5-S+0.5C3H4-A  
5.4000e+04 2.000 4500.00

C3H5-T+CYC6H10-O-13=>0.5CO+0.5HCO+C2H4+C3H6+0.5C3H5-S+0.5C3H4-A  
5.4000e+04 2.000 4500.00

C3H5-A+CYC6H10-O-13=>0.5CO+0.5HCO+C2H4+C3H6+0.5C3H5-S+0.5C3H4-A  
1.0780e+05 2.000 12800.00

C4H5+CYC6H10-O-13=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+C4H6 5.4000e+04  
2.000 4500.00

C4H71-4+CYC6H10-O-13=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+C4H8-1  
2.7000e+04 2.000 6600.00

C4H71-3+CYC6H10-O-13=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+C4H8-2  
6.8000e+04 2.000 13700.00

IC4H7+CYC6H10-O-13=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+IC4H8  
5.4000e+04 2.000 13700.00

C4H3+CYC6H10-O-13=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+C4H4 8.1800e+04  
2.000 5200.00

C6H5+CYC6H10-O-13=>0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A+C6H6 7.4000e+07  
1.000 2000.00

O+CYC6H10-O-13=>OH+0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A 4.7000e+06  
2.000 2500.00

O2+CYC6H10-O-13=>HO2+0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A 3.4000e+06  
2.000 44000.00

OH+CYC6H10-O-13=>H2O+0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A 3.0000e+09  
1.000 50.00

HO2+CYC6H10-O-13=>H2O2+0.5CO+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A 1.6000e+06  
2.000 16000.00

CH3O+CYC6H10-O-13=>0.5CO+CH3OH+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A 8.5600e+04  
2.000 1500.00

CH2OH+CYC6H10-O-13=>0.5CO+CH3OH+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A  
5.6600e+04 2.000 10200.00

HCO+CYC6H10-O-13=>0.5CO+CH2O+0.5HCO+C2H4+0.5C3H5-S+0.5C3H4-A 2.5200e+05  
2.000 12300.00

CH3CO+CYC6H10-O-13=>0.5CO+0.5HCO+C2H4+CH3CHO+0.5C3H5-S+0.5C3H4-A  
2.7000e+05 2.000 14000.00

$\text{CH}_2\text{CHO} + \text{CYC6H10-O-13} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_4 + \text{CH}_3\text{CHO} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A}$   
 4.6000e+04      2.000      11500.00

$\text{C}_3\text{H}_3 + \text{CYC6H10-O-13} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_4 + 0.5\text{C}_3\text{H}_5\text{-S} + 1.5\text{C}_3\text{H}_4\text{-A}$  5.4000e+04  
 2.000      14000.00

$\text{HCCO} + \text{CYC6H10-O-13} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_4 + \text{CH}_2\text{CO} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A}$  8.5600e+04  
 2.000      5200.00

$\text{CH}_3\text{O}_2 + \text{CYC6H10-O-13} \Rightarrow 0.5\text{CO} + \text{CH}_3\text{O}_2\text{H} + 0.5\text{HCO} + \text{C}_2\text{H}_4 + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A}$   
 1.5200e+05      2.000      12600.00

$\text{C}_2\text{H}_5\text{O}_2 + \text{CYC6H10-O-13} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_5\text{O}_2\text{H} + \text{C}_2\text{H}_4 + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A}$   
 1.5200e+05      2.000      12600.00

$\text{NC}_3\text{H}_7\text{O}_2 + \text{CYC6H10-O-13} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_4 + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{C}_3\text{H}_7\text{OOH}$   
 1.5200e+05      2.000      12600.00

$\text{IC}_3\text{H}_7\text{O}_2 + \text{CYC6H10-O-13} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_4 + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{C}_3\text{H}_7\text{OOH}$   
 1.5200e+05      2.000      12600.00

$\text{HCO}_3 + \text{CYC6H10-O-13} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_4 + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{HCO}_3\text{H}$  6.8000e+04  
 2.000      6500.00

$\text{CH}_3\text{CO}_3 + \text{CYC6H10-O-13} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_4 + \text{CH}_3\text{CO}_3\text{H} + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A}$   
 6.8000e+04      2.000      6500.00

$\text{CH}_3\text{COCH}_2 + \text{CYC6H10-O-13} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_4 + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{CH}_3\text{COCH}_3$   
 4.6000e+04      2.000      8000.00

$\text{C}_6\text{H}_5\text{O} + \text{CYC6H10-O-13} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_4 + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{C}_6\text{H}_5\text{OH}$   
 5.4000e+04      2.000      12500.00

$\text{C}_5\text{H}_7 + \text{CYC6H10-O-13} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_4 + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{LC}_5\text{H}_8$  5.4000e+04  
 2.000      15000.00

$\text{C}_7\text{H}_7 + \text{CYC6H10-O-13} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_4 + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{C}_7\text{H}_8$  2.7000e+04  
 2.000      16000.00

$\text{CH}_3\text{C}_6\text{H}_4 + \text{CYC6H10-O-13} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_4 + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{C}_7\text{H}_8$   
 7.4000e+07      1.000      2000.00

$\text{CYC6H10-O-13} + \text{RCRESOLO} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_4 + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{CRESOL}$   
 5.4000e+04      2.000      12800.00

$\text{CYC6H10-O-13} + \text{C}_{10}\text{H}_7 \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_4 + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{C}_{10}\text{H}_8$   
 7.4000e+07      1.000      2000.00

$\text{CYC6H10-O-13} + \text{INDENYL} \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_4 + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{INDENE}$   
 2.6000e+04      2.000      16000.00

$\text{CYC6H10-O-13} + \text{C}_{10}\text{H}_6\text{CH}_3 \Rightarrow 0.5\text{CO} + 0.5\text{HCO} + \text{C}_2\text{H}_4 + 0.5\text{C}_3\text{H}_5\text{-S} + 0.5\text{C}_3\text{H}_4\text{-A} + \text{C}_{10}\text{H}_7\text{CH}_3$   
 7.4000e+07      1.000      2000.00

$\text{H} + \text{CYC6H10-O-13} \Rightarrow \text{H}_2 + 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC}_5\text{H}_8$  1.8000e+07  
 2.000      4000.00

$\text{CH}_3 + \text{CYC6H10-O-13} \Rightarrow \text{CH}_4 + 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC5H}_8$  1.8000e+05  
 2.000 5000.00

$\text{C}_2\text{H}_3 + \text{CYC6H10-O-13} \Rightarrow 0.33\text{HCO} + \text{C}_2\text{H}_4 + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC5H}_8$  4.0680e+05  
 2.000 3900.00

$\text{C}_2\text{H}_5 + \text{CYC6H10-O-13} \Rightarrow 0.33\text{HCO} + \text{C}_2\text{H}_6 + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC5H}_8$  1.2000e+05  
 2.000 6700.00

$\text{NC}_3\text{H}_7 + \text{CYC6H10-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + \text{C}_3\text{H}_8 + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC5H}_8$  8.1000e+04  
 2.000 6700.00

$\text{IC}_3\text{H}_7 + \text{CYC6H10-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + \text{C}_3\text{H}_8 + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC5H}_8$  8.1000e+04  
 2.000 9900.00

$\text{C}_3\text{H}_5\text{-S} + \text{CYC6H10-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + \text{C}_3\text{H}_6 + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC5H}_8$   
 1.6200e+05 2.000 4500.00

$\text{C}_3\text{H}_5\text{-T} + \text{CYC6H10-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + \text{C}_3\text{H}_6 + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC5H}_8$   
 1.6200e+05 2.000 4500.00

$\text{C}_3\text{H}_5\text{-A} + \text{CYC6H10-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + \text{C}_3\text{H}_6 + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC5H}_8$   
 3.2340e+05 2.000 12800.00

$\text{C}_4\text{H}_5 + \text{CYC6H10-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 1.67\text{C}_4\text{H}_6 + 0.33\text{LC5H}_8$  1.6200e+05  
 2.000 4500.00

$\text{C}_4\text{H}_7\text{1-4} + \text{CYC6H10-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + \text{C}_4\text{H}_8\text{-1} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC5H}_8$   
 8.1000e+04 2.000 6600.00

$\text{C}_4\text{H}_7\text{1-3} + \text{CYC6H10-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + \text{C}_4\text{H}_8\text{-2} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC5H}_8$   
 2.0400e+05 2.000 13700.00

$\text{IC}_4\text{H}_7 + \text{CYC6H10-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + \text{IC}_4\text{H}_8 + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC5H}_8$   
 1.6200e+05 2.000 13700.00

$\text{C}_4\text{H}_3 + \text{CYC6H10-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + \text{C}_4\text{H}_4 + 0.33\text{LC5H}_8$  2.4540e+05  
 2.000 5200.00

$\text{C}_6\text{H}_5 + \text{CYC6H10-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + \text{C}_6\text{H}_6 + 0.33\text{LC5H}_8$  2.2200e+08  
 1.000 2000.00

$\text{O} + \text{CYC6H10-O-13} \Rightarrow \text{OH} + 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC5H}_8$  1.4100e+07  
 2.000 2500.00

$\text{O}_2 + \text{CYC6H10-O-13} \Rightarrow \text{HO}_2 + 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC5H}_8$  1.0200e+07  
 2.000 44000.00

$\text{OH} + \text{CYC6H10-O-13} \Rightarrow \text{H}_2\text{O} + 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC5H}_8$  9.0000e+09  
 1.000 50.00

$\text{HO}_2 + \text{CYC6H10-O-13} \Rightarrow \text{H}_2\text{O}_2 + 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC5H}_8$  4.8000e+06  
 2.000 16000.00

$\text{CH}_3\text{O} + \text{CYC6H10-O-13} \Rightarrow \text{CH}_3\text{OH} + 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC5H}_8$  2.5680e+05  
 2.000 1500.00

$\text{CH}_2\text{OH} + \text{CYC}_6\text{H}_{10}\text{-O-13} \Rightarrow \text{CH}_3\text{OH} + 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC}_5\text{H}_8$   
 1.6980e+05      2.000      10200.00

$\text{HCO} + \text{CYC}_6\text{H}_{10}\text{-O-13} \Rightarrow \text{CH}_2\text{O} + 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC}_5\text{H}_8$  7.5600e+05  
 2.000      12300.00

$\text{CH}_3\text{CO} + \text{CYC}_6\text{H}_{10}\text{-O-13} \Rightarrow 0.33\text{HCO} + \text{CH}_3\text{CHO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC}_5\text{H}_8$   
 8.1000e+05      2.000      14000.00

$\text{CH}_2\text{CHO} + \text{CYC}_6\text{H}_{10}\text{-O-13} \Rightarrow 0.33\text{HCO} + \text{CH}_3\text{CHO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC}_5\text{H}_8$   
 1.3800e+05      2.000      11500.00

$\text{C}_3\text{H}_3 + \text{CYC}_6\text{H}_{10}\text{-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + \text{C}_3\text{H}_4\text{-A} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC}_5\text{H}_8$   
 1.6200e+05      2.000      14000.00

$\text{HCCO} + \text{CYC}_6\text{H}_{10}\text{-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + \text{CH}_2\text{CO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC}_5\text{H}_8$  2.5680e+05  
 2.000      5200.00

$\text{CH}_3\text{O}_2 + \text{CYC}_6\text{H}_{10}\text{-O-13} \Rightarrow \text{CH}_3\text{O}_2\text{H} + 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC}_5\text{H}_8$   
 4.5600e+05      2.000      12600.00

$\text{C}_2\text{H}_5\text{O}_2 + \text{CYC}_6\text{H}_{10}\text{-O-13} \Rightarrow 0.33\text{HCO} + \text{C}_2\text{H}_5\text{O}_2\text{H} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC}_5\text{H}_8$   
 4.5600e+05      2.000      12600.00

$\text{NC}_3\text{H}_7\text{O}_2 + \text{CYC}_6\text{H}_{10}\text{-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + \text{C}_3\text{H}_7\text{OOH} + 0.33\text{LC}_5\text{H}_8$   
 4.5600e+05      2.000      12600.00

$\text{IC}_3\text{H}_7\text{O}_2 + \text{CYC}_6\text{H}_{10}\text{-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + \text{C}_3\text{H}_7\text{OOH} + 0.33\text{LC}_5\text{H}_8$   
 4.5600e+05      2.000      12600.00

$\text{HCO}_3 + \text{CYC}_6\text{H}_{10}\text{-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + \text{HCO}_3\text{H} + 0.33\text{LC}_5\text{H}_8$  2.0400e+05  
 2.000      6500.00

$\text{CH}_3\text{CO}_3 + \text{CYC}_6\text{H}_{10}\text{-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + \text{CH}_3\text{CO}_3\text{H} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC}_5\text{H}_8$   
 2.0400e+05      2.000      6500.00

$\text{CH}_3\text{COCH}_2 + \text{CYC}_6\text{H}_{10}\text{-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + \text{CH}_3\text{COCH}_3 + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC}_5\text{H}_8$   
 1.3800e+05      2.000      8000.00

$\text{C}_6\text{H}_5\text{O} + \text{CYC}_6\text{H}_{10}\text{-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC}_5\text{H}_8 + \text{C}_6\text{H}_5\text{OH}$   
 1.6200e+05      2.000      12500.00

$\text{C}_5\text{H}_7 + \text{CYC}_6\text{H}_{10}\text{-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 1.33\text{LC}_5\text{H}_8$  1.6200e+05  
 2.000      15000.00

$\text{C}_7\text{H}_7 + \text{CYC}_6\text{H}_{10}\text{-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC}_5\text{H}_8 + \text{C}_7\text{H}_8$  8.1000e+04  
 2.000      16000.00

$\text{CH}_3\text{C}_6\text{H}_4 + \text{CYC}_6\text{H}_{10}\text{-O-13} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC}_5\text{H}_8 + \text{C}_7\text{H}_8$   
 2.2200e+08      1.000      2000.00

$\text{CYC}_6\text{H}_{10}\text{-O-13} + \text{RCRESOLO} \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + 0.33\text{LC}_5\text{H}_8 + \text{CRESOL}$   
 1.6200e+05      2.000      12800.00

$\text{CYC}_6\text{H}_{10}\text{-O-13} + \text{C}_{10}\text{H}_7 \Rightarrow 0.33\text{HCO} + 0.67\text{CH}_2\text{CHO} + 0.67\text{C}_4\text{H}_6 + \text{C}_{10}\text{H}_8 + 0.33\text{LC}_5\text{H}_8$   
 2.2200e+08      1.000      2000.00

CYC6H10-O-13+INDENYL=>0.33HCO+0.67CH2CHO+0.67C4H6+0.33LC5H8+INDENE		
7.8000e+04	2.000	16000.00
CYC6H10-O-13+C10H6CH3=>0.33HCO+0.67CH2CHO+0.67C4H6+0.33LC5H8+C10H7CH3		
2.2200e+08	1.000	2000.00
H+CYC6H10-O-14=>H2+CH3CO+C4H6		6.0000e+06
2.000	2825.33	
CH3+CYC6H10-O-14=>CH4+CH3CO+C4H6		6.0000e+04
2.000	3778.15	
C2H3+CYC6H10-O-14=>C2H4+CH3CO+C4H6		1.3560e+05
2.000	2730.26	
C2H5+CYC6H10-O-14=>C2H6+CH3CO+C4H6		4.0000e+04
2.000	5405.42	
NC3H7+CYC6H10-O-14=>CH3CO+C3H8+C4H6		2.7000e+04
2.000	5405.42	
IC3H7+CYC6H10-O-14=>CH3CO+C3H8+C4H6		2.7000e+04
2.000	8487.19	
C3H5-S+CYC6H10-O-14=>CH3CO+C3H6+C4H6		5.4000e+04
2.000	3301.28	
C3H5-T+CYC6H10-O-14=>CH3CO+C3H6+C4H6		5.4000e+04
2.000	3301.28	
C3H5-A+CYC6H10-O-14=>CH3CO+C3H6+C4H6		1.0780e+05
2.000	11294.92	
C4H5+CYC6H10-O-14=>CH3CO+2C4H6		5.4000e+04
2.000	3301.28	
C4H71-4+CYC6H10-O-14=>CH3CO+C4H8-1+C4H6		2.7000e+04
2.000	5309.47	
C4H71-3+CYC6H10-O-14=>CH3CO+C4H8-2+C4H6		6.8000e+04
2.000	12168.47	
IC4H7+CYC6H10-O-14=>CH3CO+IC4H8+C4H6		5.4000e+04
2.000	12168.47	
C4H3+CYC6H10-O-14=>CH3CO+C4H6+C4H4		8.1800e+04
2.000	3969.14	
C6H5+CYC6H10-O-14=>CH3CO+C4H6+C6H6		7.4000e+07
1.000	1067.64	
O+CYC6H10-O-14=>OH+CH3CO+C4H6		4.7000e+06
2.000	1404.15	
O2+CYC6H10-O-14=>HO2+CH3CO+C4H6		3.4000e+06
2.000	41863.68	

OH+CYC6H10-O-14=>H2O+CH3CO+C4H6	3.0000e+09
1.000        -695.37	
H02+CYC6H10-O-14=>H2O2+CH3CO+C4H6	1.6000e+06
2.000        14404.74	
CH3O+CYC6H10-O-14=>CH3OH+CH3CO+C4H6	8.5600e+04
2.000        463.75	
CH2OH+CYC6H10-O-14=>CH3OH+CH3CO+C4H6	5.6600e+04
2.000        8777.08	
HCO+CYC6H10-O-14=>CH2O+CH3CO+C4H6	2.5200e+05
2.000        10810.03	
CH3CO+CYC6H10-O-14=>CH3CHO+CH3CO+C4H6	2.7000e+05
2.000        12459.86	
CH2CHO+CYC6H10-O-14=>CH3CHO+CH3CO+C4H6	4.6000e+04
2.000        10034.85	
C3H3+CYC6H10-O-14=>CH3CO+C3H4-A+C4H6	5.4000e+04
2.000        12459.86	
HCCO+CYC6H10-O-14=>CH3CO+CH2CO+C4H6	8.5600e+04
2.000        3969.14	
CH3O2+CYC6H10-O-14=>CH3O2H+CH3CO+C4H6	1.5200e+05
2.000        11100.93	
C2H5O2+CYC6H10-O-14=>C2H5O2H+CH3CO+C4H6	1.5200e+05
2.000        11100.93	
NC3H7O2+CYC6H10-O-14=>CH3CO+C4H6+C3H7OOH	1.5200e+05
2.000        11100.93	
IC3H7O2+CYC6H10-O-14=>CH3CO+C4H6+C3H7OOH	1.5200e+05
2.000        11100.93	
HCO3+CYC6H10-O-14=>CH3CO+C4H6+HCO3H	6.8000e+04
2.000        5213.56	
CH3CO3+CYC6H10-O-14=>CH3CO+CH3CO3H+C4H6	6.8000e+04
2.000        5213.56	
CH3COCH2+CYC6H10-O-14=>CH3CO+CH3COCH3+C4H6	4.6000e+04
2.000        6654.87	
C6H5O+CYC6H10-O-14=>CH3CO+C4H6+C6H5OH	5.4000e+04
2.000        11003.95	
C5H7+CYC6H10-O-14=>CH3CO+C4H6+LC5H8	5.4000e+04
2.000        13431.81	
C7H7+CYC6H10-O-14=>CH3CO+C4H6+C7H8	2.7000e+04
2.000        14404.74	



CH3C6H4+CYC6H10-O-14=>CH3CO+C4H6+C7H8	7.4000e+07
1.000 1067.64	
CYC6H10-O-14+RCRESOLO=>CH3CO+C4H6+CRESOL	5.4000e+04
2.000 11294.92	
CYC6H10-O-14+C10H7=>CH3CO+C4H6+C10H8	7.4000e+07
1.000 1067.64	
CYC6H10-O-14+INDENYL=>CH3CO+C4H6+INDENE	2.6000e+04
2.000 14404.74	
CYC6H10-O-14+C10H6CH3=>CH3CO+C4H6+C10H7CH3	7.4000e+07
1.000 1067.64	
H+CYC6H10-O-14=>H2+CH2CHO+C4H6	2.4000e+07
2.000 4000.00	
CH3+CYC6H10-O-14=>CH4+CH2CHO+C4H6	2.4000e+05
2.000 5000.00	
C2H3+CYC6H10-O-14=>C2H4+CH2CHO+C4H6	5.4240e+05
2.000 3900.00	
C2H5+CYC6H10-O-14=>C2H6+CH2CHO+C4H6	1.6000e+05
2.000 6700.00	
NC3H7+CYC6H10-O-14=>CH2CHO+C3H8+C4H6	1.0800e+05
2.000 6700.00	
IC3H7+CYC6H10-O-14=>CH2CHO+C3H8+C4H6	1.0800e+05
2.000 9900.00	
C3H5-S+CYC6H10-O-14=>CH2CHO+C3H6+C4H6	2.1600e+05
2.000 4500.00	
C3H5-T+CYC6H10-O-14=>CH2CHO+C3H6+C4H6	2.1600e+05
2.000 4500.00	
C3H5-A+CYC6H10-O-14=>CH2CHO+C3H6+C4H6	4.3120e+05
2.000 12800.00	
C4H5+CYC6H10-O-14=>CH2CHO+2C4H6	2.1600e+05
2.000 4500.00	
C4H71-4+CYC6H10-O-14=>CH2CHO+C4H8-1+C4H6	1.0800e+05
2.000 6600.00	
C4H71-3+CYC6H10-O-14=>CH2CHO+C4H8-2+C4H6	2.7200e+05
2.000 13700.00	
IC4H7+CYC6H10-O-14=>CH2CHO+IC4H8+C4H6	2.1600e+05
2.000 13700.00	
C4H3+CYC6H10-O-14=>CH2CHO+C4H6+C4H4	3.2720e+05
2.000 5200.00	

C6H5+CYC6H10-O-14=>CH2CHO+C4H6+C6H6	2.9600e+08
1.000        2000.00	
O+CYC6H10-O-14=>OH+CH2CHO+C4H6	1.8800e+07
2.000        2500.00	
O2+CYC6H10-O-14=>HO2+CH2CHO+C4H6	1.3600e+07
2.000        44000.00	
OH+CYC6H10-O-14=>H2O+CH2CHO+C4H6	1.2000e+10
1.000        50.00	
HO2+CYC6H10-O-14=>H2O2+CH2CHO+C4H6	6.4000e+06
2.000        16000.00	
CH3O+CYC6H10-O-14=>CH3OH+CH2CHO+C4H6	3.4240e+05
2.000        1500.00	
CH2OH+CYC6H10-O-14=>CH3OH+CH2CHO+C4H6	2.2640e+05
2.000        10200.00	
HCO+CYC6H10-O-14=>CH2O+CH2CHO+C4H6	1.0080e+06
2.000        12300.00	
CH3CO+CYC6H10-O-14=>CH3CHO+CH2CHO+C4H6	1.0800e+06
2.000        14000.00	
CH2CHO+CYC6H10-O-14=>CH3CHO+CH2CHO+C4H6	1.8400e+05
2.000        11500.00	
C3H3+CYC6H10-O-14=>CH2CHO+C3H4-A+C4H6	2.1600e+05
2.000        14000.00	
HCCO+CYC6H10-O-14=>CH2CHO+CH2CO+C4H6	3.4240e+05
2.000        5200.00	
CH3O2+CYC6H10-O-14=>CH3O2H+CH2CHO+C4H6	6.0800e+05
2.000        12600.00	
C2H5O2+CYC6H10-O-14=>C2H5O2H+CH2CHO+C4H6	6.0800e+05
2.000        12600.00	
NC3H7O2+CYC6H10-O-14=>CH2CHO+C4H6+C3H7OOH	6.0800e+05
2.000        12600.00	
IC3H7O2+CYC6H10-O-14=>CH2CHO+C4H6+C3H7OOH	6.0800e+05
2.000        12600.00	
HCO3+CYC6H10-O-14=>CH2CHO+C4H6+HCO3H	2.7200e+05
2.000        6500.00	
CH3CO3+CYC6H10-O-14=>CH2CHO+CH3CO3H+C4H6	2.7200e+05
2.000        6500.00	
CH3COCH2+CYC6H10-O-14=>CH2CHO+CH3COCH3+C4H6	1.8400e+05
2.000        8000.00	

C6H5O+CYC6H10-O-14=>CH2CHO+C4H6+C6H5OH	2.1600e+05
2.000 12500.00	
C5H7+CYC6H10-O-14=>CH2CHO+C4H6+LC5H8	2.1600e+05
2.000 15000.00	
C7H7+CYC6H10-O-14=>CH2CHO+C4H6+C7H8	1.0800e+05
2.000 16000.00	
CH3C6H4+CYC6H10-O-14=>CH2CHO+C4H6+C7H8	2.9600e+08
1.000 2000.00	
CYC6H10-O-14+RCRESOLO=>CH2CHO+C4H6+CRE SOL	2.1600e+05
2.000 12800.00	
CYC6H10-O-14+C10H7=>CH2CHO+C4H6+C10H8	2.9600e+08
1.000 2000.00	
CYC6H10-O-14+INDENYL=>CH2CHO+C4H6+INDENE	1.0400e+05
2.000 16000.00	
CYC6H10-O-14+C10H6CH3=>CH2CHO+C4H6+C10H7CH3	2.9600e+08
1.000 2000.00	
C2H2+C6H5=C6H5C2H2	1.9100e+61 -
14.550 28610.00	
PLOG / 4.000000e-02 2.750000e+69 -1.746000e+01 2.843000e+04	
/	
PLOG / 1.000000e+00 1.910000e+61 -1.455000e+01 2.861000e+04	
/	
PLOG / 1.000000e+01 1.220000e+50 -1.101000e+01 2.492000e+04	
/	
PLOG / 1.000000e+02 1.110000e+43 -8.700000e+00 2.403000e+04	
/	
C2H2+C6H5=C6H4C2H3	1.3600e+75 -
18.420 40880.00	
PLOG / 4.000000e-02 1.090000e+75 -1.912000e+01 3.238000e+04	
/	
PLOG / 1.000000e+00 1.360000e+75 -1.842000e+01 4.088000e+04	
/	
PLOG / 1.000000e+01 4.950000e+69 -1.633000e+01 4.590000e+04	
/	
PLOG / 1.000000e+02 1.130000e+48 -9.830000e+00 3.930000e+04	
/	
C2H2+C6H5=H+C6H5C2H	1.1000e+31 -
4.830 26620.00	
PLOG / 4.000000e-02 8.560000e+17 -1.330000e+00 1.269000e+04	
/	
PLOG / 1.000000e+00 1.100000e+31 -4.830000e+00 2.662000e+04	
/	
PLOG / 1.000000e+01 3.380000e+33 -5.390000e+00 3.269000e+04	
/	
PLOG / 1.000000e+02 1.130000e+33 -5.110000e+00 3.782000e+04	
/	

H+C6H5C2H=C6H5C2H2				1.5900e+62	-
14.480	31760.00				
PLOG /	4.000000e-02	3.100000e+68	-1.679000e+01	3.093000e+04	
/					
PLOG /	1.000000e+00	1.590000e+62	-1.448000e+01	3.176000e+04	
/					
PLOG /	1.000000e+01	1.740000e+51	-1.104000e+01	2.802000e+04	
/					
PLOG /	1.000000e+02	2.390000e+44	-8.800000e+00	2.710000e+04	
/					
H+C6H5C2H=C6H4C2H3				4.9600e+78	-
19.070	46600.00				
PLOG /	4.000000e-02	1.520000e+78	-1.961000e+01	3.771000e+04	
/					
PLOG /	1.000000e+00	4.960000e+78	-1.907000e+01	4.660000e+04	
/					
PLOG /	1.000000e+01	9.890000e+72	-1.693000e+01	5.142000e+04	
/					
PLOG /	1.000000e+02	2.210000e+51	-1.045000e+01	4.463000e+04	
/					
C6H5C2H2=C6H4C2H3				2.4420e+30	-
5.730	32070.00				
PLOG /	4.000000e-02	4.518000e+42	-9.780000e+00	3.508000e+04	
/					
PLOG /	1.000000e+00	2.442000e+30	-5.730000e+00	3.207000e+04	
/					
PLOG /	1.000000e+01	3.654000e+28	-4.970000e+00	3.328000e+04	
/					
PLOG /	1.000000e+02	2.010000e+21	-2.720000e+00	3.053000e+04	
/					
C2H2+C6H4C2H=>C10H7				4.4900e+82	-
20.020	51830.00				
DUPLICATE					
PLOG /	4.000000e-02	2.880000e+97	-2.474000e+01	5.508000e+04	
/					
PLOG /	1.000000e+00	4.490000e+82	-2.002000e+01	5.183000e+04	
/					
PLOG /	1.000000e+01	4.390000e+77	-1.820000e+01	5.559000e+04	
/					
PLOG /	1.000000e+02	1.050000e+63	-1.385000e+01	5.061000e+04	
/					
C2H2+C6H4C2H=>C10H7				1.1800e+104	-
25.700	76820.00				
DUPLICATE					
PLOG /	4.000000e-02	8.870000e+104	-2.675000e+01	6.278000e+04	
/					
PLOG /	1.000000e+00	1.180000e+104	-2.570000e+01	7.682000e+04	
/					
PLOG /	1.000000e+01	4.010000e+98	-2.365000e+01	8.570000e+04	
/					
PLOG /	1.000000e+02	9.450000e+78	-1.782000e+01	8.327000e+04	
/					

C2H2+C6H5C2H2=H+C10H8				3.5700e+22	-
2.718	14470.00				
DUPLICATE					
PLOG /	4.000000e-02	3.570000e+22	-2.718000e+00	1.447000e+04	
/					
PLOG /	1.000000e+00	3.570000e+22	-2.718000e+00	1.447000e+04	
/					
PLOG /	1.000000e+01	3.890000e+22	-2.729000e+00	1.450000e+04	
/					
PLOG /	1.000000e+02	1.030000e+26	-3.658000e+00	1.765000e+04	
/					
C2H2+C6H5C2H2=H+C10H8				7.9300e+11	
0.593	24310.00				
DUPLICATE					
PLOG /	4.000000e-02	6.830000e+11	6.100000e-01	2.425000e+04	
/					
PLOG /	1.000000e+00	7.930000e+11	5.930000e-01	2.431000e+04	
/					
PLOG /	1.000000e+01	2.990000e+12	4.370000e-01	2.489000e+04	
/					
PLOG /	1.000000e+02	2.810000e+15	-3.550000e-01	2.817000e+04	
/					
C2H2+C6H4C2H3=>H+C10H8				3.0200e+10	
0.702	5530.00				
DUPLICATE					
PLOG /	4.000000e-02	3.000000e+10	7.030000e-01	5.530000e+03	
/					
PLOG /	1.000000e+00	3.020000e+10	7.020000e-01	5.530000e+03	
/					
PLOG /	1.000000e+01	2.750000e+12	1.590000e-01	7.060000e+03	
/					
PLOG /	1.000000e+02	1.810000e+17	-1.130000e+00	1.207000e+04	
/					
C2H2+C6H4C2H3=>H+C10H8				1.4800e+08	
1.310	11160.00				
DUPLICATE					
PLOG /	4.000000e-02	9.620000e+07	1.360000e+00	1.099000e+04	
/					
PLOG /	1.000000e+00	1.480000e+08	1.310000e+00	1.116000e+04	
/					
PLOG /	1.000000e+01	3.390000e+09	9.440000e-01	1.249000e+04	
/					
PLOG /	1.000000e+02	3.710000e+14	-3.910000e-01	1.831000e+04	
/					
C2H2+C6H4C2H3=>H+C10H8				1.5900e-04	
4.950	16300.00				
DUPLICATE					
PLOG /	4.000000e-02	1.520000e-04	4.960000e+00	1.629000e+04	
/					
PLOG /	1.000000e+00	1.590000e-04	4.950000e+00	1.630000e+04	
/					
PLOG /	1.000000e+01	1.640000e-04	4.950000e+00	1.633000e+04	
/					

PLOG /	1.000000e+02	2.320000e-04	4.910000e+00	1.658000e+04
/				
H+C10H8=>C2H2+C6H4C2H3				1.3927e+12
0.000	69902.66			
C2H2+C6H5C2H=>C10H8				2.0000e+11
0.000	25500.00			
C2H2+C12H8=>C14H10				2.0000e+11
0.000	24000.00			
C2H2+INDENE=>C10H7CH3				3.0000e+11
0.000	30000.00			
C2H2+C10H7=H+C12H8				5.0000e+12
0.000	5000.00			
PLOG /	4.000000e-02	8.560000e+17	-1.330000e+00	1.269000e+04
/				
PLOG /	1.000000e+00	1.100000e+31	-4.830000e+00	2.662000e+04
/				
PLOG /	1.000000e+01	3.380000e+33	-5.390000e+00	3.269000e+04
/				
PLOG /	1.000000e+02	1.130000e+33	-5.110000e+00	3.782000e+04
/				
C2H2+C12H9=H+C14H10				3.0000e+12
0.000	5000.00			
PLOG /	4.000000e-02	8.560000e+17	-1.330000e+00	1.269000e+04
/				
PLOG /	1.000000e+00	1.100000e+31	-4.830000e+00	2.662000e+04
/				
PLOG /	1.000000e+01	3.380000e+33	-5.390000e+00	3.269000e+04
/				
PLOG /	1.000000e+02	1.130000e+33	-5.110000e+00	3.782000e+04
/				
C2H2+C14H9=H+C16H10				3.0000e+12
0.000	5000.00			
PLOG /	4.000000e-02	8.560000e+17	-1.330000e+00	1.269000e+04
/				
PLOG /	1.000000e+00	1.100000e+31	-4.830000e+00	2.662000e+04
/				
PLOG /	1.000000e+01	3.380000e+33	-5.390000e+00	3.269000e+04
/				
PLOG /	1.000000e+02	1.130000e+33	-5.110000e+00	3.782000e+04
/				
C2H2+C16H9=>H+C18H10				3.0000e+12
0.000	5000.00			
PLOG /	4.000000e-02	8.560000e+17	-1.330000e+00	1.269000e+04
/				
PLOG /	1.000000e+00	1.100000e+31	-4.830000e+00	2.662000e+04
/				
PLOG /	1.000000e+01	3.380000e+33	-5.390000e+00	3.269000e+04
/				
PLOG /	1.000000e+02	1.130000e+33	-5.110000e+00	3.782000e+04
/				

C2H2+C18H9=>H+BIN1B				3.0000e+12
0.000	5000.00			
PLOG /	4.000000e-02	8.560000e+17	-1.330000e+00	1.269000e+04
/				
PLOG /	1.000000e+00	1.100000e+31	-4.830000e+00	2.662000e+04
/				
PLOG /	1.000000e+01	3.380000e+33	-5.390000e+00	3.269000e+04
/				
PLOG /	1.000000e+02	1.130000e+33	-5.110000e+00	3.782000e+04
/				
C2H2+C12H7=>C14H9				3.0000e+12
0.000	6000.00			
C3H4-A+C4H71-3=>H2+CH3+C6H6				2.0000e+12
0.000	18000.00			
C3H4-A+IC4H7=>H2+CH3+C6H6				2.0000e+12
0.000	18000.00			
C3H4-A+C6H5=>H+INDENE				3.0000e+12
0.000	5000.00			
C3H4-A+CH3C6H4=>CH3+INDENE				3.0000e+12
0.000	5000.00			
C3H4-A+C5H5=>H+C6H5C2H3				2.0000e+12
0.000	19000.00			
C3H4-A+C7H7=>CH3+INDENE				3.0000e+12
0.000	18000.00			
C3H4-A+C10H7=>H+FLUORENE				3.0000e+12
0.000	5000.00			
C3H4-A+C6H4C2H=>C2H+INDENE				3.0000e+12
0.000	5000.00			
C3H4-A+C6H5CHCH3=>H2+H+C10H7CH3				3.0000e+12
0.000	18000.00			
C3H4-A+RXYLENE=>H2+CH3+C10H8				3.0000e+12
0.000	18000.00			
C3H4-A+INDENYL=>C2H3+C10H8				3.0000e+12
0.000	18000.00			
C3H4-A+C12H9=>CH3+C14H10				3.0000e+12
0.000	18000.00			
C3H4-A+C10H6CH3=>H2+H+C14H10				3.0000e+12
0.000	5000.00			
C3H4-A+C10H7CH2=>H2+H+C14H10				3.0000e+12
0.000	18000.00			

C3H4-A+C14H9=>CH3+C16H10	3.0000e+12
0.000 5000.00	
C3H4-A+C16H9=>CH3+C18H10	3.0000e+12
0.000 5000.00	
C3H4-A+C18H9=>H+0.8BIN1B+0.25BIN1A	3.0000e+12
0.000 5000.00	
C3H4-P+C4H71-3=>H2+CH3+C6H6	2.0000e+12
0.000 18000.00	
C3H4-P+IC4H7=>H2+CH3+C6H6	2.0000e+12
0.000 18000.00	
C3H4-P+C6H5=>H+INDENE	3.0000e+12
0.000 5000.00	
C3H4-P+CH3C6H4=>CH3+INDENE	3.0000e+12
0.000 5000.00	
C3H4-P+C5H5=>H+C6H5C2H3	2.0000e+12
0.000 19000.00	
C3H4-P+C7H7=>CH3+INDENE	3.0000e+12
0.000 18000.00	
C3H4-P+C10H7=>H+FLUORENE	3.0000e+12
0.000 5000.00	
C3H4-P+C6H4C2H=>C2H+INDENE	3.0000e+12
0.000 5000.00	
C3H4-P+C6H5CHCH3=>H2+H+C10H7CH3	3.0000e+12
0.000 18000.00	
C3H4-P+RXYLENE=>H2+CH3+C10H8	3.0000e+12
0.000 18000.00	
C3H4-P+INDENYL=>C2H3+C10H8	3.0000e+12
0.000 18000.00	
C3H4-P+C12H9=>CH3+C14H10	3.0000e+12
0.000 18000.00	
C3H4-P+C10H6CH3=>H2+H+C14H10	3.0000e+12
0.000 5000.00	
C3H4-P+C10H7CH2=>H2+H+C14H10	3.0000e+12
0.000 18000.00	
C3H4-P+C14H9=>CH3+C16H10	3.0000e+12
0.000 5000.00	
C3H4-P+C16H9=>CH3+C18H10	3.0000e+12
0.000 5000.00	



C3H4-P+C18H9=>H+0.8BIN1B+0.25BIN1A 0.000 5000.00	3.0000e+12
C2H2+C10H6CH3=>CH3+C12H8 0.000 5000.00	1.0000e+12
C4H5+C5H6=>H2+H+INDENE 0.000 3000.00	5.0000e+11
C4H6+C5H6=>2H2+INDENE 0.000 30000.00	5.0000e+11
C4H5+C5H5=>H2+INDENE 0.000 3000.00	5.0000e+11
C4H5+C6H5C2H3=>H+C2H4+C10H8 0.000 3000.00	5.0000e+11
C4H5+C6H5C2H=>C2H3+C10H8 0.000 3000.00	5.0000e+11
C4H6+C6H5C2H3=>H2+C2H4+C10H8 0.000 30000.00	5.0000e+11
C4H6+C6H5C2H=>C2H4+C10H8 0.000 30000.00	5.0000e+11
C4H5+INDENE=>H2+H+FLUORENE 0.000 5000.00	5.0000e+11
C4H6+INDENYL=>H2+H+FLUORENE 0.000 20000.00	5.0000e+12
C4H4+INDENYL=>H+FLUORENE 0.000 20000.00	5.0000e+12
C4H5+INDENYL=>H2+FLUORENE 0.000 3000.00	5.0000e+12
C4H3+INDENYL=>FLUORENE 0.000 3000.00	5.0000e+12
C4H6+INDENE=>2H2+FLUORENE 0.000 30000.00	5.0000e+11
IC4H8+IC4H7=>2H2+H+0.4C6H5C2H5+0.6XYLENE 0.000 19000.00	3.0000e+09
2C4H71-3=>H2+2H+XYLENE 0.000 1000.00	1.0000e+11
C2H3+C3H6=>H+CYC5H8 0.000 6000.00	6.0000e+10
C3H5-A+C4H8-1=C2H5+CYC5H8 0.000 15000.00	2.0000e+10

C3H5-A+C5H5=H2+C6H5C2H3					2.5000e+11
0.000	3000.00				
CH3+C6H5O=CRESOL					1.5000e+12
0.000	0.00				
CRESOL=OH+CH3C6H4					1.0000e+17
0.000	110000.00				
H+RCRESOLO=CRESOL					1.5000e+14
0.000	0.00				
H+RCRESOLC=CRESOL					1.5000e+14
0.000	0.00				
H+CRESOL=CH3+C6H5OH					1.5000e+13
0.000	5000.00				
CH3+CRESOL=OH+XYLENE					1.5000e+12
0.000	15000.00				
RCRESOLO=>H+CO+C6H6					6.0000e+13
0.000	52000.00				
RCRESOLO=>CH2CO+C5H5					3.0000e+13
0.000	55000.00				
RCRESOLC=>H+CO+FULVENE					2.0000e+13
0.000	52000.00				
RCRESOLC=>H+CO+C6H6					2.0000e+13
0.000	52000.00				
RCRESOLC=>H+C2H2+CYC5H4O					2.0000e+13
0.000	52000.00				
O+RCRESOLC=>OH+C6H5CHO					5.0000e+14
0.000	0.00				
OH+C7H8=H+CRESOL					3.1370e+01
3.365	4719.10				
O+C7H8=H+RCRESOLO					1.6600e+07
1.800	3974.00				
PLOG /	1.000000e-01	1.660000e+07	1.800000e+00	3.974000e+03	
/					
PLOG /	1.000000e+00	1.660000e+07	1.800000e+00	3.974000e+03	
/					
PLOG /	1.000000e+01	1.660000e+07	1.800000e+00	3.974000e+03	
/					
PLOG /	5.000000e+01	2.960000e+10	9.100000e-01	6.323000e+03	
/					
PLOG /	5.000000e+02	1.100000e+12	4.700000e-01	8.434800e+03	
/					
O+C7H8=CRESOL					2.0400e+23
2.560	14993.00				-

PLOG /	1.000000e-01	1.260000e+29	-4.720000e+00	1.334270e+04	
/					
PLOG /	1.000000e+00	2.040000e+23	-2.560000e+00	1.499300e+04	
/					
PLOG /	1.000000e+01	2.960000e+24	-2.820000e+00	2.190470e+04	
/					
PLOG /	5.000000e+01	4.870000e+35	-5.890000e+00	3.453410e+04	
/					
PLOG /	5.000000e+02	3.510000e+31	-4.730000e+00	3.842860e+04	
/					
O2+CH3C6H4=CH3+C6H4O2					3.0000e+13
0.000	9000.00				
O2+CH3C6H4=O+RCRESOLO					9.1800e+20 -
2.300	7370.00				
PLOG /	1.000000e-02	2.620000e+18	-1.610000e+00	5.060000e+03	
/					
PLOG /	1.000000e-01	4.990000e+18	-1.680000e+00	5.320000e+03	
/					
PLOG /	1.000000e+00	9.180000e+20	-2.300000e+00	7.370000e+03	
/					
PLOG /	1.000000e+01	7.270000e+29	-4.720000e+00	1.560000e+04	
/					
PLOG /	1.000000e+02	1.520000e+43	-8.300000e+00	2.910000e+04	
/					
O2C6H4CH3=O+RCRESOLO					3.0500e+37 -
7.610	43660.00				
PLOG /	1.000000e-02	3.760000e+24	-4.670000e+00	3.275000e+04	
/					
PLOG /	1.000000e-01	2.280000e+29	-5.690000e+00	3.632000e+04	
/					
PLOG /	1.000000e+00	3.050000e+37	-7.610000e+00	4.366000e+04	
/					
PLOG /	1.000000e+01	1.640000e+43	-8.820000e+00	5.088000e+04	
/					
PLOG /	1.000000e+02	3.000000e+38	-7.150000e+00	5.114000e+04	
/					
C7H7O2+CRESOL=BZCOOH+RCRESOLO					4.0000e+11
0.000	14000.00				
OH+C6H5O=>H+HCO+CYC5H4O					3.0000e+12
0.000	0.00				
CH3+CYC5H4O=>CO+C5H7					6.0000e+09
0.000	7600.00				
C5H6+C5H5O=>CO+C2H3+C7H8					5.0000e+12
0.000	20000.00				
RCRESOLC+RCRESOLO=>OH+C6H5CHO+C7H7					2.0000e+12
0.000	6000.00				
2RCRESOLO=>OH+C6H5CHO+C7H7					1.0000e+12
0.000	6000.00				

2RCRESOLC=>C2H4+2C6H5O 0.000           6000.00	1.0000e+12
OH+RCRESOLC=>H2O+C6H5CHO 0.000           0.00	6.0000e+13
OH+RCRESOLO=>H2O+C6H5CHO 0.000           0.00	6.0000e+13
HO2+RCRESOLC=>OH+CO+HCO+C5H6 0.000           6000.00	2.5000e+12
HO2+RCRESOLO=>OH+CO+HCO+C5H6 0.000           6000.00	2.5000e+12
C3H3+RCRESOLC=>2H+C10H7OH 0.000           6000.00	5.0000e+12
C3H5-A+RCRESOLC=>H2+2H+C10H7OH 0.000           6000.00	5.0000e+12
C5H5+RCRESOLC=>2H+CO+C10H7CH3 0.000           6000.00	5.0000e+12
C5H5+RCRESOLO=>2H+CO+C10H7CH3 0.000           6000.00	5.0000e+12
C4H3+C5H6=>H+INDENE 0.000           5000.00	5.0000e+11
C4H5+C4H4=>H+C6H5C2H3 0.000           5000.00	3.0000e+11
C4H6+C4H5=>CH3+C7H8 0.000           7000.00	1.0000e+11
C4H6+C4H5=>H2+H+C6H5C2H3 0.000           7000.00	5.0000e+10
C2H2+C4H5=H+LC6H6 0.000           5000.00	1.0000e+12
C4H5+C4H2=H+C6H5C2H 0.000           5000.00	1.0000e+12
H+INDENE=>0.5C3H4-P+0.5C3H4-A+C6H5 0.000           3000.00	2.5000e+12
OH+INDENE=>CO+C2H4+C6H5 0.000           0.00	6.0000e+12
OH+INDENE=>H2O+INDENYL 0.000           4000.00	1.5000e+14
O+INDENE=>CO+C2H3+C6H5 0.000           0.00	6.0000e+12

XYLENE=H+RXYLENE 0.000 89200.00	9.0000e+15	
XYLENE=CH3+CH3C6H4 0.000 98000.00	5.0000e+16	
C10H8=H+C10H7 0.000 116000.00	5.0000e+15	
C4H2+C6H6=>C10H8 0.000 22500.00	1.5000e+11	
C5H6+C5H5=>C2H3+C6H5C2H3 0.000 25500.00	4.0000e+12	
C5H6+C5H5=>CH3+INDENE 3.935 23108.00	1.3000e+25	-
C5H6+C5H5=>0.5C3H4-P+0.5C3H4-A+C7H7 0.000 25000.00	1.0000e+12	
H+INDENYL=INDENE 0.000 0.00	6.0000e+13	
H+C6H4C2H=C6H5C2H 0.000 0.00	1.0000e+14	
H+C6H4C2H3=C6H5C2H3 0.000 0.00	1.0000e+14	
H+C12H7=C12H8 0.000 0.00	1.0000e+14	
H+C12H9=BIPHENYL 0.000 0.00	1.0000e+14	
H+C14H9=C14H10 0.000 0.00	1.0000e+14	
H+C16H9=C16H10 0.000 0.00	1.0000e+14	
H+C18H9=C18H10 0.000 0.00	1.0000e+14	
H+C10H7CH2=C10H7CH3 0.000 0.00	1.0000e+14	
H+C10H6CH3=C10H7CH3 0.000 0.00	1.0000e+14	
H+C10H7O=C10H7OH 0.000 0.00	3.0000e+14	
H+C10H7O=>CO+INDENE 0.000 0.00	5.0000e+13	

OH+C10H7O=>HO2+C10H7					5.0000e+12
0.000	0.00				
O+C6H5O=H+C6H4O2					1.0000e+14
0.000	0.00				
H+CH3C10H6O=CH3C10H6OH					3.0000e+15
0.000	0.00				
H+C6H5C2H2=C6H5C2H3					1.0000e+14
0.000	0.00				
H+C6H5C2H2=H2+C6H5C2H					2.0000e+14
0.000	0.00				
H+C6H5C2H2=C2H2+C6H6					4.0000e+14
0.000	0.00				
C10H6CH3=C10H7CH2					1.0000e+10
0.000	39000.00				
C6H5C2H5=CH3+C7H7					5.0100e+27
3.169	78568.00				-
PLOG /	3.950000e-02	7.230000e+91	-2.205980e+01	1.155990e+05	
/					
PLOG /	1.974000e-01	1.160000e+78	-1.796960e+01	1.085910e+05	
/					
PLOG /	1.000000e+00	6.410000e+61	-1.322340e+01	9.944100e+04	
/					
PLOG /	1.000000e+02	5.010000e+27	-3.169300e+00	7.856800e+04	
/					
C6H5C2H5=H+C6H5CHCH3					1.0000e+00
0.000	0.00				
PLOG /	3.950000e-02	3.130000e+97	-2.423890e+01	1.340030e+05	
/					
PLOG /	1.974000e-01	1.250000e+82	-1.960000e+01	1.270220e+05	
/					
PLOG /	1.000000e+00	3.950000e+60	-1.329620e+01	1.151980e+05	
/					
PLOG /	1.000000e+02	6.120000e+16	-5.997000e-01	8.940700e+04	
/					
C6H5C2H5=>H+C2H4+C6H5					1.0000e+00
0.000	0.00				
PLOG /	3.950000e-02	1.280000e+117	-2.995410e+01	1.572500e+05	
/					
PLOG /	1.974000e-01	2.180000e+101	-2.507060e+01	1.515630e+05	
/					
PLOG /	1.000000e+00	4.770000e+76	-1.776010e+01	1.389700e+05	
/					
PLOG /	1.000000e+02	3.590000e+17	-5.607000e-01	1.047750e+05	
/					
2C7H5=C14H10					6.3900e+29
4.030	35205.54				-

CH3+C10H7=C10H7CH3 0.000            0.00	5.0000e+13
CH3C10H6OH=OH+C10H6CH3 0.000        110000.00	1.0000e+17
C10H7OH=>OH+C10H7 0.000        115000.00	5.0000e+16
C10H7CHO=>HCO+C10H7 0.000        97000.00	5.0000e+16
C6H4O2=>CO+CYC5H4O 0.000        59400.00	7.4000e+11
C6H4O2=>CO2+C2H2+C3H2 0.000        67000.00	3.5000e+12
HO2+C6H4O2=>2CO+CH2O+HCO+C2H2 0.000        13000.00	5.0000e+12
C6H5C2H5=H2+C6H5C2H3 0.000        64000.00	5.0000e+12
C6H5C2H3=>C2H2+C6H6 0.000        68000.00	1.6000e+11
C5H6+INDENE=>H+CH3+FLUORENE 0.000        31000.00	4.0000e+11
C5H6+INDENE=>2H2+C14H10 0.000        30000.00	5.0000e+11
C5H6+C12H8=>H+CH3+C16H10 0.000        31000.00	2.5000e+11
C5H6+C10H8=>H+CH3+C14H10 0.000        41000.00	2.5000e+11
C5H6+C14H10=>0.499999986046665H2+0.999999993023333H+0.999999983578100CH3+ 0.500000002362958C16H10+0.333333320395366BIN1B+0.166666678535362BIN1A 2.5000e+11        0.000        41000.00	
C5H6+C16H10=>1.000000008158069H+1.000000019147528CH3+0.666666675047105BIN 1B+0.333333323995519BIN1A 2.5000e+11        0.000        41000.00	
C5H6+C18H10=>0.999999995441259H+0.999999990049397CH3+0.933333328924989BIN 1B+0.166666671572542BIN1A 2.5000e+11        0.000        41000.00	
2INDENE=>H+CH3+0.5C2H4+C16H10 0.000        33000.00	2.5000e+11
C10H8+INDENE=>H+CH3+C2H2+C16H10 0.000        41000.00	2.5000e+11
INDENE+C14H10=>H+CH3+0.6BIN1B+0.5BIN1A 0.000        41000.00	2.5000e+11

INDENE+C16H10=>1.000000000815807H+1.000000001914753CH3+0.866666667504710B  
IN1B+0.33333332399552BIN1A 2.5000e+11 0.000 41000.00

INDENE+C18H10=>0.999999995441259H+0.99999999049397CH3+1.133333328924989B  
IN1B+0.166666671572542BIN1A 2.5000e+11 0.000 41000.00

O2+XYLENE=HO2+RXYLENE 3.0000e+14  
0.000 41400.00

O2+C6H5CH2OH=>H+HO2+C6H5CHO 2.0000e+14  
0.000 41400.00

O2+C10H7CH3=HO2+C10H7CH2 2.0000e+14  
0.000 43000.00

O2+C6H4O2=>HO2+2CO+C2H2+C2H 1.4000e+14  
0.000 56200.00

CH3+C10H7CH3=CH4+C10H7CH2 2.0000e+13  
0.000 14000.00

O2+C6H4C2H=>2CO+C6H5 2.0000e+12  
0.000 3000.00

O2+C10H7=>CO+HCO+C6H5C2H 1.0000e+12  
0.000 3000.00

O2+C14H9=>CO+HCO+C12H8 1.0000e+12  
0.000 9000.00

O2+C14H9=>2CO+C2H+C10H8 2.0000e+12  
0.000 3000.00

O2+C12H7=>2CO+C10H7 2.0000e+12  
0.000 3000.00

O2+C16H9=>2CO+C14H9 2.0000e+12  
0.000 3000.00

O2+C18H9=>2CO+C16H9 2.0000e+12  
0.000 3000.00

O2+C6H5=>H+C6H4O2 5.0000e+13  
0.000 9000.00

O2+INDENYL=>OH+CO+C6H5C2H 5.0000e+11  
0.000 17500.00

O2+C10H7=O+C10H7O 2.6000e+13  
0.000 6120.00

O2+C10H6CH3=O+CH3C10H6O 2.0000e+12  
0.000 9500.00

O2+RXYLENE=>OH+0.5C2H4+C6H5CHO 1.0000e+13  
0.000 26500.00



O2+RXYLENE=>O+CH2O+CH3C6H4	2.0000e+08
0.000 14500.00	
O2+C10H7CH2=>OH+C10H7CHO	1.0000e+13
0.000 26500.00	
O2+C6H5C2H=>CO+HCO+C6H5	3.0000e+11
0.000 22000.00	
O2+C10H8=>H+2CO+C2H2+C6H5	8.0000e+13
0.000 38000.00	
O2+INDENE=>H+CO+CH2CO+C6H5	8.0000e+13
0.000 38000.00	
OH+C6H5C2H3=>CH2O+C7H7	1.0000e+11
0.000 0.00	
OH+INDENE=>CO+RXYLENE	5.0000e+11
0.000 0.00	
OH+C10H8=>H+C10H7OH	2.0000e+11
0.000 0.00	
OH+C10H8=>CO+0.5C3H4-P+0.5C3H4-A+C6H5	4.0000e+12
0.000 5000.00	
OH+C10H8=>2C2H2+C6H5O	2.0000e+12
0.000 5000.00	
OH+C10H8=>H+CO+INDENE	2.0000e+12
0.000 5000.00	
OH+C10H8=>H2O+C10H7	5.0000e+13
0.000 4000.00	
OH+C6H5C2H=>CH2CO+C6H5	5.0000e+12
0.000 2000.00	
OH+C6H5C2H=>CO+C7H7	1.0000e+13
0.000 7000.00	
OH+C12H8=>CH2CO+C10H7	2.1800e-04
4.500 -1000.00	
OH+C12H8=>CO+C10H7CH2	1.0000e+13
0.000 7000.00	
OH+C16H10=>CH2CO+C14H9	2.1800e-04
4.500 -1000.00	
OH+C16H10=>H+CO+0.5C14H10+0.5C16H10	1.0000e+13
0.000 7000.00	
OH+C18H10=>CH2CO+C16H9	2.1800e-04
4.500 -1000.00	

OH+C18H10=>H+CO+0.5C16H10+0.5C18H10 0.000           7000.00	1.0000e+13
OH+BIPHENYL=>CO+C6H6+C5H5 0.000           7000.00	1.0000e+13
OH+FLUORENE=>H+CO+BIPHENYL 0.000           7000.00	1.0000e+13
OH+C14H10=>H+CO+FLUORENE 0.000           7000.00	1.0000e+13
OH+C6H5C2H2=H2O+C6H5C2H 0.000           0.00	1.5000e+13
OH+INDENYL=>0.5CO+0.5HCO+0.5C6H5C2H3+0.5C6H5C2H2 0.000           0.00	1.0000e+13
OH+C7H7 (+M) =C6H5CH2OH (+M) 0.000           0.00 LOW/    2.70e+38       -6.300       3100.0/ TROE/           0.2105    83.50    5398.    8370./ H2/ 2.00/   H2O/ 6.00/   CH4/ 2.00/   CO/ 1.50/   CO2/ 2.00/   C2H6/ 3.00/	6.3000e+13
2C7H7O2=>O2+C6H5CHO+C6H5CH2OH 0.000           -725.00	1.4000e+10
OH+RXYLENE=>0.5C2H4+C6H5CH2OH 0.000           0.00	6.0000e+13
OH+C10H7=>C10H7OH 0.000           0.00	5.0000e+13
OH+C10H7=H+C10H7O 0.000           0.00	5.0000e+13
O+RXYLENE=>H+0.5C2H4+C6H5CHO 0.000           0.00	1.8000e+14
O+C10H7CH2=H+C10H7CHO 0.000           0.00	3.0000e+14
O+RXYLENE=>CH2O+CH3C6H4 0.000           0.00	8.0000e+13
O+INDENYL=CO+C6H5C2H2 0.000           0.00	1.0000e+14
O+C10H7CH2=CH2O+C10H7 0.000           0.00	8.0000e+13
O+C10H7CH3=H+CH3C10H6O 0.000           4500.00	1.5000e+13
O+C10H7CHO=>OH+CO+C10H7 0.000           3000.00	1.0000e+13

O+C10H8=H+C10H7O 0.000            3000.00	2.0000e+13	
O+INDENE=>C2H2+C6H5CHO 0.000            3000.00	1.0000e+13	
HO2+RXYLENE=>H+OH+0.5C2H4+C6H5CHO 0.000            3000.00	5.0000e+12	
HO2+RXYLENE=>OH+CH2O+CH3C6H4 0.000            800.00	1.0000e+13	
HO2+INDENYL=>CO+CH2CHO+C6H5 0.000            0.00	1.0000e+13	
HO2+C10H7CH2=>H+OH+C10H7CHO 0.000            0.00	2.5000e+14	
HO2+C10H7CH2=>OH+CH2O+C10H7 0.000            0.00	8.0000e+13	
HO2+C10H7CH3=>H2O2+C10H7CH2 0.000            14000.00	1.0000e+11	
HO2+C10H7O=>H2O+2CO+C6H5C2H 0.000            6000.00	1.0000e+12	
C10H6CH3=>C3H4-P+C6H4C2H 0.000            72500.00	4.5000e+13	
C10H7CH2=>C2H2+INDENYL 0.000            70000.00	6.0000e+13	
C4H3+C4H2=C6H4C2H 11.560           22547.00	1.0000e+51	-
CH3C10H6O=>H+CO+C10H8 0.000            44000.00	5.0000e+11	
C10H7O=CO+INDENYL 0.000            43000.00	1.2500e+11	
H+LC6H6=H+C6H6 3.300            9650.00	6.5000e+24	-
C2H3+C4H4=H+LC6H6 0.000            3100.00	6.3000e+11	
C2H+C4H6=H+LC6H6 0.000            0.00	3.0000e+13	
H+XYLENE=CH3+C7H8 0.000            5000.00	2.4000e+13	
H+C10H7CH3=CH3+C10H8 0.000            5000.00	1.2000e+13	

H+CH3C10H6OH=CH3+C10H7OH 0.000        5000.00	1.2000e+13
H+C6H5CH2OH=CH2OH+C6H6 0.000        5000.00	1.2000e+13
H+C10H7CHO=HCO+C10H8 0.000        5000.00	1.2000e+13
H+CH3C10H6OH=OH+C10H7CH3 0.000        3000.00	4.0000e+13
H+C6H5C2H5=C2H5+C6H6 0.000        5000.00	2.0000e+13
CH3+C6H5C2H5=C2H5+C7H8 0.000        10000.00	1.2000e+12
H+C6H5CH2OH=OH+C7H8 0.000        5000.00	1.2000e+13
H+C6H5C2H4C6H5=CH3+C6H5CH2C6H5 0.000        5000.00	6.0000e+12
H+C6H5C2H4C6H5=C7H8+CH3C6H4 0.000        15000.00	2.5000e+12
H+C6H5C2H4C6H5=>H+C6H6+C6H5C2H3 0.000        5000.00	2.5000e+12
H+C10H7OH=>OH+C10H8 0.000        7929.00	2.2300e+13
H+INDENE=>0.01CH3+0.25C2H2+0.74C3H3+0.74C6H6+0.25C7H7+0.01C6H5C2H 5.0000e+12    0.000        2000.00	
CH3+C10H7OH=OH+C10H7CH3 0.000        15000.00	1.5000e+12
HO2+C10H7OH=>OH+2CO+C6H5C2H3 0.000        13000.00	5.0000e+12
C2H5+C6H5OH=OH+C6H5C2H5 0.000        15000.00	1.5000e+11
CH3+FLUORENE=>H2+H+C14H10 0.000        7600.00	3.0000e+11
CH3+C6H5C2H=>H+INDENE 0.000        7600.00	3.0000e+11
CH3+INDENE=>H2+H+C10H8 0.000        7600.00	3.0000e+11
C2H+C6H6=H+C6H5C2H 0.000        0.00	1.0000e+12

C2H+C10H8=>H+C12H8 0.000        8000.00	3.0000e+11
C2H+C12H8=>C14H9 0.000        8000.00	3.0000e+11
C2H+C6H5C2H=>C10H7 0.000        8000.00	3.0000e+11
C2H+FLUORENE=>H+0.5C14H10+0.5C16H10 0.000        8000.00	3.0000e+11
C2H+C14H10=H+C16H10 0.000        8000.00	3.0000e+11
C2H+C16H10=H+C18H10 0.000        8000.00	3.0000e+11
C2H3+C6H5C2H=>H+C10H8 0.000        6000.00	1.0000e+12
C2H3+C12H8=>H+C14H10 0.000        6000.00	1.0000e+12
C3H5-S+C6H5C2H=>CH3+C10H8 0.000        5000.00	1.0000e+12
C3H5-A+C12H8=>CH3+C14H10 0.000        18000.00	5.0000e+11
C3H5-A+C6H5C2H=>CH3+C10H8 0.000        18000.00	5.0000e+11
IC4H7+C12H8=>2H2+H+C16H10 0.000        16000.00	1.0000e+12
H2+C14H9=>H+C14H10 0.000        11000.00	1.0000e+13
H2+INDENYL=>H+INDENE 0.000        13000.00	1.0000e+12
C6H5CH2C6H5=H2+FLUORENE 0.000        32000.00	1.0000e+08
C6H5C2H4C6H5=>2H2+C14H10 0.000        40000.00	4.0000e+07
C4H2+C6H5=>C10H7 0.000        5000.00	5.0000e+12
C2H2+CH3C6H4=H+INDENE 0.000        5000.00	1.0000e+12
C2H2+C7H7=H+INDENE 0.000        18000.00	1.0000e+12

C2H2+INDENYL=>C10H7CH2 0.000 20000.00	1.0000e+12
C2H2+C10H7CH2=>CH3+C12H8 0.000 20000.00	1.0000e+12
CH3+C10H7CH2=>C2H4+C10H8 0.000 0.00	3.0000e+12
CH3+C10H7=H+C10H7CH2 0.000 0.00	1.5000e+13
C3H3+C6H5=>INDENE 0.000 3000.00	5.0000e+12
C3H3+C5H5=>C6H5C2H3 0.000 6000.00	5.0000e+12
C3H3+C5H5=>H2+C6H5C2H 0.000 5000.00	2.0000e+12
C3H3+C7H7=>2H+C10H8 0.000 3000.00	5.0000e+12
C3H3+CH3C6H4=>2H+C10H8 0.000 3000.00	5.0000e+12
C3H3+C6H5CHCH3=>H+CH3+C10H8 0.000 6000.00	5.0000e+12
C3H3+C6H4C2H=>0.5C10H8+0.5C12H8 0.000 3000.00	5.0000e+12
C3H3+C6H5C2H2=>C10H7CH3 0.000 3000.00	5.0000e+12
C3H3+RXYLENE=>H+CH3+C10H8 0.000 6000.00	5.0000e+12
C3H3+C10H7=>FLUORENE 0.000 2000.00	5.0000e+12
C3H3+C10H7CH2=>2H+C14H10 0.000 6000.00	5.0000e+12
C3H3+C10H6CH3=>2H+C14H10 0.000 6000.00	5.0000e+12
C3H3+C12H7=>0.5C14H10+0.5C16H10 0.000 3000.00	5.0000e+12
C3H3+C12H9=>2H+0.5C14H10+0.5C16H10 0.000 3000.00	5.0000e+12
C3H3+C14H9=>2H+0.5C16H10+0.5C18H10 0.000 3000.00	5.0000e+12

C3H3+C16H9=>2H+0.5C18H10+0.5BIN1B 0.000 3000.00	5.0000e+12
C3H3+C18H9=>0.25H2+H+1.05BIN1B 0.000 3000.00	5.0000e+12
C4H5+C6H5=>2H+C10H8 0.000 1000.00	5.0000e+12
C4H5+C7H7=>2H+C10H7CH3 0.000 4000.00	5.0000e+12
C4H5+C6H5CHCH3=>H+CH3+C10H7CH3 0.000 4000.00	5.0000e+12
C4H5+CH3C6H4=>2H+C10H7CH3 0.000 1000.00	5.0000e+12
C4H5+C6H4C2H=>H+0.5C10H8+0.5C14H10 0.000 1000.00	5.0000e+12
C4H5+C6H5C2H2=>0.5H2+2H+0.5C10H8+0.5C14H10 0.000 1000.00	5.0000e+12
C4H5+RXYLENE=>0.99999999722028H2+0.99999999861014H+0.99999999559452CH3 +0.166666668652216C10H8+0.666666665279885C14H10 4000.00 5.0000e+12 0.000	
C4H5+INDENYL=>2H+FLUORENE 0.000 4000.00	5.0000e+12
C4H5+C10H7=>2H+C14H10 0.000 1000.00	5.0000e+12
C4H5+C10H7CH2=>H2+2H+0.5C14H10+0.5C16H10 0.000 4000.00	5.0000e+12
C4H5+C10H6CH3=>H2+2H+0.5C14H10+0.5C16H10 0.000 1000.00	5.0000e+12
C4H5+C12H7=>2H+C16H10 0.000 1000.00	5.0000e+12
C4H5+C12H9=>H2+2H+C16H10 0.000 1000.00	5.0000e+12
C4H5+C14H9=>1.999999990501944H+0.500000011492310C18H10+0.033333323322630B IN1B+0.41666666334291BIN1A 5.0000e+12 0.000 1000.00	
C4H5+C16H9=>2.000000010526316H+0.666666668421053BIN1B+0.33333331578947BI N1A 5.0000e+12 0.000 1000.00	
C4H5+C18H9=>1.99999989473684H+0.933333331578947BIN1B+0.166666668421053BI N1A 5.0000e+12 0.000 1000.00	
C6H5+C5H5=>C10H7CH3 0.000 3000.00	2.0000e+12

C5H5+C7H7=>2H+BIPHENYL				5.0000e+11
0.000	6000.00			
C5H5+C7H7=>H2+2H+C12H8				2.0000e+12
0.000	6000.00			
C5H5+C6H5CHCH3=>H+CH3+BIPHENYL				5.0000e+11
0.000	6000.00			
C5H5+C6H5CHCH3=>H2+H+CH3+C12H8				1.0000e+12
0.000	6000.00			
C5H5+CH3C6H4=>2H+BIPHENYL				2.0000e+12
0.000	3000.00			
C5H5+C6H4C2H=>FLUORENE				2.0000e+12
0.000	3000.00			
C5H5+C6H5C2H2=>2H+FLUORENE				2.0000e+12
0.000	3000.00			
C5H5+RXYLENE=>H+CH3+BIPHENYL				2.0000e+12
0.000	6000.00			
C5H5+INDENYL=>2H+C14H10				2.0000e+12
0.000	6000.00			
C5H5+C10H7=>2H+0.5C14H10+0.5C16H10				2.0000e+12
0.000	3000.00			
C5H5+C10H7CH2=>H2+2H+C16H10				2.0000e+12
0.000	6000.00			
C5H5+C10H6CH3=>H2+2H+C16H10				2.0000e+12
0.000	3000.00			
C5H5+C12H7=>2H+0.75C16H10+0.25BIN1B				2.0000e+12
0.000	3000.00			
C5H5+C12H9=>H+CH3+C16H10				2.0000e+12
0.000	3000.00			
C5H5+C14H9=>H+CH3+0.5C16H10+0.5BIN1B				2.0000e+12
0.000	3000.00			
C5H5+C16H9=>H+CH3+BIN1B				2.0000e+12
0.000	3000.00			
C5H5+C18H9=>CH3+1.1BIN1B				2.0000e+12
0.000	3000.00			
2C6H5=BIPHENYL				1.6600e+64 -
14.680	33262.00			
PLOG /	1.000000e-02	1.660000e+64	-1.468000e+01	3.326200e+04
/				
PLOG /	1.000000e-01	6.140000e+37	-7.140000e+00	1.570300e+04
/				



PLOG /	1.000000e+00	7.340000e+20	-2.335000e+00	4.125000e+03
/				
PLOG /	1.000000e+01	1.110000e+14	-4.050000e-01	-6.100000e+02
/				
PLOG /	1.000000e+02	3.090000e+12	3.600000e-02	-1.702000e+03
/				
C6H6+C6H5=H+BIPHENYL				5.6000e+12 -
0.074	7550.00			
PLOG /	2.630000e-02	5.600000e+12	-7.400000e-02	7.550000e+03
/				
PLOG /	1.184000e-01	1.500000e+14	-4.500000e-01	8.915000e+03
/				
PLOG /	1.000000e+00	1.100000e+23	-2.920000e+00	1.589000e+04
/				
PLOG /	5.000000e+00	1.100000e+23	-2.920000e+00	1.589000e+04
/				
H+BIPHENYL=H2+C12H9				3.0000e+12
0.000	10000.00			
CH3+BIPHENYL=CH4+C12H9				1.2500e+06
2.000	10654.35			
C6H5+C7H7=C6H5CH2C6H5				2.0000e+12
0.000	3000.00			
C6H5+CH3C6H4=>2H+FLUORENE				5.0000e+12
0.000	0.00			
C6H5+C6H4C2H=C14H10				5.0000e+12
0.000	0.00			
C6H5+C6H5C2H2=>2H+C14H10				5.0000e+12
0.000	0.00			
C6H5+RXYLENE=>H+CH3+FLUORENE				2.0000e+12
0.000	3000.00			
C6H5+INDENYL=>2H+0.5C14H10+0.5C16H10				2.0000e+12
0.000	3000.00			
C6H5+C10H7=>2H+C16H10				5.0000e+12
0.000	0.00			
C6H5+C10H7CH2=>H+CH3+C16H10				2.0000e+12
0.000	3000.00			
C6H5+C10H6CH3=>H+CH3+C16H10				5.0000e+12
0.000	0.00			
C6H5+C12H7=>2H+C18H10				5.0000e+12
0.000	0.00			
C6H5+C12H9=>H+CH3+0.5C16H10+0.5C18H10				5.0000e+12
0.000	0.00			

C6H5C2H4C6H5=2C7H7				4.3500e+08
1.403	58325.00			
PLOG /	3.947368e-02	3.160000e+101	-2.553200e+01	1.140210e+05
/				
PLOG /	9.210526e-02	1.040000e+93	-2.301400e+01	1.097550e+05
/				
PLOG /	1.973684e-01	5.550000e+84	-2.057700e+01	1.053740e+05
/				
PLOG /	2.631579e-01	3.370000e+81	-1.963300e+01	1.036270e+05
/				
PLOG /	1.000000e+00	6.510000e+66	-1.533500e+01	9.539000e+04
/				
PLOG /	1.000000e+01	2.750000e+54	-1.178300e+01	8.841400e+04
/				
PLOG /	1.000000e+02	8.710000e+52	-1.129000e+01	8.746000e+04
/				
PLOG /	1.000000e+03	4.350000e+08	1.403000e+00	5.832500e+04
/				
C6H5C2H4C6H5=C6H5+C6H5CHCH3				1.0000e+16
0.000	89000.00			
C6H5C2H4C6H5=H+RBBENZ				1.0000e+16
0.000	89000.00			
RBBENZ=C6H5+C6H5C2H3				2.0000e+13
0.000	30000.00			
RBBENZ=H+STILB				1.5000e+13
0.000	38500.00			
STILB=H2+C14H10				1.8000e+13
0.000	78000.00			
C6H5+C6H5C2H3=H+STILB				1.8640e+13 -
0.385	4163.40			
C2H2+C7H5=>INDENYL				1.1000e+86 -
21.259	65862.00			
PLOG /	1.320000e-02	1.100000e+86	-2.125900e+01	6.586200e+04
/				
PLOG /	1.320000e-01	2.290000e+65	-1.533200e+01	5.260000e+04
/				
PLOG /	1.000000e+00	2.580000e+46	-9.963000e+00	3.942600e+04
/				
PLOG /	1.000000e+01	5.470000e+28	-4.989000e+00	2.662200e+04
/				
PLOG /	1.000000e+02	2.500000e+18	-2.092000e+00	1.890600e+04
/				
INDENYL=>C2H2+C7H5				1.5260e+108 -
25.979	180259.00			
PLOG /	1.320000e-02	1.526000e+108	-2.597900e+01	1.802590e+05
/				
PLOG /	1.320000e-01	4.288000e+94	-2.202300e+01	1.727140e+05
/				
PLOG /	1.000000e+00	1.476000e+79	-1.761700e+01	1.623890e+05
/				

PLOG /	1.000000e+01	1.894000e+60	-1.230400e+01	1.486320e+05
/				
PLOG /	1.000000e+02	1.412000e+44	-7.806000e+00	1.362730e+05
/				
C3H3+C6H4=>C2H2+C7H5				6.9300e+59 -
12.732	53252.00			
PLOG /	1.320000e-02	6.930000e+59	-1.273200e+01	5.325200e+04
/				
PLOG /	1.320000e-01	4.360000e+61	-1.305400e+01	6.148500e+04
/				
PLOG /	1.000000e+00	9.610000e+54	-1.109800e+01	6.193700e+04
/				
PLOG /	1.000000e+01	2.580000e+38	-6.427000e+00	5.521900e+04
/				
PLOG /	1.000000e+02	3.290000e+15	-1.000000e-03	4.539300e+04
/				
C2H2+C7H5=>C3H3+C6H4				4.6800e+61 -
13.236	79195.00			
PLOG /	1.320000e-02	4.680000e+61	-1.323600e+01	7.919500e+04
/				
PLOG /	1.320000e-01	2.760000e+63	-1.355100e+01	8.740600e+04
/				
PLOG /	1.000000e+00	5.740000e+56	-1.158700e+01	8.783800e+04
/				
PLOG /	1.000000e+01	1.440000e+40	-6.908000e+00	8.109600e+04
/				
PLOG /	1.000000e+02	1.810000e+17	-4.800000e-01	7.127100e+04
/				
C7H7+INDENYL=>1.5H2+H+C16H10				5.0000e+11
0.000	7000.00			
C3H3+INDENYL=>BIPHENYL				2.5000e+12
0.000	7000.00			
C3H3+INDENYL=>H2+C12H8				5.0000e+11
0.000	7000.00			
C7H7+CH3C6H4=>H2+2H+C14H10				2.0000e+12
0.000	3000.00			
C7H7+C6H4C2H=>2H+0.5C14H10+0.5C16H10				2.0000e+12
0.000	3000.00			
C7H7+C6H5C2H2=>H2+2H+0.5C14H10+0.5C16H10				2.0000e+12
0.000	3000.00			
C7H7+RXYLENE=>H2+H+CH3+C14H10				1.0000e+12
0.000	6000.00			
C7H7+C10H7=>H+CH3+C16H10				2.0000e+12
0.000	3000.00			
C7H7+C10H7CH2=>2H2+2H+C18H10				1.0000e+12
0.000	6000.00			

C7H7+C10H6CH3=>2H2+2H+C18H10	2.0000e+12
0.000 3000.00	
C7H7+C12H7=>H+CH3+C18H10	2.0000e+12
0.000 3000.00	
C7H7+C12H9=>0.999997847762442H+0.999995484734420CH3+0.857138540777918C16H10+0.214289393140945BIN1A	2.0000e+12 0.000 3000.00
CH3C6H4+C6H5CHCH3=>H2+H+CH3+C14H10	2.0000e+12
0.000 3000.00	
C6H4C2H+C6H5CHCH3=>H+CH3+0.5C14H10+0.5C16H10	2.0000e+12
0.000 3000.00	
C6H5C2H2+C6H5CHCH3=>H2+H+CH3+0.5C14H10+0.5C16H10	2.0000e+12
0.000 3000.00	
C6H5CHCH3+RXYLENE=>H2+2CH3+C14H10	1.0000e+12
0.000 6000.00	
C6H5CHCH3+INDENYL=>1.5H2+CH3+C16H10	1.0000e+12
0.000 6000.00	
C6H5CHCH3+C10H7=>2CH3+C16H10	2.0000e+12
0.000 3000.00	
C6H5CHCH3+C10H7CH2=>H2+2CH3+0.75C16H10+0.25BIN1B	1.0000e+12
0.000 6000.00	
C6H5CHCH3+C10H6CH3=>H2+2CH3+0.75C16H10+0.25BIN1B	2.0000e+12
0.000 3000.00	
C6H5CHCH3+C12H7=>2CH3+C18H10	2.0000e+12
0.000 3000.00	
C6H5CHCH3+C12H9=>1.999994993247390CH3+0.857138923265808C16H10+0.214289111724984BIN1A	2.0000e+12 0.000 3000.00
2CH3C6H4=>H2+2H+C14H10	5.0000e+12
0.000 0.00	
CH3C6H4+C6H4C2H=>2H+0.5C14H10+0.5C16H10	5.0000e+12
0.000 0.00	
CH3C6H4+C6H5C2H2=>H2+2H+0.5C14H10+0.5C16H10	5.0000e+12
0.000 0.00	
CH3C6H4+RXYLENE=>H2+H+CH3+C14H10	2.0000e+12
0.000 3000.00	
CH3C6H4+INDENYL=>1.5H2+H+C16H10	2.0000e+12
0.000 3000.00	
CH3C6H4+C10H7=>H+CH3+C16H10	5.0000e+12
0.000 0.00	

CH3C6H4+C10H7CH2=>H2+H+CH3+0.75C16H10+0.25BIN1B 0.000 3000.00	2.0000e+12
CH3C6H4+C10H6CH3=>H2+H+CH3+0.75C16H10+0.25BIN1B 0.000 0.00	5.0000e+12
CH3C6H4+C12H7=>H+CH3+0.5C16H10+0.5BIN1B 0.000 0.00	5.0000e+12
CH3C6H4+C12H9=>0.999997847762442H+0.999995484734420CH3+0.857138540777918C 16H10+0.214289393140945BIN1A 5.0000e+12 0.000 0.00	
2C6H4C2H=>C16H10 0.000 0.00	5.0000e+12
C6H4C2H+C6H5C2H2=>2H+C16H10 0.000 0.00	5.0000e+12
C6H4C2H+RXYLENE=>H+CH3+0.5C14H10+0.5C16H10 0.000 3000.00	2.0000e+12
C6H4C2H+INDENYL=>2H+0.75C16H10+0.25BIN1B 0.000 3000.00	5.0000e+12
C6H4C2H+C10H7=>2H+0.5C16H10+0.5BIN1B 0.000 0.00	5.0000e+12
C6H4C2H+C10H7CH2=>H+CH3+0.5C16H10+0.5BIN1B 0.000 3000.00	2.0000e+12
C6H4C2H+C10H6CH3=>H+CH3+0.5C16H10+0.5BIN1B 0.000 0.00	5.0000e+12
2C6H5C2H2=>H2+2H+C16H10 0.000 0.00	5.0000e+12
C6H5C2H2+RXYLENE=>H2+H+CH3+0.5C14H10+0.5C16H10 0.000 3000.00	2.0000e+12
C6H5C2H2+INDENYL=>H2+2H+0.75C16H10+0.25BIN1B 0.000 3000.00	5.0000e+12
C6H5C2H2+C10H7=>H2+2H+0.5C16H10+0.5BIN1B 0.000 0.00	5.0000e+12
C6H5C2H2+C10H7CH2=>H2+H+CH3+0.5C16H10+0.5BIN1B 0.000 3000.00	2.0000e+12
C6H5C2H2+C10H6CH3=>H2+H+CH3+0.5C16H10+0.5BIN1B 0.000 0.00	5.0000e+12
2RXYLENE=>2H2+H+CH3+0.5C14H10+0.5C16H10 0.000 6000.00	1.0000e+12
RXYLENE+INDENYL=>H2+H+CH3+C16H10 0.000 6000.00	1.0000e+12

RXYLENE+C10H7=>H2+H+CH3+0.75C16H10+0.25BIN1B 0.000 3000.00	2.0000e+12
RXYLENE+C10H7CH2=>H2+2CH3+0.75C16H10+0.25BIN1B 0.000 6000.00	1.0000e+12
RXYLENE+C10H6CH3=>H2+2CH3+0.75C16H10+0.25BIN1B 0.000 3000.00	2.0000e+12
RXYLENE+C12H7=>H2+H+CH3+0.25C16H10+0.75BIN1B 0.000 3000.00	2.0000e+12
2INDENYL=>H+CH3+0.75C16H10+0.25BIN1B 0.000 6000.00	2.0000e+12
INDENYL+C10H7=>H+CH3+0.5C16H10+0.5BIN1B 0.000 3000.00	2.0000e+12
C3H3+C6H6=>H+INDENE 0.000 19000.00	4.0000e+11
C3H3+C7H8=>H2+H+C10H8 0.000 19000.00	4.0000e+11
C3H3+C6H5C2H=>C10H7CH2 0.000 19000.00	4.0000e+11
C3H3+C6H5C2H3=>H+C10H7CH3 0.000 19000.00	4.0000e+11
C3H3+XYLENE=>H2+H+C10H7CH3 0.000 19000.00	4.0000e+11
C3H3+C6H5C2H5=>H2+H+C10H7CH3 0.000 19000.00	4.0000e+11
C3H3+INDENE=>H+BIPHENYL 0.000 19000.00	4.0000e+11
C3H3+C10H8=>H+FLUORENE 0.000 19000.00	4.0000e+11
C3H3+C10H7CH3=>H2+H+C14H10 0.000 19000.00	4.0000e+11
C3H3+C12H8=>H+0.5C14H10+0.5C16H10 0.000 19000.00	4.0000e+11
C3H3+BIPHENYL=>H2+H+0.5C14H10+0.5C16H10 0.000 19000.00	4.0000e+11
C3H3+FLUORENE=>H2+H+C16H10 0.000 19000.00	4.0000e+11
C3H3+C14H10=>H2+H+0.75C16H10+0.25BIN1B 0.000 19000.00	4.0000e+11

C3H3+C16H10=>H2+H+0.25C16H10+0.75BIN1B 0.000 19000.00	4.0000e+11
C6H6+C5H5=>H+C10H7CH3 0.000 23000.00	4.0000e+11
C5H5+C7H8=>H2+H+BIPHENYL 0.000 19000.00	4.0000e+11
C5H5+C6H5C2H=H+FLUORENE 0.000 19000.00	4.0000e+11
C5H5+C6H5C2H3=>H2+H+FLUORENE 0.000 18000.00	1.0000e+12
C5H5+XYLENE=>H2+CH3+BIPHENYL 0.000 19000.00	4.0000e+11
C5H5+C6H5C2H5=>H2+CH3+BIPHENYL 0.000 19000.00	4.0000e+11
C5H5+INDENE=>H2+H+C14H10 0.000 19000.00	4.0000e+11
C5H5+C10H8=>CH3+C14H10 0.000 19000.00	4.0000e+11
C5H5+C10H7CH3=>2H2+H+C16H10 0.000 19000.00	4.0000e+11
C5H5+C12H8=>0.999990295358650H+0.571425105485232C16H10+0.392859915611815B IN1A 4.0000e+11 0.000 19000.00	
C5H5+BIPHENYL=>0.99999833640271CH3+0.285714155003069C16H10+0.57142868431 5531BIN1A 4.0000e+11 0.000 19000.00	
C5H5+FLUORENE=>1.000001265822785H+0.142857594936709C16H10+0.7857139240506 33BIN1A 4.0000e+11 0.000 19000.00	
C5H5+C6H5CH2C6H5=>0.999999363517060H2+0.999999081364829CH3+0.571427395013 123C16H10+0.392858129921260BIN1A 4.0000e+11 0.000 19000.00	
C5H5+C14H10=>1.000000843881857H+0.428571729957806C16H10+0.607142616033755 BIN1A 4.0000e+11 0.000 19000.00	
C5H5+C6H5C2H4C6H5=>1.000001056430446H2+1.000001181102362CH3+0.14285882545 9318C16H10+0.785712880577428BIN1A 4.0000e+11 0.000 19000.00	
C5H5+C16H10=>0.99999986842105H+0.466666664473684BIN1B+0.58333333526316B IN1A 4.0000e+11 0.000 19000.00	
2C4H6=>2H2+C6H5C2H3 0.000 30000.00	1.2500e+12
2C4H6=>H2+C6H5C2H5 0.000 36000.00	2.0000e+12

C4H6+C6H5=>CH3+INDENE	1.0000e+12
0.000 6000.00	
C6H5+C5H6=>CH3+C10H8	1.0000e+12
0.000 8000.00	
C6H5+C7H8=H+C6H5CH2C6H5	1.0000e+12
0.000 8000.00	
C6H5+C6H5C2H=>H+C14H10	1.0000e+12
0.000 8000.00	
C6H5+C6H5C2H3=>H2+H+C14H10	1.0000e+12
0.000 8000.00	
C6H5+XYLENE=>H2+CH3+FLUORENE	1.0000e+12
0.000 8000.00	
C6H5+C6H5C2H5=>H2+CH3+FLUORENE	1.0000e+12
0.000 8000.00	
C6H5+INDENE=>CH3+C14H10	1.0000e+12
0.000 8000.00	
C6H5+C10H8=>H2+H+C16H10	1.0000e+12
0.000 8000.00	
C6H5+C10H7CH3=>H2+CH3+C16H10	1.0000e+12
0.000 8000.00	
C6H5+C12H8=>1.000007594936709H+0.857145569620253C16H10+0.214283544303797B IN1A	1.0000e+12 0.000 8000.00
C6H5+BIPHENYL=>1.000013080168776H+0.142861814345992C16H10+0.7857105485232 07BIN1A	1.0000e+12 0.000 8000.00
C6H5+FLUORENE=>1.000000843881857H+0.428571729957806C16H10+0.6071426160337 55BIN1A	1.0000e+12 0.000 8000.00
C6H5+C6H5CH2C6H5=>1.000001663597299CH3+0.142858449969306C16H10+0.78571315 6844690BIN1A	1.0000e+12 0.000 8000.00
C6H5+C6H5C2H4C6H5=>1.000000636482940H2+1.000000918635171CH3+0.42857260498 6876C16H10+0.607141870078740BIN1A	1.0000e+12 0.000 8000.00
C5H6+C7H7=>H2+H+BIPHENYL	4.0000e+11
0.000 19000.00	
C6H6+C7H7=H+C6H5CH2C6H5	4.0000e+11
0.000 19000.00	
C7H8+C7H7=H+C6H5C2H4C6H5	4.0000e+11
0.000 23000.00	
C7H7+C6H5C2H3=>H2+CH3+C14H10	4.0000e+11
0.000 19000.00	



C7H7+XYLENE=>CH3+C6H5C2H4C6H5	4.0000e+11
0.000 19000.00	
C7H7+C6H5C2H5=>CH3+C6H5C2H4C6H5	4.0000e+11
0.000 19000.00	
C7H7+INDENE=>0.999999501246883H2+0.999999750623441H+0.285713840399003C16H10+0.571428927680798BIN1A	4.0000e+11 0.000 19000.00
C10H8+C7H7=>0.999999545733579CH3+0.285713928790669C16H10+0.571428879680786BIN1A	4.0000e+11 0.000 19000.00
C7H7+C10H7CH3=>3H2+H+0.5C16H10+0.5BIN1B	4.0000e+11
0.000 19000.00	
C7H7+C12H8=>1.000003797468354H+0.428572784810127C16H10+0.607141772151899BIN1A	4.0000e+11 0.000 19000.00
C7H7+BIPHENYL=>1.000001663597299CH3+0.142858449969306C16H10+0.785713156844690BIN1A	4.0000e+11 0.000 19000.00
C7H7+C6H5CH2C6H5=>1.000000636482940H2+1.000000918635171CH3+0.428572604986876C16H10+0.607141870078740BIN1A	4.0000e+11 0.000 19000.00
C5H6+CH3C6H4=>H2+H+BIPHENYL	1.0000e+12
0.000 8000.00	
C6H6+CH3C6H4=>H2+H+FLUORENE	1.0000e+12
0.000 8000.00	
C7H8+CH3C6H4=>2H2+H+C14H10	1.0000e+12
0.000 8000.00	
CH3C6H4+C6H5C2H3=>H2+CH3+C14H10	1.0000e+12
0.000 8000.00	
CH3C6H4+XYLENE=>CH3+C6H5C2H4C6H5	1.0000e+12
0.000 8000.00	
CH3C6H4+C6H5C2H5=>CH3+C6H5C2H4C6H5	1.0000e+12
0.000 8000.00	
CH3C6H4+INDENE=>0.999999501246883H2+0.999999750623441H+0.285713840399003C16H10+0.571428927680798BIN1A	1.0000e+12 0.000 8000.00
C10H8+CH3C6H4=>0.999999545733579CH3+0.285713928790669C16H10+0.571428879680786BIN1A	1.0000e+12 0.000 8000.00
CH3C6H4+C10H7CH3=>3H2+H+0.5C16H10+0.5BIN1B	1.0000e+12
0.000 8000.00	
CH3C6H4+C12H8=>1.000003797468354H+0.428572784810127C16H10+0.607141772151899BIN1A	1.0000e+12 0.000 8000.00
CH3C6H4+BIPHENYL=>1.000001663597299CH3+0.142858449969306C16H10+0.785713156844690BIN1A	1.0000e+12 0.000 8000.00

CH3C6H4+C6H5CH2C6H5=>1.000000636482940H2+1.000000918635171CH3+0.428572604 986876C16H10+0.607141870078740BIN1A 1.0000e+12 0.000 8000.00	
C5H6+C6H4C2H=>CH3+C12H8 0.000 8000.00	1.0000e+12
C6H6+C6H4C2H=>H+C14H10 0.000 8000.00	1.0000e+12
C6H5C2H+C6H4C2H=>H+C16H10 0.000 8000.00	1.0000e+12
C6H4C2H+C6H5C2H3=>H2+H+C16H10 0.000 8000.00	1.0000e+12
C6H4C2H+XYLENE=>H2+CH3+0.5C14H10+0.5C16H10 0.000 8000.00	1.0000e+12
C6H4C2H+C6H5C2H5=>H2+CH3+0.5C14H10+0.5C16H10 0.000 8000.00	1.0000e+12
C6H4C2H+INDENE=>CH3+C16H10 0.000 8000.00	1.0000e+12
C10H8+C6H4C2H=>CH3+0.75C16H10+0.25BIN1B 0.000 8000.00	1.0000e+12
C6H4C2H+C10H7CH3=>H2+CH3+0.5C16H10+0.5BIN1B 0.000 8000.00	1.0000e+12
C5H6+C6H5C2H2=>H2+CH3+C12H8 0.000 8000.00	1.0000e+12
C6H6+C6H5C2H2=>H2+H+C14H10 0.000 8000.00	1.0000e+12
C6H5C2H+C6H5C2H2=>H2+H+C16H10 0.000 8000.00	1.0000e+12
C6H5C2H3+C6H5C2H2=>2H2+H+C16H10 0.000 8000.00	1.0000e+12
C6H5C2H2+XYLENE=>2H2+CH3+0.5C14H10+0.5C16H10 0.000 8000.00	1.0000e+12
C6H5C2H5+C6H5C2H2=>2H2+CH3+0.5C14H10+0.5C16H10 0.000 8000.00	1.0000e+12
C6H5C2H2+INDENE=>H2+CH3+C16H10 0.000 8000.00	1.0000e+12
C10H8+C6H5C2H2=>H2+CH3+0.75C16H10+0.25BIN1B 0.000 8000.00	1.0000e+12
C6H5C2H2+C10H7CH3=>2H2+CH3+0.5C16H10+0.5BIN1B 0.000 8000.00	1.0000e+12

C5H6+RXYLENE=>2H2+CH3+C12H8	4.0000e+11
0.000 19000.00	
C6H6+RXYLENE=>0.5H2+H+CH3+FLUORENE	4.0000e+11
0.000 19000.00	
C7H8+RXYLENE=>2H2+CH3+C14H10	4.0000e+11
0.000 19000.00	
C6H5C2H+RXYLENE=>H2+CH3+0.5C14H10+0.5C16H10	4.0000e+11
0.000 19000.00	
C6H5C2H3+RXYLENE=>2H2+CH3+0.5C14H10+0.5C16H10	4.0000e+11
0.000 19000.00	
XYLENE+RXYLENE=>3H2+CH3+0.5C14H10+0.5C16H10	4.0000e+11
0.000 19000.00	
C6H5C2H5+RXYLENE=>3H2+CH3+0.5C14H10+0.5C16H10	4.0000e+11
0.000 19000.00	
RXYLENE+INDENE=>2H2+CH3+C16H10	4.0000e+11
0.000 19000.00	
C10H8+RXYLENE=>2H2+CH3+0.75C16H10+0.25BIN1B	4.0000e+11
0.000 19000.00	
RXYLENE+C10H7CH3=>3H2+CH3+0.5C16H10+0.5BIN1B	4.0000e+11
0.000 19000.00	
C5H6+INDENYL=>H2+H+C14H10	4.0000e+11
0.000 19000.00	
C6H6+INDENYL=>CH3+C14H10	4.0000e+11
0.000 19000.00	
C7H8+INDENYL=>H2+CH3+0.5C14H10+0.5C16H10	4.0000e+11
0.000 19000.00	
C6H5C2H3+INDENYL=>0.999999545733579CH3+0.285713928790669C16H10+0.571428879680786BIN1A	4.0000e+11 0.000 19000.00
XYLENE+INDENYL=>0.999999894356956H2+0.999999881889764CH3+0.285714117454068C16H10+0.571428711942257BIN1A	4.0000e+11 0.000 19000.00
C6H5C2H5+INDENYL=>0.999999894356956H2+0.999999881889764CH3+0.285714117454068C16H10+0.571428711942257BIN1A	4.0000e+11 0.000 19000.00
INDENE+INDENYL=>0.999986497890295H+0.142852320675106C16H10+0.785718143459915BIN1A	4.0000e+11 0.000 19000.00
C10H8+INDENYL=>1.000012658227848H+0.428575949367089C16H10+0.607139240506329BIN1A	4.0000e+11 0.000 19000.00
INDENYL+C10H7CH3=>2H2+CH3+0.25C16H10+0.75BIN1B	4.0000e+11
0.000 19000.00	

C5H6+C10H7=>CH3+C14H10 1.0000e+12  
0.000 8000.00

C6H6+C10H7=>H2+H+C16H10 1.0000e+12  
0.000 8000.00

C7H8+C10H7=>0.99999833640271CH3+0.285714155003069C16H10+0.57142868431553  
1BIN1A 1.0000e+12 0.000 8000.00

C6H5C2H+C10H7=>CH3+0.75C16H10+0.25BIN1B 1.0000e+12  
0.000 8000.00

C6H5C2H3+C10H7=>1.000000379746835H+0.142857278481013C16H10+0.785714177215  
190BIN1A 1.0000e+12 0.000 8000.00

XYLENE+C10H7=>0.999999363517060H2+0.999999081364829CH3+0.571427395013123C  
16H10+0.392858129921260BIN1A 1.0000e+12 0.000 8000.00

C6H5C2H5+C10H7=>0.999999363517060H2+0.999999081364829CH3+0.57142739501312  
3C16H10+0.392858129921260BIN1A 1.0000e+12 0.000 8000.00

INDENE+C10H7=>1.000000843881857H+0.428571729957806C16H10+0.60714261603375  
5BIN1A 1.0000e+12 0.000 8000.00

C5H6+C10H7CH2=>H2+CH3+0.5C14H10+0.5C16H10 4.0000e+11  
0.000 19000.00

C6H6+C10H7CH2=>H2+CH3+C16H10 4.0000e+11  
0.000 19000.00

C7H8+C10H7CH2=>0.999999363517060H2+0.999999081364829CH3+0.571427395013123  
C16H10+0.392858129921260BIN1A 4.0000e+11 0.000 19000.00

C6H5C2H+C10H7CH2=>H2+CH3+0.5C16H10+0.5BIN1B 4.0000e+11  
0.000 19000.00

C6H5C2H3+C10H7CH2=>1.000000529158993CH3+0.142857558624923C16H10+0.7857139  
26642112BIN1A 4.0000e+11 0.000 19000.00

XYLENE+C10H7CH2=>1.000001056430446H2+1.000001181102362CH3+0.1428588254593  
18C16H10+0.785712880577428BIN1A 4.0000e+11 0.000 19000.00

C6H5C2H5+C10H7CH2=>1.000001056430446H2+1.000001181102362CH3+0.14285882545  
9318C16H10+0.785712880577428BIN1A 4.0000e+11 0.000 19000.00

INDENE+C10H7CH2=>1.000001209330878CH3+0.428572378759975C16H10+0.607142036  
525476BIN1A 4.0000e+11 0.000 19000.00

C5H6+C10H6CH3=>H2+CH3+0.5C14H10+0.5C16H10 1.0000e+12  
0.000 8000.00

C6H6+C10H6CH3=>H2+CH3+C16H10 1.0000e+12  
0.000 8000.00

C7H8+C10H6CH3=>0.999999363517060H2+0.999999081364829CH3+0.571427395013123  
C16H10+0.392858129921260BIN1A 1.0000e+12 0.000 8000.00

C6H5C2H+C10H6CH3=>H2+CH3+0.5C16H10+0.5BIN1B 1.0000e+12  
0.000 8000.00

C6H5C2H3+C10H6CH3=>1.000000529158993CH3+0.142857558624923C16H10+0.7857139  
26642112BIN1A 1.0000e+12 0.000 8000.00

XYLENE+C10H6CH3=>1.000001056430446H2+1.000001181102362CH3+0.1428588254593  
18C16H10+0.785712880577428BIN1A 1.0000e+12 0.000 8000.00

C6H5C2H5+C10H6CH3=>1.000001056430446H2+1.000001181102362CH3+0.14285882545  
9318C16H10+0.785712880577428BIN1A 1.0000e+12 0.000 8000.00

INDENE+C10H6CH3=>1.000001209330878CH3+0.428572378759975C16H10+0.607142036  
525476BIN1A 1.0000e+12 0.000 8000.00

C5H6+C12H7=>CH3+C16H10 1.0000e+12  
0.000 8000.00

C6H6+C12H7=>CH3+0.75C16H10+0.25BIN1B 1.0000e+12  
0.000 8000.00

C7H8+C12H7=>1.000003797468354H+0.428572784810127C16H10+0.607141772151899B  
IN1A 1.0000e+12 0.000 8000.00

C6H5C2H+C12H7=>CH3+0.25C16H10+0.75BIN1B 1.0000e+12  
0.000 8000.00

C5H6+C12H9=>0.999999833640271CH3+0.285714155003069C16H10+0.57142868431553  
1BIN1A 1.0000e+12 0.000 8000.00

C6H6+C12H9=>1.000001265822785H+0.142857594936709C16H10+0.785713924050633B  
IN1A 1.0000e+12 0.000 8000.00

C7H8+C12H9=>1.000001663597299CH3+0.142858449969306C16H10+0.78571315684469  
0BIN1A 1.0000e+12 0.000 8000.00

XYLENE+C12H9=>1.000000636482940H2+1.000000918635171CH3+0.428572604986876C  
16H10+0.607141870078740BIN1A 1.0000e+12 0.000 8000.00

C6H5C2H5+C12H9=>1.000000636482940H2+1.000000918635171CH3+0.42857260498687  
6C16H10+0.607141870078740BIN1A 1.0000e+12 0.000 8000.00

C5H6+C14H9=>H2+CH3+0.5C16H10+0.5BIN1B 1.0000e+12  
0.000 8000.00

C5H6+C16H9=>0.99999986842105H+0.466666664473684BIN1B+0.58333333526316BI  
N1A 1.0000e+12 0.000 8000.00

C5H6+C18H9=>1.000000001315789H+0.73333333352632BIN1B+0.41666666447368BI  
N1A 1.0000e+12 0.000 8000.00

OH+BIN1A=>0.4H2+HCO+0.2C10H8+0.85BIN1A 3.5000e+13  
0.500 9600.00

OH+BIN1B=>HCO+0.5C18H10+0.5BIN1B 3.5000e+13  
0.500 9600.00

C6H5CHCH3=H+C6H5C2H3	2.0000e+14
0.000 50700.00	
H+C6H5C2H3=C2H3+C6H6	1.2000e+13
0.000 5500.00	
C2H4+C6H5=H+C6H5C2H3	2.5100e+12
0.000 6190.00	
O2+C6H5CHCH3=>HO2+C6H5C2H3	1.0000e+12
0.000 12000.00	
HO2+C6H5CHCH3=>OH+CH3+C6H5CHO	1.0000e+12
0.000 2500.00	
HO2+C6H5CHCH3=>OH+CH3CHO+C6H5	1.0000e+12
0.000 2500.00	
H+XYLENE=>H2+RXYLENE	2.0000e+14
0.000 7925.00	
CH3+XYLENE=>CH4+RXYLENE	3.5000e+12
0.000 8846.00	
OH+C10H7OH=H2O+C10H7O	1.0000e+14
0.000 630.00	
C6H5+C14H9=>H2+2H+BIN1B	5.0000e+12
0.000 0.00	
C6H5+C16H9=>0.5H2+2H+1.1BIN1B	5.0000e+12
0.000 0.00	
C6H5+C18H9=>2H+1.2BIN1B	5.0000e+12
0.000 0.00	
C7H7+C14H9=>0.1333333333333333BIN1B+0.916666666666667BIN1A	2.0000e+12
0.000 3000.00	
C7H7+C16H9=>0.4BIN1B+0.75BIN1A	2.0000e+12
0.000 3000.00	
C7H7+C18H9=>0.666666666666667BIN1B+0.5833333333333333BIN1A	2.0000e+12
0.000 3000.00	
CH3C6H4+C14H9=>0.1333333333333333BIN1B+0.916666666666667BIN1A	5.0000e+12
0.000 0.00	
CH3C6H4+C16H9=>0.4BIN1B+0.75BIN1A	5.0000e+12
0.000 0.00	
CH3C6H4+C18H9=>0.666666666666667BIN1B+0.5833333333333333BIN1A	5.0000e+12
0.000 0.00	
C6H4C2H+C12H7=>2H+BIN1B	5.0000e+12
0.000 0.00	

C6H4C2H+C12H9=>1.999999986842105H+0.666666664473685BIN1B+0.3333333352631  
6BIN1A 5.0000e+12 0.000 0.00

C6H4C2H+C14H9=>0.6BIN1B+0.5BIN1A 5.0000e+12  
0.000 0.00

C6H5C2H2+C12H7=>H2+2H+BIN1B 5.0000e+12  
0.000 0.00

C6H5C2H2+C12H9=>0.999999978260870H2+1.999999989130435H+0.666666657608696B  
IN1B+0.333333342391304BIN1A 5.0000e+12 0.000 0.00

C6H5C2H2+C14H9=>2H+0.6BIN1B+0.5BIN1A 5.0000e+12  
0.000 0.00

RXYLENE+C12H9=>1.999999978260870H2+1.999999989130435H+0.666666657608696BI  
N1B+0.333333342391304BIN1A 2.0000e+12 0.000 3000.00

RXYLENE+C14H9=>0.999999991597495H+0.999999961552172CH3+0.466666651168712B  
IN1B+0.583333350753679BIN1A 2.0000e+12 0.000 3000.00

INDENYL+C10H7CH2=>2H2+2H+BIN1B 1.0000e+12  
0.000 6000.00

INDENYL+C10H6CH3=>2H2+2H+BIN1B 2.0000e+12  
0.000 3000.00

INDENYL+C12H7=>H+CH3+BIN1B 2.0000e+12  
0.000 3000.00

INDENYL+C12H9=>0.1333333333333333BIN1B+0.916666666666667BIN1A 2.0000e+12  
0.000 3000.00

INDENYL+C14H9=>0.4BIN1B+0.75BIN1A 2.0000e+12  
0.000 3000.00

2C10H7=>H2+2H+BIN1B 5.0000e+12  
0.000 0.00

C10H7+C10H7CH2=>H2+H+CH3+BIN1B 2.0000e+12  
0.000 3000.00

C10H7+C10H6CH3=>H2+H+CH3+BIN1B 5.0000e+12  
0.000 0.00

C10H7+C12H7=>0.6BIN1B+0.5BIN1A 5.0000e+12  
0.000 0.00

C10H7+C12H9=>H+CH3+0.8BIN1B+0.25BIN1A 5.0000e+12  
0.000 0.00

2C10H7CH2=>0.2H2+1.1BIN1A 1.0000e+12  
0.000 6000.00

C10H6CH3+C10H7CH2=>0.2H2+1.1BIN1A 2.0000e+12  
0.000 3000.00

2C10H6CH3=>0.2H2+1.1BIN1A	5.0000e+12
0.000 0.00	
C6H5+C14H10=>1.000000013157895H+0.33333333526316BIN1B+0.666666664473684B IN1A 1.0000e+12 0.000 8000.00	
C6H5+C16H10=>H+0.6BIN1B+0.5BIN1A	1.0000e+12
0.000 8000.00	
C7H7+C6H5C2H=>H+0.75BIN1A	4.0000e+11
0.000 19000.00	
C7H7+FLUORENE=>H+BIN1A	4.0000e+11
0.000 19000.00	
C7H7+C14H10=>1.000000131578947H+0.133333335263158BIN1B+0.9166666644736842B IN1A 4.0000e+11 0.000 19000.00	
C7H7+C6H5C2H4C6H5=>H2+CH3+BIN1A	4.0000e+11
0.000 19000.00	
C7H7+C16H10=>H+0.4BIN1B+0.75BIN1A	4.0000e+11
0.000 19000.00	
CH3C6H4+C6H5C2H=>H+0.75BIN1A	4.0000e+11
0.000 19000.00	
CH3C6H4+FLUORENE=>H+BIN1A	4.0000e+11
0.000 19000.00	
CH3C6H4+C14H10=>1.000000131578947H+0.133333335263158BIN1B+0.91666666447368 42BIN1A 4.0000e+11 0.000 19000.00	
CH3C6H4+C6H5C2H4C6H5=>H2+CH3+BIN1A	4.0000e+11
0.000 19000.00	
CH3C6H4+C16H10=>H+0.4BIN1B+0.75BIN1A	4.0000e+11
0.000 19000.00	
C7H8+C6H4C2H=>H+0.75BIN1A	1.0000e+12
0.000 8000.00	
C6H4C2H+C12H8=>0.99999986842105H+0.666666664473685BIN1B+0.3333333352631 6BIN1A 1.0000e+12 0.000 8000.00	
C6H4C2H+BIPHENYL=>0.99999953947368H+0.33333325657895BIN1B+0.66666667434 2105BIN1A 1.0000e+12 0.000 8000.00	
C6H4C2H+FLUORENE=>0.99999986842105H+0.466666664473684BIN1B+0.5833333352 6316BIN1A 1.0000e+12 0.000 8000.00	
C6H4C2H+C6H5CH2C6H5=>0.99995394736842H+0.13332565789474BIN1B+0.91666743 4210526BIN1A 1.0000e+12 0.000 8000.00	
C6H4C2H+C14H10=>H+0.6BIN1B+0.5BIN1A	1.0000e+12
0.000 8000.00	



C6H4C2H+C6H5C2H4C6H5=>0.999991983435974CH3+0.133330393926524BIN1B+0.91667  
0006901678BIN1A 1.0000e+12 0.000 8000.00

C6H4C2H+C16H10=>0.99999986842105H+0.866666664473684BIN1B+0.33333335263  
16BIN1A 1.0000e+12 0.000 8000.00

C7H8+C6H5C2H2=>H2+H+0.75BIN1A 1.0000e+12  
0.000 8000.00

C6H5C2H2+C12H8=>0.99999978260870H2+0.99999989130435H+0.66666657608696B  
IN1B+0.33333342391304BIN1A 1.0000e+12 0.000 8000.00

C6H5C2H2+BIPHENYL=>0.99999923913043H2+0.99999961956522H+0.333333016304  
35BIN1B+0.66666698369565BIN1A 1.0000e+12 0.000 8000.00

C6H5C2H2+FLUORENE=>0.99999978260870H2+0.99999989130435H+0.466666576086  
96BIN1B+0.58333342391304BIN1A 1.0000e+12 0.000 8000.00

C6H5C2H2+C6H5CH2C6H5=>0.999992391304348H2+0.999996195652174H+0.1333301630  
43478BIN1B+0.916669836956522BIN1A 1.0000e+12 0.000 8000.00

C6H5C2H2+C14H10=>H2+H+0.6BIN1B+0.5BIN1A 1.0000e+12  
0.000 8000.00

C6H5C2H2+C6H5C2H4C6H5=>0.999993480036298H2+0.999993284936479CH3+0.1333286  
97822142BIN1B+0.916671637931034BIN1A 1.0000e+12 0.000 8000.00

C6H5C2H2+C16H10=>0.99999978260870H2+0.99999989130435H+0.86666657608696  
BIN1B+0.33333342391304BIN1A 1.0000e+12 0.000 8000.00

RXYLENE+C12H8=>1.99999978260870H2+0.99999989130435H+0.66666657608696BI  
N1B+0.33333342391304BIN1A 4.0000e+11 0.000 19000.00

RXYLENE+BIPHENYL=>1.99999923913043H2+0.99999961956522H+0.3333330163043  
5BIN1B+0.66666698369565BIN1A 4.0000e+11 0.000 19000.00

RXYLENE+FLUORENE=>1.99999978260870H2+0.99999989130435H+0.4666665760869  
6BIN1B+0.58333342391304BIN1A 4.0000e+11 0.000 19000.00

RXYLENE+C6H5CH2C6H5=>1.999992391304348H2+0.999996195652174H+0.13333016304  
3478BIN1B+0.916669836956522BIN1A 4.0000e+11 0.000 19000.00

RXYLENE+C14H10=>2H2+H+0.6BIN1B+0.5BIN1A 4.0000e+11  
0.000 19000.00

RXYLENE+C6H5C2H4C6H5=>1.999993480036298H2+0.999993284936479CH3+0.13332869  
7822142BIN1B+0.916671637931034BIN1A 4.0000e+11 0.000 19000.00

RXYLENE+C16H10=>1.99999978260870H2+0.99999989130435H+0.86666657608696B  
IN1B+0.33333342391304BIN1A 4.0000e+11 0.000 19000.00

C6H5C2H+INDENYL=>H2+CH3+0.8BIN1B 4.0000e+11  
0.000 19000.00

INDENYL+C12H8=>0.99999986842105H+0.466666664473684BIN1B+0.583333352631  
6BIN1A 4.0000e+11 0.000 19000.00

INDENYL+BIPHENYL=>1.000000013157895H+0.13333333526316BIN1B+0.91666664473684BIN1A 4.0000e+11 0.000 19000.00

INDENYL+FLUORENE=>0.99999986842105H+0.26666664473684BIN1B+0.83333333526316BIN1A 4.0000e+11 0.000 19000.00

INDENYL+C6H5CH2C6H5=>1.000000039286473CH3+0.133333347738373BIN1B+0.916666650297303BIN1A 4.0000e+11 0.000 19000.00

INDENYL+C14H10=>H+0.4BIN1B+0.75BIN1A 4.0000e+11  
0.000 19000.00

INDENYL+C6H5C2H4C6H5=>0.99999985027223H2+0.99999963702359CH3+0.266666648366606BIN1B+0.833333353448276BIN1A 4.0000e+11 0.000 19000.00

C10H8+C10H7=>1.000000013157895H+0.33333333526316BIN1B+0.66666664473684BIN1A 1.0000e+12 0.000 8000.00

C10H7+C10H7CH3=>2H2+CH3+BIN1B 1.0000e+12  
0.000 8000.00

C10H7+C12H8=>H+0.6BIN1B+0.5BIN1A 1.0000e+12  
0.000 8000.00

C10H7+BIPHENYL=>0.99999394736842H+0.266666565789474BIN1B+0.833333434210526BIN1A 1.0000e+12 0.000 8000.00

C10H7+FLUORENE=>H+0.4BIN1B+0.75BIN1A 1.0000e+12  
0.000 8000.00

C10H7+C6H5CH2C6H5=>0.99993947368421H+0.066665657894736BIN1B+1.083334342105263BIN1A 1.0000e+12 0.000 8000.00

C10H7+C14H10=>1.000000013157895H+0.53333333526316BIN1B+0.66666664473684BIN1A 1.0000e+12 0.000 8000.00

C10H7+C6H5C2H4C6H5=>0.99987661923976CH3+0.066662142705457BIN1B+1.083338474198344BIN1A 1.0000e+12 0.000 8000.00

C10H8+C10H7CH2=>1.000000039286473CH3+0.333333347738373BIN1B+0.66666650297303BIN1A 4.0000e+11 0.000 19000.00

C10H7CH2+C10H7CH3=>0.2H2+H+1.1BIN1A 4.0000e+11  
0.000 19000.00

C10H7CH2+C12H8=>CH3+0.6BIN1B+0.5BIN1A 4.0000e+11  
0.000 19000.00

C10H7CH2+BIPHENYL=>0.99998766192397CH3+0.266666214270546BIN1B+0.833333847419834BIN1A 4.0000e+11 0.000 19000.00

C10H7CH2+FLUORENE=>CH3+0.4BIN1B+0.75BIN1A 4.0000e+11  
0.000 19000.00

C10H7CH2+C6H5CH2C6H5=>0.99987661923976CH3+0.066662142705457BIN1B+1.083338474198344BIN1A 4.0000e+11 0.000 19000.00

C10H7CH2+C14H10=>1.000000039286473CH3+0.533333347738373BIN1B+0.6666666502  
97303BIN1A 4.0000e+11 0.000 19000.00

C10H7CH2+C6H5C2H4C6H5=>H2+H+1.25BIN1A 4.0000e+11  
0.000 19000.00

C10H8+C10H6CH3=>1.000000039286473CH3+0.333333347738373BIN1B+0.66666665029  
7303BIN1A 1.0000e+12 0.000 8000.00

C10H6CH3+C10H7CH3=>0.2H2+H+1.1BIN1A 1.0000e+12  
0.000 8000.00

C10H6CH3+C12H8=>CH3+0.6BIN1B+0.5BIN1A 1.0000e+12  
0.000 8000.00

C10H6CH3+BIPHENYL=>0.999998766192397CH3+0.266666214270546BIN1B+0.83333384  
7419834BIN1A 1.0000e+12 0.000 8000.00

C10H6CH3+FLUORENE=>CH3+0.4BIN1B+0.75BIN1A 1.0000e+12  
0.000 8000.00

C10H6CH3+C6H5CH2C6H5=>0.999987661923976CH3+0.066662142705457BIN1B+1.08333  
8474198344BIN1A 1.0000e+12 0.000 8000.00

C10H6CH3+C14H10=>1.000000039286473CH3+0.533333347738373BIN1B+0.6666666502  
97303BIN1A 1.0000e+12 0.000 8000.00

C10H6CH3+C6H5C2H4C6H5=>H2+H+1.25BIN1A 1.0000e+12  
0.000 8000.00

C6H5C2H3+C12H7=>0.999995394736842H+0.333332565789474BIN1B+0.6666674342105  
26BIN1A 1.0000e+12 0.000 8000.00

XYLENE+C12H7=>H+BIN1A 1.0000e+12  
0.000 8000.00

C6H5C2H5+C12H7=>H+BIN1A 1.0000e+12  
0.000 8000.00

INDENE+C12H7=>0.99999868421053H+0.466666644736842BIN1B+0.58333335263158  
BIN1A 1.0000e+12 0.000 8000.00

C10H8+C12H7=>H+0.6BIN1B+0.5BIN1A 1.0000e+12  
0.000 8000.00

C10H7CH3+C12H7=>H+0.4BIN1B+0.75BIN1A 1.0000e+12  
0.000 8000.00

C12H8+C12H7=>0.99999986842105H+0.86666664473684BIN1B+0.3333333526316B  
IN1A 1.0000e+12 0.000 8000.00

C12H7+BIPHENYL=>1.000000013157895H+0.5333333526316BIN1B+0.666666644736  
84BIN1A 1.0000e+12 0.000 8000.00

C6H5C2H+C12H9=>1.000000013157895H+0.3333333526316BIN1B+0.6666666447368  
4BIN1A 1.0000e+12 0.000 8000.00

C6H5C2H3+C12H9=>H+BIN1A 1.0000e+12  
0.000 8000.00

INDENE+C12H9=>1.000000013157895H+0.13333333526316BIN1B+0.91666664473684  
BIN1A 1.0000e+12 0.000 8000.00

C10H8+C12H9=>0.999993947368421H+0.266665657894736BIN1B+0.833334342105263B  
IN1A 1.0000e+12 0.000 8000.00

C10H7CH3+C12H9=>0.99999868421053H+0.066666644736842BIN1B+1.083333352631  
58BIN1A 1.0000e+12 0.000 8000.00

C12H8+C12H9=>1.000000013157895H+0.53333333526316BIN1B+0.66666664473684B  
IN1A 1.0000e+12 0.000 8000.00

BIPHENYL+C12H9=>H+0.2BIN1B+BIN1A 1.0000e+12  
0.000 8000.00

C6H6+C14H9=>0.99999539473684H+0.33333256578947BIN1B+0.666666743421052BI  
N1A 1.0000e+12 0.000 8000.00

C7H8+C14H9=>1.000000013157895H+0.13333333526316BIN1B+0.91666664473684BI  
N1A 1.0000e+12 0.000 8000.00

C6H5C2H+C14H9=>H+0.6BIN1B+0.5BIN1A 1.0000e+12  
0.000 8000.00

C6H5C2H3+C14H9=>0.99999394736842H+0.26666565789474BIN1B+0.8333334342105  
26BIN1A 1.0000e+12 0.000 8000.00

XYLENE+C14H9=>1.000000039286473CH3+0.133333347738373BIN1B+0.916666502973  
03BIN1A 1.0000e+12 0.000 8000.00

C6H5C2H5+C14H9=>1.000000039286473CH3+0.133333347738373BIN1B+0.9166665029  
7303BIN1A 1.0000e+12 0.000 8000.00

INDENE+C14H9=>H+0.4BIN1B+0.75BIN1A 1.0000e+12  
0.000 8000.00

C10H8+C14H9=>1.000000013157895H+0.53333333526316BIN1B+0.66666664473684B  
IN1A 1.0000e+12 0.000 8000.00

C6H6+C16H9=>H+0.6BIN1B+0.5BIN1A 1.0000e+12  
0.000 8000.00

C7H8+C16H9=>H+0.4BIN1B+0.75BIN1A 1.0000e+12  
0.000 8000.00

C6H6+C18H9=>1.000000005315790H+0.866666667552632BIN1B+0.33333332447369BI  
N1A 1.0000e+12 0.000 8000.00

C7H8+C18H9=>1.000000000105263H+0.66666666684210BIN1B+0.58333333315790BI  
N1A 1.0000e+12 0.000 8000.00

H+C6H4O2=>H2+2CO+C2H2+C2H 1.0500e+08  
2.000 9705.55

CH3+C6H4O2=>2CO+CH4+C2H2+C2H	1.0500e+06
2.000 10934.70	
C2H3+C6H4O2=>2CO+C2H4+C2H2+C2H	2.3730e+06
2.000 9581.60	
C2H5+C6H4O2=>2CO+C2H6+C2H2+C2H	7.0000e+05
2.000 12987.97	
NC3H7+C6H4O2=>2CO+C2H2+C2H+C3H8	4.7250e+05
2.000 12987.97	
IC3H7+C6H4O2=>2CO+C2H2+C2H+C3H8	4.7250e+05
2.000 16762.22	
C3H5-S+C6H4O2=>2CO+C2H2+C2H+C3H6	9.4500e+05
2.000 10322.38	
C3H5-T+C6H4O2=>2CO+C2H2+C2H+C3H6	9.4500e+05
2.000 10322.38	
C3H5-A+C6H4O2=>2CO+C2H2+C2H+C3H6	1.8865e+06
2.000 20110.38	
C4H5+C6H4O2=>2CO+C2H2+C2H+C4H6	9.4500e+05
2.000 10322.38	
C4H71-4+C6H4O2=>2CO+C2H2+C2H+C4H8-1	4.7250e+05
2.000 12868.27	
C4H71-3+C6H4O2=>2CO+C2H2+C2H+C4H8-2	1.1900e+06
2.000 21138.84	
IC4H7+C6H4O2=>2CO+C2H2+C2H+IC4H8	9.4500e+05
2.000 21138.84	
C4H3+C6H4O2=>2CO+C2H2+C2H+C4H4	1.4315e+06
2.000 11178.46	
C6H5+C6H4O2=>2CO+C2H2+C2H+C6H6	1.2950e+09
1.000 6528.60	
O+C6H4O2=>OH+2CO+C2H2+C2H	8.2250e+07
2.000 7822.71	
OH+C6H4O2=>H2O+2CO+C2H2+C2H	5.2500e+10
1.000 3670.39	
H02+C6H4O2=>H2O2+2CO+C2H2+C2H	2.8000e+07
2.000 23748.43	
CH3O+C6H4O2=>2CO+CH3OH+C2H2+C2H	1.4980e+06
2.000 6533.22	
CH2OH+C6H4O2=>2CO+CH3OH+C2H2+C2H	9.9050e+05
2.000 17111.32	

HCO+C6H4O2=>2CO+CH2O+C2H2+C2H	4.4100e+06
2.000 19537.02	
CH3CO+C6H4O2=>2CO+C2H2+C2H+CH3CHO	4.7250e+06
2.000 21480.69	
CH2CHO+C6H4O2=>2CO+C2H2+C2H+CH3CHO	8.0500e+05
2.000 18616.45	
C3H3+C6H4O2=>2CO+C2H2+C2H+C3H4-A	9.4500e+05
2.000 21480.69	
HCCO+C6H4O2=>2CO+C2H2+C2H+CH2CO	1.4980e+06
2.000 11178.46	
CH3O2+C6H4O2=>2CO+CH3O2H+C2H2+C2H	2.6600e+06
2.000 19881.21	
C2H5O2+C6H4O2=>2CO+C2H5O2H+C2H2+C2H	2.6600e+06
2.000 19881.21	
NC3H7O2+C6H4O2=>2CO+C2H2+C2H+C3H7OOH	2.6600e+06
2.000 19881.21	
IC3H7O2+C6H4O2=>2CO+C2H2+C2H+C3H7OOH	2.6600e+06
2.000 19881.21	
HCO3+C6H4O2=>2CO+C2H2+C2H+HCO3H	1.1900e+06
2.000 12748.45	
CH3CO3+C6H4O2=>2CO+C2H2+C2H+CH3CO3H	1.1900e+06
2.000 12748.45	
CH3COCH2+C6H4O2=>2CO+C2H2+C2H+CH3COCH3	8.0500e+05
2.000 14533.50	
C6H5O+C6H4O2=>2CO+C2H2+C2H+C6H5OH	9.4500e+05
2.000 19766.54	
C5H7+C6H4O2=>2CO+C2H2+C2H+LC5H8	9.4500e+05
2.000 22616.91	
C7H7+C6H4O2=>2CO+C2H2+C2H+C7H8	4.7250e+05
2.000 23748.43	
CH3C6H4+C6H4O2=>2CO+C2H2+C2H+C7H8	1.2950e+09
1.000 6528.60	
C6H4O2+RCRESOLO=>2CO+C2H2+C2H+RCRESOL	9.4500e+05
2.000 20110.38	
C6H4O2+C10H7=>2CO+C2H2+C2H+C10H8	1.2950e+09
1.000 6528.60	
C6H4O2+INDENYL=>2CO+C2H2+C2H+INDENE	4.5500e+05
2.000 23748.43	

C6H4O2+C10H6CH3=>2CO+C2H2+C2H+C10H7CH3	1.2950e+09
1.000        6528.60	
H+C10H7CHO=>H2+CO+C10H7	2.4000e+07
2.000        2573.61	
CH3+C10H7CHO=>CO+CH4+C10H7	2.4000e+05
2.000        3516.32	
C2H3+C10H7CHO=>CO+C2H4+C10H7	5.4240e+05
2.000        2479.60	
C2H5+C10H7CHO=>CO+C2H6+C10H7	1.6000e+05
2.000        5128.01	
NC3H7+C10H7CHO=>CO+C3H8+C10H7	1.0800e+05
2.000        5128.01	
IC3H7+C10H7CHO=>CO+C3H8+C10H7	1.0800e+05
2.000        8184.45	
C3H5-S+C10H7CHO=>CO+C3H6+C10H7	2.1600e+05
2.000        3044.41	
C3H5-T+C10H7CHO=>CO+C3H6+C10H7	2.1600e+05
2.000        3044.41	
C3H5-A+C10H7CHO=>CO+C3H6+C10H7	4.3120e+05
2.000        10972.41	
C4H5+C10H7CHO=>CO+C4H6+C10H7	2.1600e+05
2.000        3044.41	
C4H71-4+C10H7CHO=>CO+C4H8-1+C10H7	1.0800e+05
2.000        5032.93	
C4H71-3+C10H7CHO=>CO+C4H8-2+C10H7	2.7200e+05
2.000        11840.29	
IC4H7+C10H7CHO=>CO+IC4H8+C10H7	2.1600e+05
2.000        11840.29	
C4H3+C10H7CHO=>CO+C4H4+C10H7	3.2720e+05
2.000        3705.38	
C6H5+C10H7CHO=>CO+C6H6+C10H7	2.9600e+08
1.000        867.85	
O2+C10H7CHO=>HO2+CO+C10H7	1.3600e+07
2.000        41405.89	
OH+C10H7CHO=>H2O+CO+C10H7	1.2000e+10
1.000        -855.10	
HO2+C10H7CHO=>H2O2+CO+C10H7	6.4000e+06
2.000        14062.89	

CH3O+C10H7CHO=>CO+CH3OH+C10H7	3.4240e+05
2.000 241.70	
CH2OH+C10H7CHO=>CO+CH3OH+C10H7	2.2640e+05
2.000 8472.17	
HCO+C10H7CHO=>CO+CH2O+C10H7	1.0080e+06
2.000 10490.75	
CH3CO+C10H7CHO=>CO+CH3CHO+C10H7	1.0800e+06
2.000 12129.83	
CH2CHO+C10H7CHO=>CO+CH3CHO+C10H7	1.8400e+05
2.000 9720.89	
C3H3+C10H7CHO=>CO+C3H4-A+C10H7	2.1600e+05
2.000 12129.83	
HCCO+C10H7CHO=>CO+CH2CO+C10H7	3.4240e+05
2.000 3705.38	
CH3O2+C10H7CHO=>CO+CH3O2H+C10H7	6.0800e+05
2.000 10779.70	
C2H5O2+C10H7CHO=>CO+C2H5O2H+C10H7	6.0800e+05
2.000 10779.70	
NC3H7O2+C10H7CHO=>CO+C3H7OOH+C10H7	6.0800e+05
2.000 10779.70	
IC3H7O2+C10H7CHO=>CO+C3H7OOH+C10H7	6.0800e+05
2.000 10779.70	
HCO3+C10H7CHO=>CO+HCO3H+C10H7	2.7200e+05
2.000 4937.89	
CH3CO3+C10H7CHO=>CO+CH3CO3H+C10H7	2.7200e+05
2.000 4937.89	
CH3COCH2+C10H7CHO=>CO+CH3COCH3+C10H7	1.8400e+05
2.000 6366.63	
C6H5O+C10H7CHO=>CO+C6H5OH+C10H7	2.1600e+05
2.000 10683.36	
C5H7+C10H7CHO=>CO+LC5H8+C10H7	2.1600e+05
2.000 13095.77	
C7H7+C10H7CHO=>CO+C7H8+C10H7	1.0800e+05
2.000 14062.89	
CH3C6H4+C10H7CHO=>CO+C7H8+C10H7	2.9600e+08
1.000 867.85	
RCRESOLO+C10H7CHO=>CO+CRESOL+C10H7	2.1600e+05
2.000 10972.41	



C10H7+C10H7CHO=>CO+C10H8+C10H7	2.9600e+08
1.000 867.85	
INDENYL+C10H7CHO=>CO+INDENE+C10H7	1.0400e+05
2.000 14062.89	
C10H6CH3+C10H7CHO=>CO+C10H7+C10H7CH3	2.9600e+08
1.000 867.85	
H+C6H5CH2OH=>H2+H+C6H5CHO	6.0000e+06
2.000 5510.29	
CH3+C6H5CH2OH=>H+CH4+C6H5CHO	6.0000e+04
2.000 6570.95	
C2H3+C6H5CH2OH=>H+C2H4+C6H5CHO	1.3560e+05
2.000 5403.95	
C2H5+C6H5CH2OH=>H+C2H6+C6H5CHO	4.0000e+04
2.000 8364.46	
NC3H7+C6H5CH2OH=>H+C3H8+C6H5CHO	2.7000e+04
2.000 8364.46	
IC3H7+C6H5CH2OH=>H+C3H8+C6H5CHO	2.7000e+04
2.000 11716.47	
C3H5-S+C6H5CH2OH=>H+C3H6+C6H5CHO	5.4000e+04
2.000 6041.22	
C3H5-T+C6H5CH2OH=>H+C3H6+C6H5CHO	5.4000e+04
2.000 6041.22	
C3H5-A+C6H5CH2OH=>H+C3H6+C6H5CHO	1.0780e+05
2.000 14735.10	
C4H5+C6H5CH2OH=>H+C4H6+C6H5CHO	5.4000e+04
2.000 6041.22	
C4H71-4+C6H5CH2OH=>H+C4H8-1+C6H5CHO	2.7000e+04
2.000 8259.25	
C4H71-3+C6H5CH2OH=>H+C4H8-2+C6H5CHO	6.8000e+04
2.000 15669.11	
IC4H7+C6H5CH2OH=>H+IC4H8+C6H5CHO	5.4000e+04
2.000 15669.11	
C4H3+C6H5CH2OH=>H+C4H4+C6H5CHO	8.1800e+04
2.000 6782.53	
C6H5+C6H5CH2OH=>H+C6H6+C6H5CHO	7.4000e+07
1.000 3198.75	
O+C6H5CH2OH=>H+OH+C6H5CHO	4.7000e+06
2.000 3908.95	

OH+C6H5CH2OH=>H+H2O+C6H5CHO	3.0000e+09
1.000 1008.34	
HO2+C6H5CH2OH=>H+H2O2+C6H5CHO	1.6000e+06
2.000 18051.06	
CH3O+C6H5CH2OH=>H+CH3OH+C6H5CHO	8.5600e+04
2.000 2832.32	
CH2OH+C6H5CH2OH=>H+CH3OH+C6H5CHO	5.6600e+04
2.000 12029.47	
HCO+C6H5CH2OH=>H+CH2O+C6H5CHO	2.5200e+05
2.000 14215.68	
CH3CO+C6H5CH2OH=>H+CH3CHO+C6H5CHO	2.7000e+05
2.000 15980.18	
CH2CHO+C6H5CH2OH=>H+CH3CHO+C6H5CHO	4.6000e+04
2.000 13383.76	
C3H3+C6H5CH2OH=>H+C3H4-A+C6H5CHO	5.4000e+04
2.000 15980.18	
HCCO+C6H5CH2OH=>H+CH2CO+C6H5CHO	8.5600e+04
2.000 6782.53	
CH3O2+C6H5CH2OH=>H+CH3O2H+C6H5CHO	1.5200e+05
2.000 14527.38	
C2H5O2+C6H5CH2OH=>H+C2H5O2H+C6H5CHO	1.5200e+05
2.000 14527.38	
NC3H7O2+C6H5CH2OH=>H+C3H7OOH+C6H5CHO	1.5200e+05
2.000 14527.38	
IC3H7O2+C6H5CH2OH=>H+C3H7OOH+C6H5CHO	1.5200e+05
2.000 14527.38	
HCO3+C6H5CH2OH=>H+HCO3H+C6H5CHO	6.8000e+04
2.000 8154.00	
CH3CO3+C6H5CH2OH=>H+CH3CO3H+C6H5CHO	6.8000e+04
2.000 8154.00	
CH3COCH2+C6H5CH2OH=>H+CH3COCH3+C6H5CHO	4.6000e+04
2.000 9729.46	
C6H5O+C6H5CH2OH=>H+C6H5OH+C6H5CHO	5.4000e+04
2.000 14423.50	
C5H7+C6H5CH2OH=>H+LC5H8+C6H5CHO	5.4000e+04
2.000 17016.24	
C7H7+C6H5CH2OH=>H+C7H8+C6H5CHO	2.7000e+04
2.000 18051.06	

CH3C6H4+C6H5CH2OH=>H+C7H8+C6H5CHO	7.4000e+07
1.000 3198.75	
RCRESOLO+C6H5CH2OH=>H+C6H5CHO+CRESOL	5.4000e+04
2.000 14735.10	
C6H5CH2OH+C10H7=>H+C10H8+C6H5CHO	7.4000e+07
1.000 3198.75	
C6H5CH2OH+INDENYL=>H+C6H5CHO+INDENE	2.6000e+04
2.000 18051.06	
C6H5CH2OH+C10H6CH3=>H+C6H5CHO+C10H7CH3	7.4000e+07
1.000 3198.75	
H+CH3C10H6OH=>H2+CH3C10H6O	1.0500e+07
2.000 4000.00	
CH3+CH3C10H6OH=>CH4+CH3C10H6O	1.0500e+05
2.000 5000.00	
C2H3+CH3C10H6OH=>C2H4+CH3C10H6O	2.3730e+05
2.000 3900.00	
C2H5+CH3C10H6OH=>C2H6+CH3C10H6O	7.0000e+04
2.000 6700.00	
NC3H7+CH3C10H6OH=>C3H8+CH3C10H6O	4.7250e+04
2.000 6700.00	
IC3H7+CH3C10H6OH=>C3H8+CH3C10H6O	4.7250e+04
2.000 9900.00	
C3H5-S+CH3C10H6OH=>C3H6+CH3C10H6O	9.4500e+04
2.000 4500.00	
C3H5-T+CH3C10H6OH=>C3H6+CH3C10H6O	9.4500e+04
2.000 4500.00	
C3H5-A+CH3C10H6OH=>C3H6+CH3C10H6O	1.8865e+05
2.000 12800.00	
C4H5+CH3C10H6OH=>C4H6+CH3C10H6O	9.4500e+04
2.000 4500.00	
C4H71-4+CH3C10H6OH=>C4H8-1+CH3C10H6O	4.7250e+04
2.000 6600.00	
C4H71-3+CH3C10H6OH=>C4H8-2+CH3C10H6O	1.1900e+05
2.000 13700.00	
IC4H7+CH3C10H6OH=>IC4H8+CH3C10H6O	9.4500e+04
2.000 13700.00	
C4H3+CH3C10H6OH=>C4H4+CH3C10H6O	1.4315e+05
2.000 5200.00	

C6H5+CH3C10H6OH=>C6H6+CH3C10H6O	1.2950e+08
1.000 2000.00	
O+CH3C10H6OH=>OH+CH3C10H6O	8.2250e+06
2.000 2500.00	
O2+CH3C10H6OH=>HO2+CH3C10H6O	5.9500e+06
2.000 44000.00	
OH+CH3C10H6OH=>H2O+CH3C10H6O	5.2500e+09
1.000 50.00	
HO2+CH3C10H6OH=>H2O2+CH3C10H6O	2.8000e+06
2.000 16000.00	
CH3O+CH3C10H6OH=>CH3OH+CH3C10H6O	1.4980e+05
2.000 1500.00	
CH2OH+CH3C10H6OH=>CH3OH+CH3C10H6O	9.9050e+04
2.000 10200.00	
HCO+CH3C10H6OH=>CH2O+CH3C10H6O	4.4100e+05
2.000 12300.00	
CH3CO+CH3C10H6OH=>CH3CHO+CH3C10H6O	4.7250e+05
2.000 14000.00	
CH2CHO+CH3C10H6OH=>CH3CHO+CH3C10H6O	8.0500e+04
2.000 11500.00	
C3H3+CH3C10H6OH=>C3H4-A+CH3C10H6O	9.4500e+04
2.000 14000.00	
HCCO+CH3C10H6OH=>CH2CO+CH3C10H6O	1.4980e+05
2.000 5200.00	
CH3O2+CH3C10H6OH=>CH3O2H+CH3C10H6O	2.6600e+05
2.000 12600.00	
C2H5O2+CH3C10H6OH=>C2H5O2H+CH3C10H6O	2.6600e+05
2.000 12600.00	
NC3H7O2+CH3C10H6OH=>C3H7OOH+CH3C10H6O	2.6600e+05
2.000 12600.00	
IC3H7O2+CH3C10H6OH=>C3H7OOH+CH3C10H6O	2.6600e+05
2.000 12600.00	
HCO3+CH3C10H6OH=>HCO3H+CH3C10H6O	1.1900e+05
2.000 6500.00	
CH3CO3+CH3C10H6OH=>CH3CO3H+CH3C10H6O	1.1900e+05
2.000 6500.00	
CH3COCH2+CH3C10H6OH=>CH3COCH3+CH3C10H6O	8.0500e+04
2.000 8000.00	

C6H5O+CH3C10H6OH=>C6H5OH+CH3C10H6O 2.000 12500.00	9.4500e+04
C5H7+CH3C10H6OH=>LC5H8+CH3C10H6O 2.000 15000.00	9.4500e+04
C7H7+CH3C10H6OH=>C7H8+CH3C10H6O 2.000 16000.00	4.7250e+04
CH3C6H4+CH3C10H6OH=>C7H8+CH3C10H6O 1.000 2000.00	1.2950e+08
RCRESOLO+CH3C10H6OH=>CRESOL+CH3C10H6O 2.000 12800.00	9.4500e+04
C10H7+CH3C10H6OH=>C10H8+CH3C10H6O 1.000 2000.00	1.2950e+08
INDENYL+CH3C10H6OH=>INDENE+CH3C10H6O 2.000 16000.00	4.5500e+04
C10H6CH3+CH3C10H6OH=>C10H7CH3+CH3C10H6O 1.000 2000.00	1.2950e+08
H+C6H5C2H3=>H2+C6H5C2H2 2.000 9957.26	3.0000e+07
CH3+C6H5C2H3=>CH4+C6H5C2H2 2.000 11196.53	3.0000e+05
C2H3+C6H5C2H3=>C2H4+C6H5C2H2 2.000 9832.26	6.7800e+05
C2H5+C6H5C2H3=>C2H6+C6H5C2H2 2.000 13265.38	2.0000e+05
NC3H7+C6H5C2H3=>C3H8+C6H5C2H2 2.000 13265.38	1.3500e+05
IC3H7+C6H5C2H3=>C3H8+C6H5C2H2 2.000 17064.96	1.3500e+05
C3H5-S+C6H5C2H3=>C3H6+C6H5C2H2 2.000 10579.25	2.7000e+05
C3H5-T+C6H5C2H3=>C3H6+C6H5C2H2 2.000 10579.25	2.7000e+05
C3H5-A+C6H5C2H3=>C3H6+C6H5C2H2 2.000 20432.90	5.3900e+05
C4H5+C6H5C2H3=>C4H6+C6H5C2H2 2.000 10579.25	2.7000e+05
C4H71-4+C6H5C2H3=>C4H8-1+C6H5C2H2 2.000 13144.81	1.3500e+05

C4H71-3+C6H5C2H3=>C4H8-2+C6H5C2H2	3.4000e+05
2.000 21467.03	
IC4H7+C6H5C2H3=>IC4H8+C6H5C2H2	2.7000e+05
2.000 21467.03	
C4H3+C6H5C2H3=>C4H4+C6H5C2H2	4.0900e+05
2.000 11442.22	
C6H5+C6H5C2H3=>C6H6+C6H5C2H2	3.7000e+08
1.000 6728.39	
O+C6H5C2H3=>OH+C6H5C2H2	2.3500e+07
2.000 8057.53	
O2+C6H5C2H3=>HO2+C6H5C2H2	1.7000e+07
2.000 54834.21	
OH+C6H5C2H3=>H2O+C6H5C2H2	1.5000e+10
1.000 3830.11	
HO2+C6H5C2H3=>H2O2+C6H5C2H2	8.0000e+06
2.000 24090.27	
CH3O+C6H5C2H3=>CH3OH+C6H5C2H2	4.2800e+05
2.000 6755.27	
CH2OH+C6H5C2H3=>CH3OH+C6H5C2H2	2.8300e+05
2.000 17416.23	
HCO+C6H5C2H3=>CH2O+C6H5C2H2	1.2600e+06
2.000 19856.30	
CH3CO+C6H5C2H3=>CH3CHO+C6H5C2H2	1.3500e+06
2.000 21810.72	
CH2CHO+C6H5C2H3=>CH3CHO+C6H5C2H2	2.3000e+05
2.000 18930.41	
C3H3+C6H5C2H3=>C3H4-A+C6H5C2H2	2.7000e+05
2.000 21810.72	
HCCO+C6H5C2H3=>CH2CO+C6H5C2H2	4.2800e+05
2.000 11442.22	
CH3O2+C6H5C2H3=>CH3O2H+C6H5C2H2	7.6000e+05
2.000 20202.44	
C2H5O2+C6H5C2H3=>C2H5O2H+C6H5C2H2	7.6000e+05
2.000 20202.44	
NC3H7O2+C6H5C2H3=>C3H7OOH+C6H5C2H2	7.6000e+05
2.000 20202.44	
IC3H7O2+C6H5C2H3=>C3H7OOH+C6H5C2H2	7.6000e+05
2.000 20202.44	

HCO3+C6H5C2H3=>HCO3H+C6H5C2H2	3.4000e+05
2.000 13024.11	
CH3CO3+C6H5C2H3=>CH3CO3H+C6H5C2H2	3.4000e+05
2.000 13024.11	
CH3COCH2+C6H5C2H3=>CH3COCH3+C6H5C2H2	2.3000e+05
2.000 14821.74	
C6H5O+C6H5C2H3=>C6H5OH+C6H5C2H2	2.7000e+05
2.000 20087.13	
C5H7+C6H5C2H3=>LC5H8+C6H5C2H2	2.7000e+05
2.000 22952.95	
C7H7+C6H5C2H3=>C7H8+C6H5C2H2	1.3500e+05
2.000 24090.27	
CH3C6H4+C6H5C2H3=>C7H8+C6H5C2H2	3.7000e+08
1.000 6728.39	
RCRESOLO+C6H5C2H3=>CRESOL+C6H5C2H2	2.7000e+05
2.000 20432.90	
C6H5C2H3+C10H7=>C10H8+C6H5C2H2	3.7000e+08
1.000 6728.39	
C6H5C2H3+INDENYL=>C6H5C2H2+INDENE	1.3000e+05
2.000 24090.27	
C6H5C2H3+C10H6CH3=>C6H5C2H2+C10H7CH3	3.7000e+08
1.000 6728.39	
H+C6H5C2H5=>H2+C2H4+C6H5	9.0000e+06
2.000 6349.34	
CH3+C6H5C2H5=>CH4+C2H4+C6H5	9.0000e+04
2.000 7443.70	
C2H3+C6H5C2H5=>2C2H4+C6H5	2.0340e+05
2.000 6239.48	
C2H5+C6H5C2H5=>C2H6+C2H4+C6H5	6.0000e+04
2.000 9289.16	
NC3H7+C6H5C2H5=>C2H4+C3H8+C6H5	4.0500e+04
2.000 9289.16	
IC3H7+C6H5C2H5=>C2H4+C3H8+C6H5	4.0500e+04
2.000 12725.62	
C3H5-S+C6H5C2H5=>C2H4+C3H6+C6H5	8.1000e+04
2.000 6897.45	
C3H5-T+C6H5C2H5=>C2H4+C3H6+C6H5	8.1000e+04
2.000 6897.45	

C3H5-A+C6H5C2H5=>C2H4+C3H6+C6H5	1.6170e+05
2.000 15810.16	
C4H5+C6H5C2H5=>C2H4+C4H6+C6H5	8.1000e+04
2.000 6897.45	
C4H71-4+C6H5C2H5=>C2H4+C4H8-1+C6H5	4.0500e+04
2.000 9181.05	
C4H71-3+C6H5C2H5=>C2H4+C4H8-2+C6H5	1.0200e+05
2.000 16763.05	
IC4H7+C6H5C2H5=>C2H4+IC4H8+C6H5	8.1000e+04
2.000 16763.05	
C4H3+C6H5C2H5=>C2H4+C4H4+C6H5	1.2270e+05
2.000 7661.72	
C6H5+C6H5C2H5=>C2H4+C6H6+C6H5	1.1100e+08
1.000 3864.72	
O+C6H5C2H5=>OH+C2H4+C6H5	7.0500e+06
2.000 4691.70	
O2+C6H5C2H5=>HO2+C2H4+C6H5	5.1000e+06
2.000 48272.65	
OH+C6H5C2H5=>H2O+C2H4+C6H5	4.5000e+09
1.000 1540.75	
HO2+C6H5C2H5=>H2O2+C2H4+C6H5	2.4000e+06
2.000 19190.53	
CH3O+C6H5C2H5=>CH3OH+C2H4+C6H5	1.2840e+05
2.000 3572.50	
CH2OH+C6H5C2H5=>CH3OH+C2H4+C6H5	8.4900e+04
2.000 13045.84	
HCO+C6H5C2H5=>CH2O+C2H4+C6H5	3.7800e+05
2.000 15279.95	
CH3CO+C6H5C2H5=>C2H4+CH3CHO+C6H5	4.0500e+05
2.000 17080.28	
CH2CHO+C6H5C2H5=>C2H4+CH3CHO+C6H5	6.9000e+04
2.000 14430.30	
C3H3+C6H5C2H5=>C2H4+C3H4-A+C6H5	8.1000e+04
2.000 17080.28	
HCCO+C6H5C2H5=>C2H4+CH2CO+C6H5	1.2840e+05
2.000 7661.72	
CH3O2+C6H5C2H5=>CH3O2H+C2H4+C6H5	2.2800e+05
2.000 15598.15	



C2H5O2+C6H5C2H5=>C2H5O2H+C2H4+C6H5	2.2800e+05
2.000 15598.15	
NC3H7O2+C6H5C2H5=>C2H4+C6H5+C3H7OOH	2.2800e+05
2.000 15598.15	
IC3H7O2+C6H5C2H5=>C2H4+C6H5+C3H7OOH	2.2800e+05
2.000 15598.15	
HCO3+C6H5C2H5=>C2H4+C6H5+HCO3H	1.0200e+05
2.000 9072.89	
CH3CO3+C6H5C2H5=>C2H4+CH3CO3H+C6H5	1.0200e+05
2.000 9072.89	
CH3COCH2+C6H5C2H5=>C2H4+CH3COCH3+C6H5	6.9000e+04
2.000 10690.26	
C6H5O+C6H5C2H5=>C2H4+C6H5+C6H5OH	8.1000e+04
2.000 15492.11	
C5H7+C6H5C2H5=>C2H4+C6H5+LC5H8	8.1000e+04
2.000 18136.38	
C7H7+C6H5C2H5=>C2H4+C6H5+C7H8	4.0500e+04
2.000 19190.53	
CH3C6H4+C6H5C2H5=>C2H4+C6H5+C7H8	1.1100e+08
1.000 3864.72	
RCRESOLO+C6H5C2H5=>C2H4+C6H5+CRESOL	8.1000e+04
2.000 15810.16	
C6H5C2H5+C10H7=>C2H4+C6H5+C10H8	1.1100e+08
1.000 3864.72	
C6H5C2H5+INDENYL=>C2H4+C6H5+INDENE	3.9000e+04
2.000 19190.53	
C6H5C2H5+C10H6CH3=>C2H4+C6H5+C10H7CH3	1.1100e+08
1.000 3864.72	
H+C6H5C2H5=>H2+C6H5CHCH3	9.0000e+06
2.000 4000.00	
CH3+C6H5C2H5=>CH4+C6H5CHCH3	9.0000e+04
2.000 5000.00	
C2H3+C6H5C2H5=>C2H4+C6H5CHCH3	2.0340e+05
2.000 3900.00	
C2H5+C6H5C2H5=>C2H6+C6H5CHCH3	6.0000e+04
2.000 6700.00	
NC3H7+C6H5C2H5=>C3H8+C6H5CHCH3	4.0500e+04
2.000 6700.00	

IC3H7+C6H5C2H5=>C3H8+C6H5CHCH3 2.000            9900.00	4.0500e+04
C3H5-S+C6H5C2H5=>C3H6+C6H5CHCH3 2.000            4500.00	8.1000e+04
C3H5-T+C6H5C2H5=>C3H6+C6H5CHCH3 2.000            4500.00	8.1000e+04
C3H5-A+C6H5C2H5=>C3H6+C6H5CHCH3 2.000            12800.00	1.6170e+05
C4H5+C6H5C2H5=>C4H6+C6H5CHCH3 2.000            4500.00	8.1000e+04
C4H71-4+C6H5C2H5=>C4H8-1+C6H5CHCH3 2.000            6600.00	4.0500e+04
C4H71-3+C6H5C2H5=>C4H8-2+C6H5CHCH3 2.000            13700.00	1.0200e+05
IC4H7+C6H5C2H5=>IC4H8+C6H5CHCH3 2.000            13700.00	8.1000e+04
C4H3+C6H5C2H5=>C4H4+C6H5CHCH3 2.000            5200.00	1.2270e+05
C6H5+C6H5C2H5=>C6H6+C6H5CHCH3 1.000            2000.00	1.1100e+08
O+C6H5C2H5=>OH+C6H5CHCH3 2.000            2500.00	7.0500e+06
O2+C6H5C2H5=>HO2+C6H5CHCH3 2.000            44000.00	5.1000e+06
OH+C6H5C2H5=>H2O+C6H5CHCH3 1.000            50.00	4.5000e+09
HO2+C6H5C2H5=>H2O2+C6H5CHCH3 2.000            16000.00	2.4000e+06
CH3O+C6H5C2H5=>CH3OH+C6H5CHCH3 2.000            1500.00	1.2840e+05
CH2OH+C6H5C2H5=>CH3OH+C6H5CHCH3 2.000            10200.00	8.4900e+04
HCO+C6H5C2H5=>CH2O+C6H5CHCH3 2.000            12300.00	3.7800e+05
CH3CO+C6H5C2H5=>CH3CHO+C6H5CHCH3 2.000            14000.00	4.0500e+05
CH2CHO+C6H5C2H5=>CH3CHO+C6H5CHCH3 2.000            11500.00	6.9000e+04

C3H3+C6H5C2H5=>C3H4-A+C6H5CHCH3	8.1000e+04
2.000 14000.00	
HCCO+C6H5C2H5=>CH2CO+C6H5CHCH3	1.2840e+05
2.000 5200.00	
CH3O2+C6H5C2H5=>CH3O2H+C6H5CHCH3	2.2800e+05
2.000 12600.00	
C2H5O2+C6H5C2H5=>C2H5O2H+C6H5CHCH3	2.2800e+05
2.000 12600.00	
NC3H7O2+C6H5C2H5=>C3H7OOH+C6H5CHCH3	2.2800e+05
2.000 12600.00	
IC3H7O2+C6H5C2H5=>C3H7OOH+C6H5CHCH3	2.2800e+05
2.000 12600.00	
HCO3+C6H5C2H5=>HCO3H+C6H5CHCH3	1.0200e+05
2.000 6500.00	
CH3CO3+C6H5C2H5=>CH3CO3H+C6H5CHCH3	1.0200e+05
2.000 6500.00	
CH3COCH2+C6H5C2H5=>CH3COCH3+C6H5CHCH3	6.9000e+04
2.000 8000.00	
C6H5O+C6H5C2H5=>C6H5OH+C6H5CHCH3	8.1000e+04
2.000 12500.00	
C5H7+C6H5C2H5=>LC5H8+C6H5CHCH3	8.1000e+04
2.000 15000.00	
C7H7+C6H5C2H5=>C7H8+C6H5CHCH3	4.0500e+04
2.000 16000.00	
CH3C6H4+C6H5C2H5=>C7H8+C6H5CHCH3	1.1100e+08
1.000 2000.00	
RCRESOLO+C6H5C2H5=>CRESOL+C6H5CHCH3	8.1000e+04
2.000 12800.00	
C6H5C2H5+C10H7=>C10H8+C6H5CHCH3	1.1100e+08
1.000 2000.00	
C6H5C2H5+INDENYL=>C6H5CHCH3+INDENE	3.9000e+04
2.000 16000.00	
C6H5C2H5+C10H6CH3=>C6H5CHCH3+C10H7CH3	1.1100e+08
1.000 2000.00	
H+CRESOL=>H2+0.5RCRESOLC+0.5RCRESOLO	2.4000e+07
2.000 4000.00	
C2H3+CRESOL=>C2H4+0.5RCRESOLC+0.5RCRESOLO	5.4240e+05
2.000 3900.00	

C2H5+CRESOL=>C2H6+0.5RCRESOLC+0.5RCRESOLO 2.000            6700.00	1.6000e+05
NC3H7+CRESOL=>C3H8+0.5RCRESOLC+0.5RCRESOLO 2.000            6700.00	1.0800e+05
IC3H7+CRESOL=>C3H8+0.5RCRESOLC+0.5RCRESOLO 2.000            9900.00	1.0800e+05
C3H5-S+CRESOL=>C3H6+0.5RCRESOLC+0.5RCRESOLO 2.000            4500.00	2.1600e+05
C3H5-T+CRESOL=>C3H6+0.5RCRESOLC+0.5RCRESOLO 2.000            4500.00	2.1600e+05
C3H5-A+CRESOL=>C3H6+0.5RCRESOLC+0.5RCRESOLO 2.000            12800.00	4.3120e+05
C4H5+CRESOL=>C4H6+0.5RCRESOLC+0.5RCRESOLO 2.000            4500.00	2.1600e+05
C4H71-4+CRESOL=>C4H8-1+0.5RCRESOLC+0.5RCRESOLO 2.000            6600.00	1.0800e+05
C4H71-3+CRESOL=>C4H8-2+0.5RCRESOLC+0.5RCRESOLO 2.000            13700.00	2.7200e+05
IC4H7+CRESOL=>IC4H8+0.5RCRESOLC+0.5RCRESOLO 2.000            13700.00	2.1600e+05
C4H3+CRESOL=>C4H4+0.5RCRESOLC+0.5RCRESOLO 2.000            5200.00	3.2720e+05
C6H5+CRESOL=>C6H6+0.5RCRESOLC+0.5RCRESOLO 1.000            2000.00	2.9600e+08
O+CRESOL=>OH+0.5RCRESOLC+0.5RCRESOLO 2.000            2500.00	1.8800e+07
O2+CRESOL=>HO2+0.5RCRESOLC+0.5RCRESOLO 2.000            44000.00	1.3600e+07
OH+CRESOL=>H2O+0.5RCRESOLC+0.5RCRESOLO 1.000            50.00	1.2000e+10
HO2+CRESOL=>H2O2+0.5RCRESOLC+0.5RCRESOLO 2.000            16000.00	6.4000e+06
CH3O+CRESOL=>CH3OH+0.5RCRESOLC+0.5RCRESOLO 2.000            1500.00	3.4240e+05
CH2OH+CRESOL=>CH3OH+0.5RCRESOLC+0.5RCRESOLO 2.000            10200.00	2.2640e+05
HCO+CRESOL=>CH2O+0.5RCRESOLC+0.5RCRESOLO 2.000            12300.00	1.0080e+06

CH3CO+CRESOL=>CH3CHO+0.5RCRESOLC+0.5RCRESOLO 2.000        14000.00	1.0800e+06
CH2CHO+CRESOL=>CH3CHO+0.5RCRESOLC+0.5RCRESOLO 2.000        11500.00	1.8400e+05
C3H3+CRESOL=>C3H4-A+0.5RCRESOLC+0.5RCRESOLO 2.000        14000.00	2.1600e+05
HCCO+CRESOL=>CH2CO+0.5RCRESOLC+0.5RCRESOLO 2.000        5200.00	3.4240e+05
CH3O2+CRESOL=>CH3O2H+0.5RCRESOLC+0.5RCRESOLO 2.000        12600.00	6.0800e+05
C2H5O2+CRESOL=>C2H5O2H+0.5RCRESOLC+0.5RCRESOLO 2.000        12600.00	6.0800e+05
NC3H7O2+CRESOL=>C3H7OOH+0.5RCRESOLC+0.5RCRESOLO 2.000        12600.00	6.0800e+05
IC3H7O2+CRESOL=>C3H7OOH+0.5RCRESOLC+0.5RCRESOLO 2.000        12600.00	6.0800e+05
HCO3+CRESOL=>HCO3H+0.5RCRESOLC+0.5RCRESOLO 2.000        6500.00	2.7200e+05
CH3CO3+CRESOL=>CH3CO3H+0.5RCRESOLC+0.5RCRESOLO 2.000        6500.00	2.7200e+05
CH3COCH2+CRESOL=>CH3COCH3+0.5RCRESOLC+0.5RCRESOLO 2.000        8000.00	1.8400e+05
C6H5O+CRESOL=>C6H5OH+0.5RCRESOLC+0.5RCRESOLO 2.000        12500.00	2.1600e+05
C5H7+CRESOL=>LC5H8+0.5RCRESOLC+0.5RCRESOLO 2.000        15000.00	2.1600e+05
C7H7+CRESOL=>C7H8+0.5RCRESOLC+0.5RCRESOLO 2.000        16000.00	1.0800e+05
CH3C6H4+CRESOL=>C7H8+0.5RCRESOLC+0.5RCRESOLO 1.000        2000.00	2.9600e+08
CRESOL+RCRESOLO=>CRESOL+0.5RCRESOLC+0.5RCRESOLO 2.000        12800.00	2.1600e+05
CRESOL+C10H7=>C10H8+0.5RCRESOLC+0.5RCRESOLO 1.000        2000.00	2.9600e+08
CRESOL+INDENYL=>0.5RCRESOLC+0.5RCRESOLO+INDENE 2.000        16000.00	1.0400e+05
CRESOL+C10H6CH3=>0.5RCRESOLC+0.5RCRESOLO+C10H7CH3 1.000        2000.00	2.9600e+08

CH3+CRESOL=>CH4+0.5RCRESOLC+0.5RCRESOLO	1.6000e+05
2.000 4871.29	
C2H3+XYLENE=>C2H4+RXYLENE	4.0680e+05
2.000 3900.00	
C2H5+XYLENE=>C2H6+RXYLENE	1.2000e+05
2.000 6700.00	
NC3H7+XYLENE=>C3H8+RXYLENE	8.1000e+04
2.000 6700.00	
IC3H7+XYLENE=>C3H8+RXYLENE	8.1000e+04
2.000 9900.00	
C3H5-S+XYLENE=>C3H6+RXYLENE	1.6200e+05
2.000 4500.00	
C3H5-T+XYLENE=>C3H6+RXYLENE	1.6200e+05
2.000 4500.00	
C3H5-A+XYLENE=>C3H6+RXYLENE	3.2340e+05
2.000 12800.00	
C4H5+XYLENE=>C4H6+RXYLENE	1.6200e+05
2.000 4500.00	
C4H71-4+XYLENE=>C4H8-1+RXYLENE	8.1000e+04
2.000 6600.00	
C4H71-3+XYLENE=>C4H8-2+RXYLENE	2.0400e+05
2.000 13700.00	
IC4H7+XYLENE=>IC4H8+RXYLENE	1.6200e+05
2.000 13700.00	
C4H3+XYLENE=>C4H4+RXYLENE	2.4540e+05
2.000 5200.00	
C6H5+XYLENE=>C6H6+RXYLENE	2.2200e+08
1.000 2000.00	
O+XYLENE=>OH+RXYLENE	1.4100e+07
2.000 2500.00	
OH+XYLENE=>H2O+RXYLENE	9.0000e+09
1.000 50.00	
HO2+XYLENE=>H2O2+RXYLENE	4.8000e+06
2.000 16000.00	
CH3O+XYLENE=>CH3OH+RXYLENE	2.5680e+05
2.000 1500.00	
CH2OH+XYLENE=>CH3OH+RXYLENE	1.6980e+05
2.000 10200.00	

HCO+XYLENE=>CH2O+RXYLENE	7.5600e+05
2.000 12300.00	
CH3CO+XYLENE=>CH3CHO+RXYLENE	8.1000e+05
2.000 14000.00	
CH2CHO+XYLENE=>CH3CHO+RXYLENE	1.3800e+05
2.000 11500.00	
C3H3+XYLENE=>C3H4-A+RXYLENE	1.6200e+05
2.000 14000.00	
HCCO+XYLENE=>CH2CO+RXYLENE	2.5680e+05
2.000 5200.00	
CH3O2+XYLENE=>CH3O2H+RXYLENE	4.5600e+05
2.000 12600.00	
C2H5O2+XYLENE=>C2H5O2H+RXYLENE	4.5600e+05
2.000 12600.00	
NC3H7O2+XYLENE=>C3H7OOH+RXYLENE	4.5600e+05
2.000 12600.00	
IC3H7O2+XYLENE=>C3H7OOH+RXYLENE	4.5600e+05
2.000 12600.00	
HCO3+XYLENE=>HCO3H+RXYLENE	2.0400e+05
2.000 6500.00	
CH3CO3+XYLENE=>CH3CO3H+RXYLENE	2.0400e+05
2.000 6500.00	
CH3COCH2+XYLENE=>CH3COCH3+RXYLENE	1.3800e+05
2.000 8000.00	
C6H5O+XYLENE=>C6H5OH+RXYLENE	1.6200e+05
2.000 12500.00	
C5H7+XYLENE=>LC5H8+RXYLENE	1.6200e+05
2.000 15000.00	
C7H7+XYLENE=>C7H8+RXYLENE	8.1000e+04
2.000 16000.00	
CH3C6H4+XYLENE=>C7H8+RXYLENE	2.2200e+08
1.000 2000.00	
RCRESOLO+XYLENE=>CRESOL+RXYLENE	1.6200e+05
2.000 12800.00	
XYLENE+C10H7=>C10H8+RXYLENE	2.2200e+08
1.000 2000.00	
XYLENE+INDENYL=>RXYLENE+INDENE	7.8000e+04
2.000 16000.00	

XYLENE+C10H6CH3=>RXYLENE+C10H7CH3	2.2200e+08
1.000 2000.00	
H+XYLENE=>H2+0.5C2H4+CH3C6H4	2.4000e+07
2.000 9957.26	
CH3+XYLENE=>CH4+0.5C2H4+CH3C6H4	2.4000e+05
2.000 11196.53	
C2H3+XYLENE=>1.5C2H4+CH3C6H4	5.4240e+05
2.000 9832.26	
C2H5+XYLENE=>C2H6+0.5C2H4+CH3C6H4	1.6000e+05
2.000 13265.38	
NC3H7+XYLENE=>0.5C2H4+C3H8+CH3C6H4	1.0800e+05
2.000 13265.38	
IC3H7+XYLENE=>0.5C2H4+C3H8+CH3C6H4	1.0800e+05
2.000 17064.96	
C3H5-S+XYLENE=>0.5C2H4+C3H6+CH3C6H4	2.1600e+05
2.000 10579.25	
C3H5-T+XYLENE=>0.5C2H4+C3H6+CH3C6H4	2.1600e+05
2.000 10579.25	
C3H5-A+XYLENE=>0.5C2H4+C3H6+CH3C6H4	4.3120e+05
2.000 20432.90	
C4H5+XYLENE=>0.5C2H4+C4H6+CH3C6H4	2.1600e+05
2.000 10579.25	
C4H71-4+XYLENE=>0.5C2H4+C4H8-1+CH3C6H4	1.0800e+05
2.000 13144.81	
C4H71-3+XYLENE=>0.5C2H4+C4H8-2+CH3C6H4	2.7200e+05
2.000 21467.03	
IC4H7+XYLENE=>0.5C2H4+IC4H8+CH3C6H4	2.1600e+05
2.000 21467.03	
C4H3+XYLENE=>0.5C2H4+C4H4+CH3C6H4	3.2720e+05
2.000 11442.22	
C6H5+XYLENE=>0.5C2H4+C6H6+CH3C6H4	2.9600e+08
1.000 6728.39	
O+XYLENE=>OH+0.5C2H4+CH3C6H4	1.8800e+07
2.000 8057.53	
O2+XYLENE=>HO2+0.5C2H4+CH3C6H4	1.3600e+07
2.000 54834.21	
OH+XYLENE=>H2O+0.5C2H4+CH3C6H4	1.2000e+10
1.000 3830.11	



HO2+XYLENE=>H2O2+0.5C2H4+CH3C6H4 2.000        24090.27	6.4000e+06
CH3O+XYLENE=>CH3OH+0.5C2H4+CH3C6H4 2.000        6755.27	3.4240e+05
CH2OH+XYLENE=>CH3OH+0.5C2H4+CH3C6H4 2.000        17416.23	2.2640e+05
HCO+XYLENE=>CH2O+0.5C2H4+CH3C6H4 2.000        19856.30	1.0080e+06
CH3CO+XYLENE=>0.5C2H4+CH3CHO+CH3C6H4 2.000        21810.72	1.0800e+06
CH2CHO+XYLENE=>0.5C2H4+CH3CHO+CH3C6H4 2.000        18930.41	1.8400e+05
C3H3+XYLENE=>0.5C2H4+C3H4-A+CH3C6H4 2.000        21810.72	2.1600e+05
HCCO+XYLENE=>0.5C2H4+CH2CO+CH3C6H4 2.000        11442.22	3.4240e+05
CH3O2+XYLENE=>CH3O2H+0.5C2H4+CH3C6H4 2.000        20202.44	6.0800e+05
C2H5O2+XYLENE=>C2H5O2H+0.5C2H4+CH3C6H4 2.000        20202.44	6.0800e+05
NC3H7O2+XYLENE=>0.5C2H4+C3H7OOH+CH3C6H4 2.000        20202.44	6.0800e+05
IC3H7O2+XYLENE=>0.5C2H4+C3H7OOH+CH3C6H4 2.000        20202.44	6.0800e+05
HCO3+XYLENE=>0.5C2H4+HCO3H+CH3C6H4 2.000        13024.11	2.7200e+05
CH3CO3+XYLENE=>0.5C2H4+CH3CO3H+CH3C6H4 2.000        13024.11	2.7200e+05
CH3COCH2+XYLENE=>0.5C2H4+CH3COCH3+CH3C6H4 2.000        14821.74	1.8400e+05
C6H5O+XYLENE=>0.5C2H4+C6H5OH+CH3C6H4 2.000        20087.13	2.1600e+05
C5H7+XYLENE=>0.5C2H4+LC5H8+CH3C6H4 2.000        22952.95	2.1600e+05
C7H7+XYLENE=>0.5C2H4+C7H8+CH3C6H4 2.000        24090.27	1.0800e+05
CH3C6H4+XYLENE=>0.5C2H4+C7H8+CH3C6H4 1.000        6728.39	2.9600e+08

RCRESOLO+XYLENE=>0.5C2H4+CH3C6H4+CRESOL	2.1600e+05
2.000 20432.90	
XYLENE+C10H7=>0.5C2H4+C10H8+CH3C6H4	2.9600e+08
1.000 6728.39	
XYLENE+INDENYL=>0.5C2H4+CH3C6H4+INDENE	1.0400e+05
2.000 24090.27	
XYLENE+C10H6CH3=>0.5C2H4+CH3C6H4+C10H7CH3	2.9600e+08
1.000 6728.39	
H+INDENE=>H2+INDENYL	1.8000e+07
2.000 4578.82	
CH3+INDENE=>CH4+INDENYL	1.8000e+05
2.000 5948.43	
C2H3+INDENE=>C2H4+INDENYL	4.0680e+05
2.000 4890.27	
C2H5+INDENE=>C2H6+INDENYL	1.2000e+05
2.000 7090.53	
NC3H7+INDENE=>C3H8+INDENYL	8.1000e+04
2.000 7090.53	
IC3H7+INDENE=>C3H8+INDENYL	8.1000e+04
2.000 10290.53	
C3H5-S+INDENE=>C3H6+INDENYL	1.6200e+05
2.000 4500.00	
C3H5-T+INDENE=>C3H6+INDENYL	1.6200e+05
2.000 4500.00	
C3H5-A+INDENE=>C3H6+INDENYL	3.2340e+05
2.000 12800.00	
C4H5+INDENE=>C4H6+INDENYL	1.6200e+05
2.000 5490.27	
C4H71-4+INDENE=>C4H8-1+INDENYL	8.1000e+04
2.000 6600.00	
C4H71-3+INDENE=>C4H8-2+INDENYL	2.0400e+05
2.000 13700.00	
IC4H7+INDENE=>IC4H8+INDENYL	1.6200e+05
2.000 13700.00	
C4H3+INDENE=>C4H4+INDENYL	2.4540e+05
2.000 6148.43	
C6H5+INDENE=>C6H6+INDENYL	2.2200e+08
1.000 2990.27	

O+INDENE=>OH+INDENYL	1.4100e+07
2.000 2500.00	
O2+INDENE=>HO2+INDENYL	1.0200e+07
2.000 44000.00	
HO2+INDENE=>H2O2+INDENYL	4.8000e+06
2.000 15323.55	
CH3O+INDENE=>CH3OH+INDENYL	2.5680e+05
2.000 1890.53	
CH2OH+INDENE=>CH3OH+INDENYL	1.6980e+05
2.000 10590.53	
HCO+INDENE=>CH2O+INDENYL	7.5600e+05
2.000 12062.89	
CH3CO+INDENE=>CH3CHO+INDENYL	8.1000e+05
2.000 13762.89	
CH2CHO+INDENE=>CH3CHO+INDENYL	1.3800e+05
2.000 11262.89	
C3H3+INDENE=>C3H4-A+INDENYL	1.6200e+05
2.000 14990.27	
HCCO+INDENE=>CH2CO+INDENYL	2.5680e+05
2.000 6190.27	
CH3O2+INDENE=>CH3O2H+INDENYL	4.5600e+05
2.000 12600.00	
C2H5O2+INDENE=>C2H5O2H+INDENYL	4.5600e+05
2.000 12600.00	
NC3H7O2+INDENE=>C3H7OOH+INDENYL	4.5600e+05
2.000 12404.74	
IC3H7O2+INDENE=>C3H7OOH+INDENYL	4.5600e+05
2.000 12404.74	
HCO3+INDENE=>HCO3H+INDENYL	2.0400e+05
2.000 6500.00	
CH3CO3+INDENE=>CH3CO3H+INDENYL	2.0400e+05
2.000 6500.00	
CH3COCH2+INDENE=>CH3COCH3+INDENYL	1.3800e+05
2.000 8000.00	
C6H5O+INDENE=>C6H5OH+INDENYL	1.6200e+05
2.000 12890.53	
C5H7+INDENE=>LC5H8+INDENYL	1.6200e+05
2.000 15000.00	

C7H7+INDENE=>C7H8+INDENYL	8.1000e+04
2.000 16990.27	
CH3C6H4+INDENE=>C7H8+INDENYL	2.2200e+08
1.000 2990.27	
RCRESOLO+INDENE=>CRESOL+INDENYL	1.6200e+05
2.000 12800.00	
INDENE+C10H7=>C10H8+INDENYL	2.2200e+08
1.000 2990.27	
INDENE+C10H6CH3=>INDENYL+C10H7CH3	2.2200e+08
1.000 2000.00	
H+C6H5C2H=>H2+C6H4C2H	3.0000e+07
2.000 9957.26	
CH3+C6H5C2H=>CH4+C6H4C2H	3.0000e+05
2.000 11196.53	
C2H3+C6H5C2H=>C2H4+C6H4C2H	6.7800e+05
2.000 9832.26	
C2H5+C6H5C2H=>C2H6+C6H4C2H	2.0000e+05
2.000 13265.38	
NC3H7+C6H5C2H=>C3H8+C6H4C2H	1.3500e+05
2.000 13265.38	
IC3H7+C6H5C2H=>C3H8+C6H4C2H	1.3500e+05
2.000 17064.96	
C3H5-S+C6H5C2H=>C3H6+C6H4C2H	2.7000e+05
2.000 10579.25	
C3H5-T+C6H5C2H=>C3H6+C6H4C2H	2.7000e+05
2.000 10579.25	
C3H5-A+C6H5C2H=>C3H6+C6H4C2H	5.3900e+05
2.000 20432.90	
C4H5+C6H5C2H=>C4H6+C6H4C2H	2.7000e+05
2.000 10579.25	
C4H71-4+C6H5C2H=>C4H8-1+C6H4C2H	1.3500e+05
2.000 13144.81	
C4H71-3+C6H5C2H=>C4H8-2+C6H4C2H	3.4000e+05
2.000 21467.03	
IC4H7+C6H5C2H=>IC4H8+C6H4C2H	2.7000e+05
2.000 21467.03	
C4H3+C6H5C2H=>C4H4+C6H4C2H	4.0900e+05
2.000 11442.22	

C6H5+C6H5C2H=>C6H6+C6H4C2H	3.7000e+08
1.000 6728.39	
O+C6H5C2H=>OH+C6H4C2H	2.3500e+07
2.000 8057.53	
O2+C6H5C2H=>HO2+C6H4C2H	1.7000e+07
2.000 54834.21	
OH+C6H5C2H=>H2O+C6H4C2H	1.5000e+10
1.000 3830.11	
HO2+C6H5C2H=>H2O2+C6H4C2H	8.0000e+06
2.000 24090.27	
CH3O+C6H5C2H=>CH3OH+C6H4C2H	4.2800e+05
2.000 6755.27	
CH2OH+C6H5C2H=>CH3OH+C6H4C2H	2.8300e+05
2.000 17416.23	
HCO+C6H5C2H=>CH2O+C6H4C2H	1.2600e+06
2.000 19856.30	
CH3CO+C6H5C2H=>CH3CHO+C6H4C2H	1.3500e+06
2.000 21810.72	
CH2CHO+C6H5C2H=>CH3CHO+C6H4C2H	2.3000e+05
2.000 18930.41	
C3H3+C6H5C2H=>C3H4-A+C6H4C2H	2.7000e+05
2.000 21810.72	
HCCO+C6H5C2H=>CH2CO+C6H4C2H	4.2800e+05
2.000 11442.22	
CH3O2+C6H5C2H=>CH3O2H+C6H4C2H	7.6000e+05
2.000 20202.44	
C2H5O2+C6H5C2H=>C2H5O2H+C6H4C2H	7.6000e+05
2.000 20202.44	
NC3H7O2+C6H5C2H=>C3H7OOH+C6H4C2H	7.6000e+05
2.000 20202.44	
IC3H7O2+C6H5C2H=>C3H7OOH+C6H4C2H	7.6000e+05
2.000 20202.44	
HCO3+C6H5C2H=>HCO3H+C6H4C2H	3.4000e+05
2.000 13024.11	
CH3CO3+C6H5C2H=>CH3CO3H+C6H4C2H	3.4000e+05
2.000 13024.11	
CH3COCH2+C6H5C2H=>CH3COCH3+C6H4C2H	2.3000e+05
2.000 14821.74	

C6H5O+C6H5C2H=>C6H5OH+C6H4C2H 2.000        20087.13	2.7000e+05
C5H7+C6H5C2H=>LC5H8+C6H4C2H 2.000        22952.95	2.7000e+05
C7H7+C6H5C2H=>C7H8+C6H4C2H 2.000        24090.27	1.3500e+05
CH3C6H4+C6H5C2H=>C7H8+C6H4C2H 1.000        6728.39	3.7000e+08
RCRESOLO+C6H5C2H=>CRESOL+C6H4C2H 2.000        20432.90	2.7000e+05
C6H5C2H+C10H7=>C10H8+C6H4C2H 1.000        6728.39	3.7000e+08
C6H5C2H+INDENYL=>C6H4C2H+INDENE 2.000        24090.27	1.3000e+05
C6H5C2H+C10H6CH3=>C6H4C2H+C10H7CH3 1.000        6728.39	3.7000e+08
H+C10H8=>H2+C10H7 2.000        8571.04	4.8000e+07
CH3+C10H8=>CH4+C10H7 2.000        8925.13	4.8000e+05
C2H3+C10H8=>C2H4+C10H7 2.000        7460.65	1.0848e+06
C2H5+C10H8=>C2H6+C10H7 2.000        12330.09	3.2000e+05
NC3H7+C10H8=>C3H8+C10H7 2.000        12330.09	2.1600e+05
IC3H7+C10H8=>C3H8+C10H7 2.000        16129.68	2.1600e+05
C3H5-S+C10H8=>C3H6+C10H7 2.000        10579.25	4.3200e+05
C3H5-T+C10H8=>C3H6+C10H7 2.000        10579.25	4.3200e+05
C3H5-A+C10H8=>C3H6+C10H7 2.000        20432.90	8.6240e+05
C4H5+C10H8=>C4H6+C10H7 2.000        8207.64	4.3200e+05
C4H71-4+C10H8=>C4H8-1+C10H7 2.000        13144.81	2.1600e+05

C4H71-3+C10H8=>C4H8-2+C10H7	5.4400e+05
2.000 21467.03	
IC4H7+C10H8=>IC4H8+C10H7	4.3200e+05
2.000 21467.03	
C4H3+C10H8=>C4H4+C10H7	6.5440e+05
2.000 9170.82	
C6H5+C10H8=>C6H6+C10H7	5.9200e+08
1.000 4356.78	
O+C10H8=>OH+C10H7	3.7600e+07
2.000 8057.53	
O2+C10H8=>HO2+C10H7	2.7200e+07
2.000 54834.21	
HO2+C10H8=>H2O2+C10H7	1.2800e+07
2.000 25710.31	
CH3O+C10H8=>CH3OH+C10H7	6.8480e+05
2.000 5819.99	
CH2OH+C10H8=>CH3OH+C10H7	4.5280e+05
2.000 16480.95	
HCO+C10H8=>CH2O+C10H7	2.0160e+06
2.000 20424.15	
CH3CO+C10H8=>CH3CHO+C10H7	2.1600e+06
2.000 22378.57	
CH2CHO+C10H8=>CH3CHO+C10H7	3.6800e+05
2.000 19498.26	
C3H3+C10H8=>C3H4-A+C10H7	4.3200e+05
2.000 19439.11	
HCCO+C10H8=>CH2CO+C10H7	6.8480e+05
2.000 9070.61	
CH3O2+C10H8=>CH3O2H+C10H7	1.2160e+06
2.000 20202.44	
C2H5O2+C10H8=>C2H5O2H+C10H7	1.2160e+06
2.000 20202.44	
C10H8+NC3H7O2=>C3H7OOH+C10H7	1.2160e+06
2.000 20670.08	
C10H8+IC3H7O2=>C3H7OOH+C10H7	1.2160e+06
2.000 20670.08	
C10H8+HCO3=>HCO3H+C10H7	5.4400e+05
2.000 13024.11	

CH3CO3+C10H8=>CH3CO3H+C10H7	5.4400e+05
2.000 13024.11	
CH3COCH2+C10H8=>CH3COCH3+C10H7	3.6800e+05
2.000 14821.74	
C10H8+C6H5O=>C6H5OH+C10H7	4.3200e+05
2.000 19151.84	
C10H8+C5H7=>LC5H8+C10H7	4.3200e+05
2.000 22952.95	
C10H8+C7H7=>C7H8+C10H7	2.1600e+05
2.000 21718.66	
C10H8+CH3C6H4=>C7H8+C10H7	5.9200e+08
1.000 4356.78	
C10H8+RCRESOLO=>CRESOL+C10H7	4.3200e+05
2.000 20432.90	
C10H8+INDENYL=>INDENE+C10H7	2.0800e+05
2.000 24090.27	
C10H8+C10H6CH3=>C10H7+C10H7CH3	5.9200e+08
1.000 6728.39	
H+C10H7OH=>H2+C10H7O	3.0000e+07
2.000 6349.34	
CH3+C10H7OH=>CH4+C10H7O	3.0000e+05
2.000 7443.70	
C2H3+C10H7OH=>C2H4+C10H7O	6.7800e+05
2.000 6239.48	
C2H5+C10H7OH=>C2H6+C10H7O	2.0000e+05
2.000 9289.16	
NC3H7+C10H7OH=>C3H8+C10H7O	1.3500e+05
2.000 9289.16	
IC3H7+C10H7OH=>C3H8+C10H7O	1.3500e+05
2.000 12725.62	
C3H5-S+C10H7OH=>C3H6+C10H7O	2.7000e+05
2.000 6897.45	
C3H5-T+C10H7OH=>C3H6+C10H7O	2.7000e+05
2.000 6897.45	
C3H5-A+C10H7OH=>C3H6+C10H7O	5.3900e+05
2.000 15810.16	
C4H5+C10H7OH=>C4H6+C10H7O	2.7000e+05
2.000 6897.45	



C4H71-4+C10H7OH=>C4H8-1+C10H7O 2.000 9181.05	1.3500e+05
C4H71-3+C10H7OH=>C4H8-2+C10H7O 2.000 16763.05	3.4000e+05
IC4H7+C10H7OH=>IC4H8+C10H7O 2.000 16763.05	2.7000e+05
C4H3+C10H7OH=>C4H4+C10H7O 2.000 7661.72	4.0900e+05
C6H5+C10H7OH=>C6H6+C10H7O 1.000 3864.72	3.7000e+08
O+C10H7OH=>OH+C10H7O 2.000 4691.70	2.3500e+07
O2+C10H7OH=>HO2+C10H7O 2.000 48272.65	1.7000e+07
HO2+C10H7OH=>H2O2+C10H7O 2.000 19190.53	8.0000e+06
CH3O+C10H7OH=>CH3OH+C10H7O 2.000 3572.50	4.2800e+05
CH2OH+C10H7OH=>CH3OH+C10H7O 2.000 13045.84	2.8300e+05
HCO+C10H7OH=>CH2O+C10H7O 2.000 15279.95	1.2600e+06
CH3CO+C10H7OH=>CH3CHO+C10H7O 2.000 17080.28	1.3500e+06
CH2CHO+C10H7OH=>CH3CHO+C10H7O 2.000 14430.30	2.3000e+05
C3H3+C10H7OH=>C3H4-A+C10H7O 2.000 17080.28	2.7000e+05
HCCO+C10H7OH=>CH2CO+C10H7O 2.000 7661.72	4.2800e+05
CH3O2+C10H7OH=>CH3O2H+C10H7O 2.000 15598.15	7.6000e+05
C2H5O2+C10H7OH=>C2H5O2H+C10H7O 2.000 15598.15	7.6000e+05
NC3H7O2+C10H7OH=>C3H7OOH+C10H7O 2.000 15598.15	7.6000e+05
IC3H7O2+C10H7OH=>C3H7OOH+C10H7O 2.000 15598.15	7.6000e+05

HCO3+C10H7OH=>HCO3H+C10H7O	3.4000e+05
2.000 9072.89	
CH3CO3+C10H7OH=>CH3CO3H+C10H7O	3.4000e+05
2.000 9072.89	
CH3COCH2+C10H7OH=>CH3COCH3+C10H7O	2.3000e+05
2.000 10690.26	
C6H5O+C10H7OH=>C6H5OH+C10H7O	2.7000e+05
2.000 15492.11	
C5H7+C10H7OH=>LC5H8+C10H7O	2.7000e+05
2.000 18136.38	
C7H7+C10H7OH=>C7H8+C10H7O	1.3500e+05
2.000 19190.53	
CH3C6H4+C10H7OH=>C7H8+C10H7O	3.7000e+08
1.000 3864.72	
RCRESOLO+C10H7OH=>CRESOL+C10H7O	2.7000e+05
2.000 15810.16	
C10H7+C10H7OH=>C10H8+C10H7O	3.7000e+08
1.000 3864.72	
INDENYL+C10H7OH=>INDENE+C10H7O	1.3000e+05
2.000 19190.53	
C10H7OH+C10H6CH3=>C10H7O+C10H7CH3	3.7000e+08
1.000 3864.72	
H+C10H7CH3=>H2+C10H7CH2	9.0000e+06
2.000 4000.00	
C2H3+C10H7CH3=>C2H4+C10H7CH2	2.0340e+05
2.000 3900.00	
C2H5+C10H7CH3=>C2H6+C10H7CH2	6.0000e+04
2.000 6700.00	
NC3H7+C10H7CH3=>C3H8+C10H7CH2	4.0500e+04
2.000 6700.00	
IC3H7+C10H7CH3=>C3H8+C10H7CH2	4.0500e+04
2.000 9900.00	
C3H5-S+C10H7CH3=>C3H6+C10H7CH2	8.1000e+04
2.000 4500.00	
C3H5-T+C10H7CH3=>C3H6+C10H7CH2	8.1000e+04
2.000 4500.00	
C3H5-A+C10H7CH3=>C3H6+C10H7CH2	1.6170e+05
2.000 12800.00	

C4H5+C10H7CH3=>C4H6+C10H7CH2	8.1000e+04
2.000 4500.00	
C4H71-4+C10H7CH3=>C4H8-1+C10H7CH2	4.0500e+04
2.000 6600.00	
C4H71-3+C10H7CH3=>C4H8-2+C10H7CH2	1.0200e+05
2.000 13700.00	
IC4H7+C10H7CH3=>IC4H8+C10H7CH2	8.1000e+04
2.000 13700.00	
C4H3+C10H7CH3=>C4H4+C10H7CH2	1.2270e+05
2.000 5200.00	
C6H5+C10H7CH3=>C6H6+C10H7CH2	1.1100e+08
1.000 2000.00	
O+C10H7CH3=>OH+C10H7CH2	7.0500e+06
2.000 2500.00	
OH+C10H7CH3=>H2O+C10H7CH2	4.5000e+09
1.000 50.00	
CH3O+C10H7CH3=>CH3OH+C10H7CH2	1.2840e+05
2.000 1500.00	
CH2OH+C10H7CH3=>CH3OH+C10H7CH2	8.4900e+04
2.000 10200.00	
HCO+C10H7CH3=>CH2O+C10H7CH2	3.7800e+05
2.000 12300.00	
CH3CO+C10H7CH3=>CH3CHO+C10H7CH2	4.0500e+05
2.000 14000.00	
CH2CHO+C10H7CH3=>CH3CHO+C10H7CH2	6.9000e+04
2.000 11500.00	
C3H3+C10H7CH3=>C3H4-A+C10H7CH2	8.1000e+04
2.000 14000.00	
HCCO+C10H7CH3=>CH2CO+C10H7CH2	1.2840e+05
2.000 5200.00	
CH3O2+C10H7CH3=>CH3O2H+C10H7CH2	2.2800e+05
2.000 12600.00	
C2H5O2+C10H7CH3=>C2H5O2H+C10H7CH2	2.2800e+05
2.000 12600.00	
NC3H7O2+C10H7CH3=>C3H7OOH+C10H7CH2	2.2800e+05
2.000 12600.00	
IC3H7O2+C10H7CH3=>C3H7OOH+C10H7CH2	2.2800e+05
2.000 12600.00	

HCO3+C10H7CH3=>HCO3H+C10H7CH2	1.0200e+05
2.000        6500.00	
CH3CO3+C10H7CH3=>CH3CO3H+C10H7CH2	1.0200e+05
2.000        6500.00	
CH3COCH2+C10H7CH3=>CH3COCH3+C10H7CH2	6.9000e+04
2.000        8000.00	
C6H5O+C10H7CH3=>C6H5OH+C10H7CH2	8.1000e+04
2.000        12500.00	
C5H7+C10H7CH3=>LC5H8+C10H7CH2	8.1000e+04
2.000        15000.00	
C7H7+C10H7CH3=>C7H8+C10H7CH2	4.0500e+04
2.000        16000.00	
CH3C6H4+C10H7CH3=>C7H8+C10H7CH2	1.1100e+08
1.000        2000.00	
RCRESOLO+C10H7CH3=>CRESOL+C10H7CH2	8.1000e+04
2.000        12800.00	
C10H7+C10H7CH3=>C10H8+C10H7CH2	1.1100e+08
1.000        2000.00	
INDENYL+C10H7CH3=>INDENE+C10H7CH2	3.9000e+04
2.000        16000.00	
C10H6CH3+C10H7CH3=>C10H7CH2+C10H7CH3	1.1100e+08
1.000        2000.00	
H+C10H7CH3=>H2+C10H6CH3	4.2000e+07
2.000        8571.04	
CH3+C10H7CH3=>CH4+C10H6CH3	4.2000e+05
2.000        8925.13	
C2H3+C10H7CH3=>C2H4+C10H6CH3	9.4920e+05
2.000        7460.65	
C2H5+C10H7CH3=>C2H6+C10H6CH3	2.8000e+05
2.000        12330.09	
NC3H7+C10H7CH3=>C3H8+C10H6CH3	1.8900e+05
2.000        12330.09	
IC3H7+C10H7CH3=>C3H8+C10H6CH3	1.8900e+05
2.000        16129.68	
C3H5-S+C10H7CH3=>C3H6+C10H6CH3	3.7800e+05
2.000        10579.25	
C3H5-T+C10H7CH3=>C3H6+C10H6CH3	3.7800e+05
2.000        10579.25	

C3H5-A+C10H7CH3=>C3H6+C10H6CH3	7.5460e+05
2.000 20432.90	
C4H5+C10H7CH3=>C4H6+C10H6CH3	3.7800e+05
2.000 8207.64	
C4H71-4+C10H7CH3=>C4H8-1+C10H6CH3	1.8900e+05
2.000 13144.81	
C4H71-3+C10H7CH3=>C4H8-2+C10H6CH3	4.7600e+05
2.000 21467.03	
IC4H7+C10H7CH3=>IC4H8+C10H6CH3	3.7800e+05
2.000 21467.03	
C4H3+C10H7CH3=>C4H4+C10H6CH3	5.7260e+05
2.000 9170.82	
C6H5+C10H7CH3=>C6H6+C10H6CH3	5.1800e+08
1.000 4356.78	
O+C10H7CH3=>OH+C10H6CH3	3.2900e+07
2.000 8057.53	
O2+C10H7CH3=>HO2+C10H6CH3	2.3800e+07
2.000 54834.21	
OH+C10H7CH3=>H2O+C10H6CH3	2.1000e+10
1.000 -378.66	
HO2+C10H7CH3=>H2O2+C10H6CH3	1.1200e+07
2.000 25710.31	
CH3O+C10H7CH3=>CH3OH+C10H6CH3	5.9920e+05
2.000 5819.99	
CH2OH+C10H7CH3=>CH3OH+C10H6CH3	3.9620e+05
2.000 16480.95	
HCO+C10H7CH3=>CH2O+C10H6CH3	1.7640e+06
2.000 20424.15	
CH3CO+C10H7CH3=>CH3CHO+C10H6CH3	1.8900e+06
2.000 22378.57	
CH2CHO+C10H7CH3=>CH3CHO+C10H6CH3	3.2200e+05
2.000 19498.26	
C3H3+C10H7CH3=>C3H4-A+C10H6CH3	3.7800e+05
2.000 19439.11	
HCCO+C10H7CH3=>CH2CO+C10H6CH3	5.9920e+05
2.000 9070.61	
CH3O2+C10H7CH3=>CH3O2H+C10H6CH3	1.0640e+06
2.000 20202.44	

C2H5O2+C10H7CH3=>C2H5O2H+C10H6CH3 2.000 20202.44	1.0640e+06
NC3H7O2+C10H7CH3=>C3H7OOH+C10H6CH3 2.000 20670.08	1.0640e+06
IC3H7O2+C10H7CH3=>C3H7OOH+C10H6CH3 2.000 20670.08	1.0640e+06
HCO3+C10H7CH3=>HCO3H+C10H6CH3 2.000 13024.11	4.7600e+05
CH3CO3+C10H7CH3=>CH3CO3H+C10H6CH3 2.000 13024.11	4.7600e+05
CH3COCH2+C10H7CH3=>CH3COCH3+C10H6CH3 2.000 14821.74	3.2200e+05
C6H5O+C10H7CH3=>C6H5OH+C10H6CH3 2.000 19151.84	3.7800e+05
C5H7+C10H7CH3=>LC5H8+C10H6CH3 2.000 22952.95	3.7800e+05
C7H7+C10H7CH3=>C7H8+C10H6CH3 2.000 21718.66	1.8900e+05
CH3C6H4+C10H7CH3=>C7H8+C10H6CH3 1.000 4356.78	5.1800e+08
RCRESOLO+C10H7CH3=>CRESOL+C10H6CH3 2.000 20432.90	3.7800e+05
C10H7+C10H7CH3=>C10H8+C10H6CH3 1.000 4356.78	5.1800e+08
INDENYL+C10H7CH3=>INDENE+C10H6CH3 2.000 24090.27	1.8200e+05
H+C12H8=>H2+C12H7 2.000 9957.26	4.8000e+07
CH3+C12H8=>CH4+C12H7 2.000 11196.53	4.8000e+05
C2H3+C12H8=>C2H4+C12H7 2.000 9832.26	1.0848e+06
C2H5+C12H8=>C2H6+C12H7 2.000 13265.38	3.2000e+05
NC3H7+C12H8=>C3H8+C12H7 2.000 13265.38	2.1600e+05
IC3H7+C12H8=>C3H8+C12H7 2.000 17064.96	2.1600e+05

C3H5-S+C12H8=>C3H6+C12H7 2.000 10579.25	4.3200e+05
C3H5-T+C12H8=>C3H6+C12H7 2.000 10579.25	4.3200e+05
C3H5-A+C12H8=>C3H6+C12H7 2.000 20432.90	8.6240e+05
C4H5+C12H8=>C4H6+C12H7 2.000 10579.25	4.3200e+05
C4H71-4+C12H8=>C4H8-1+C12H7 2.000 13144.81	2.1600e+05
C4H71-3+C12H8=>C4H8-2+C12H7 2.000 21467.03	5.4400e+05
IC4H7+C12H8=>IC4H8+C12H7 2.000 21467.03	4.3200e+05
C4H3+C12H8=>C4H4+C12H7 2.000 11442.22	6.5440e+05
C6H5+C12H8=>C6H6+C12H7 1.000 6728.39	5.9200e+08
O+C12H8=>OH+C12H7 2.000 8057.53	3.7600e+07
O2+C12H8=>HO2+C12H7 2.000 54834.21	2.7200e+07
OH+C12H8=>H2O+C12H7 1.000 3830.11	2.4000e+10
HO2+C12H8=>H2O2+C12H7 2.000 24090.27	1.2800e+07
CH3O+C12H8=>CH3OH+C12H7 2.000 6755.27	6.8480e+05
CH2OH+C12H8=>CH3OH+C12H7 2.000 17416.23	4.5280e+05
HCO+C12H8=>CH2O+C12H7 2.000 19856.30	2.0160e+06
CH3CO+C12H8=>CH3CHO+C12H7 2.000 21810.72	2.1600e+06
CH2CHO+C12H8=>CH3CHO+C12H7 2.000 18930.41	3.6800e+05
C3H3+C12H8=>C3H4-A+C12H7 2.000 21810.72	4.3200e+05

HCCO+C12H8=>CH2CO+C12H7	6.8480e+05
2.000 11442.22	
CH3O2+C12H8=>CH3O2H+C12H7	1.2160e+06
2.000 20202.44	
C2H5O2+C12H8=>C2H5O2H+C12H7	1.2160e+06
2.000 20202.44	
NC3H7O2+C12H8=>C3H7OOH+C12H7	1.2160e+06
2.000 20202.44	
IC3H7O2+C12H8=>C3H7OOH+C12H7	1.2160e+06
2.000 20202.44	
HCO3+C12H8=>HCO3H+C12H7	5.4400e+05
2.000 13024.11	
CH3CO3+C12H8=>CH3CO3H+C12H7	5.4400e+05
2.000 13024.11	
CH3COCH2+C12H8=>CH3COCH3+C12H7	3.6800e+05
2.000 14821.74	
C6H5O+C12H8=>C6H5OH+C12H7	4.3200e+05
2.000 20087.13	
C5H7+C12H8=>LC5H8+C12H7	4.3200e+05
2.000 22952.95	
C7H7+C12H8=>C7H8+C12H7	2.1600e+05
2.000 24090.27	
CH3C6H4+C12H8=>C7H8+C12H7	5.9200e+08
1.000 6728.39	
RCRESOLO+C12H8=>CRESOL+C12H7	4.3200e+05
2.000 20432.90	
C10H7+C12H8=>C10H8+C12H7	5.9200e+08
1.000 6728.39	
INDENYL+C12H8=>INDENE+C12H7	2.0800e+05
2.000 24090.27	
C10H6CH3+C12H8=>C10H7CH3+C12H7	5.9200e+08
1.000 6728.39	
C2H3+BIPHENYL=>C2H4+C12H9	1.3560e+06
2.000 9832.26	
C2H5+BIPHENYL=>C2H6+C12H9	4.0000e+05
2.000 13265.38	
NC3H7+BIPHENYL=>C3H8+C12H9	2.7000e+05
2.000 13265.38	



IC3H7+BIPHENYL=>C3H8+C12H9	2.7000e+05
2.000 17064.96	
C3H5-S+BIPHENYL=>C3H6+C12H9	5.4000e+05
2.000 10579.25	
C3H5-T+BIPHENYL=>C3H6+C12H9	5.4000e+05
2.000 10579.25	
C3H5-A+BIPHENYL=>C3H6+C12H9	1.0780e+06
2.000 20432.90	
C4H5+BIPHENYL=>C4H6+C12H9	5.4000e+05
2.000 10579.25	
C4H71-4+BIPHENYL=>C4H8-1+C12H9	2.7000e+05
2.000 13144.81	
C4H71-3+BIPHENYL=>C4H8-2+C12H9	6.8000e+05
2.000 21467.03	
IC4H7+BIPHENYL=>IC4H8+C12H9	5.4000e+05
2.000 21467.03	
C4H3+BIPHENYL=>C4H4+C12H9	8.1800e+05
2.000 11442.22	
C6H5+BIPHENYL=>C6H6+C12H9	7.4000e+08
1.000 6728.39	
O+BIPHENYL=>OH+C12H9	4.7000e+07
2.000 8057.53	
O2+BIPHENYL=>HO2+C12H9	3.4000e+07
2.000 54834.21	
OH+BIPHENYL=>H2O+C12H9	3.0000e+10
1.000 3830.11	
HO2+BIPHENYL=>H2O2+C12H9	1.6000e+07
2.000 24090.27	
CH3O+BIPHENYL=>CH3OH+C12H9	8.5600e+05
2.000 6755.27	
CH2OH+BIPHENYL=>CH3OH+C12H9	5.6600e+05
2.000 17416.23	
HCO+BIPHENYL=>CH2O+C12H9	2.5200e+06
2.000 19856.30	
CH3CO+BIPHENYL=>CH3CHO+C12H9	2.7000e+06
2.000 21810.72	
CH2CHO+BIPHENYL=>CH3CHO+C12H9	4.6000e+05
2.000 18930.41	

C3H3+BIPHENYL=>C3H4-A+C12H9	5.4000e+05
2.000 21810.72	
HCCO+BIPHENYL=>CH2CO+C12H9	8.5600e+05
2.000 11442.22	
CH3O2+BIPHENYL=>CH3O2H+C12H9	1.5200e+06
2.000 20202.44	
C2H5O2+BIPHENYL=>C2H5O2H+C12H9	1.5200e+06
2.000 20202.44	
NC3H7O2+BIPHENYL=>C3H7OOH+C12H9	1.5200e+06
2.000 20202.44	
IC3H7O2+BIPHENYL=>C3H7OOH+C12H9	1.5200e+06
2.000 20202.44	
HCO3+BIPHENYL=>HCO3H+C12H9	6.8000e+05
2.000 13024.11	
CH3CO3+BIPHENYL=>CH3CO3H+C12H9	6.8000e+05
2.000 13024.11	
CH3COCH2+BIPHENYL=>CH3COCH3+C12H9	4.6000e+05
2.000 14821.74	
C6H5O+BIPHENYL=>C6H5OH+C12H9	5.4000e+05
2.000 20087.13	
C5H7+BIPHENYL=>LC5H8+C12H9	5.4000e+05
2.000 22952.95	
C7H7+BIPHENYL=>C7H8+C12H9	2.7000e+05
2.000 24090.27	
CH3C6H4+BIPHENYL=>C7H8+C12H9	7.4000e+08
1.000 6728.39	
RCRESOLO+BIPHENYL=>CRESOL+C12H9	5.4000e+05
2.000 20432.90	
C10H7+BIPHENYL=>C10H8+C12H9	7.4000e+08
1.000 6728.39	
INDENYL+BIPHENYL=>INDENE+C12H9	2.6000e+05
2.000 24090.27	
C10H6CH3+BIPHENYL=>C10H7CH3+C12H9	7.4000e+08
1.000 6728.39	
H+C6H5CH2C6H5=>H2+H+FLUORENE	9.0000e+06
2.000 4000.00	
CH3+C6H5CH2C6H5=>H+CH4+FLUORENE	9.0000e+04
2.000 5000.00	

C2H3+C6H5CH2C6H5=>H+C2H4+FLUORENE 2.000            3900.00	2.0340e+05
C2H5+C6H5CH2C6H5=>H+C2H6+FLUORENE 2.000            6700.00	6.0000e+04
NC3H7+C6H5CH2C6H5=>H+C3H8+FLUORENE 2.000            6700.00	4.0500e+04
IC3H7+C6H5CH2C6H5=>H+C3H8+FLUORENE 2.000            9900.00	4.0500e+04
C3H5-S+C6H5CH2C6H5=>H+C3H6+FLUORENE 2.000            4500.00	8.1000e+04
C3H5-T+C6H5CH2C6H5=>H+C3H6+FLUORENE 2.000            4500.00	8.1000e+04
C3H5-A+C6H5CH2C6H5=>H+C3H6+FLUORENE 2.000            12800.00	1.6170e+05
C4H5+C6H5CH2C6H5=>H+C4H6+FLUORENE 2.000            4500.00	8.1000e+04
C4H71-4+C6H5CH2C6H5=>H+C4H8-1+FLUORENE 2.000            6600.00	4.0500e+04
C4H71-3+C6H5CH2C6H5=>H+C4H8-2+FLUORENE 2.000            13700.00	1.0200e+05
IC4H7+C6H5CH2C6H5=>H+IC4H8+FLUORENE 2.000            13700.00	8.1000e+04
C4H3+C6H5CH2C6H5=>H+C4H4+FLUORENE 2.000            5200.00	1.2270e+05
C6H5+C6H5CH2C6H5=>H+C6H6+FLUORENE 1.000            2000.00	1.1100e+08
O+C6H5CH2C6H5=>H+OH+FLUORENE 2.000            2500.00	7.0500e+06
O2+C6H5CH2C6H5=>H+HO2+FLUORENE 2.000            44000.00	5.1000e+06
OH+C6H5CH2C6H5=>H+H2O+FLUORENE 1.000            50.00	4.5000e+09
HO2+C6H5CH2C6H5=>H+H2O2+FLUORENE 2.000            16000.00	2.4000e+06
CH3O+C6H5CH2C6H5=>H+CH3OH+FLUORENE 2.000            1500.00	1.2840e+05
CH2OH+C6H5CH2C6H5=>H+CH3OH+FLUORENE 2.000            10200.00	8.4900e+04

HCO+C6H5CH2C6H5=>H+CH2O+FLUORENE	3.7800e+05
2.000 12300.00	
CH3CO+C6H5CH2C6H5=>H+CH3CHO+FLUORENE	4.0500e+05
2.000 14000.00	
CH2CHO+C6H5CH2C6H5=>H+CH3CHO+FLUORENE	6.9000e+04
2.000 11500.00	
C3H3+C6H5CH2C6H5=>H+C3H4-A+FLUORENE	8.1000e+04
2.000 14000.00	
HCCO+C6H5CH2C6H5=>H+CH2CO+FLUORENE	1.2840e+05
2.000 5200.00	
CH3O2+C6H5CH2C6H5=>H+CH3O2H+FLUORENE	2.2800e+05
2.000 12600.00	
C2H5O2+C6H5CH2C6H5=>H+C2H5O2H+FLUORENE	2.2800e+05
2.000 12600.00	
NC3H7O2+C6H5CH2C6H5=>H+C3H7OOH+FLUORENE	2.2800e+05
2.000 12600.00	
IC3H7O2+C6H5CH2C6H5=>H+C3H7OOH+FLUORENE	2.2800e+05
2.000 12600.00	
HCO3+C6H5CH2C6H5=>H+HCO3H+FLUORENE	1.0200e+05
2.000 6500.00	
CH3CO3+C6H5CH2C6H5=>H+CH3CO3H+FLUORENE	1.0200e+05
2.000 6500.00	
CH3COCH2+C6H5CH2C6H5=>H+CH3COCH3+FLUORENE	6.9000e+04
2.000 8000.00	
C6H5O+C6H5CH2C6H5=>H+C6H5OH+FLUORENE	8.1000e+04
2.000 12500.00	
C5H7+C6H5CH2C6H5=>H+LC5H8+FLUORENE	8.1000e+04
2.000 15000.00	
C7H7+C6H5CH2C6H5=>H+C7H8+FLUORENE	4.0500e+04
2.000 16000.00	
CH3C6H4+C6H5CH2C6H5=>H+C7H8+FLUORENE	1.1100e+08
1.000 2000.00	
RCRESOLO+C6H5CH2C6H5=>H+CRESOL+FLUORENE	8.1000e+04
2.000 12800.00	
C10H7+C6H5CH2C6H5=>H+C10H8+FLUORENE	1.1100e+08
1.000 2000.00	
INDENYL+C6H5CH2C6H5=>H+INDENE+FLUORENE	3.9000e+04
2.000 16000.00	

C10H6CH3+C6H5CH2C6H5=>H+C10H7CH3+FLUORENE 1.000            2000.00	1.1100e+08
H+FLUORENE=>H2+0.5C12H9+0.5C14H9 2.000            4000.00	6.0000e+06
CH3+FLUORENE=>CH4+0.5C12H9+0.5C14H9 2.000            5000.00	6.0000e+04
C2H3+FLUORENE=>C2H4+0.5C12H9+0.5C14H9 2.000            3900.00	1.3560e+05
C2H5+FLUORENE=>C2H6+0.5C12H9+0.5C14H9 2.000            6700.00	4.0000e+04
NC3H7+FLUORENE=>C3H8+0.5C12H9+0.5C14H9 2.000            6700.00	2.7000e+04
IC3H7+FLUORENE=>C3H8+0.5C12H9+0.5C14H9 2.000            9900.00	2.7000e+04
C3H5-S+FLUORENE=>C3H6+0.5C12H9+0.5C14H9 2.000            4500.00	5.4000e+04
C3H5-T+FLUORENE=>C3H6+0.5C12H9+0.5C14H9 2.000            4500.00	5.4000e+04
C3H5-A+FLUORENE=>C3H6+0.5C12H9+0.5C14H9 2.000            12800.00	1.0780e+05
C4H5+FLUORENE=>C4H6+0.5C12H9+0.5C14H9 2.000            4500.00	5.4000e+04
C4H71-4+FLUORENE=>C4H8-1+0.5C12H9+0.5C14H9 2.000            6600.00	2.7000e+04
C4H71-3+FLUORENE=>C4H8-2+0.5C12H9+0.5C14H9 2.000            13700.00	6.8000e+04
IC4H7+FLUORENE=>IC4H8+0.5C12H9+0.5C14H9 2.000            13700.00	5.4000e+04
C4H3+FLUORENE=>C4H4+0.5C12H9+0.5C14H9 2.000            5200.00	8.1800e+04
C6H5+FLUORENE=>C6H6+0.5C12H9+0.5C14H9 1.000            2000.00	7.4000e+07
O+FLUORENE=>OH+0.5C12H9+0.5C14H9 2.000            2500.00	4.7000e+06
O2+FLUORENE=>HO2+0.5C12H9+0.5C14H9 2.000            44000.00	3.4000e+06
OH+FLUORENE=>H2O+0.5C12H9+0.5C14H9 1.000            50.00	3.0000e+09

HO2+FLUORENE=>H2O2+0.5C12H9+0.5C14H9	1.6000e+06
2.000 16000.00	
CH3O+FLUORENE=>CH3OH+0.5C12H9+0.5C14H9	8.5600e+04
2.000 1500.00	
CH2OH+FLUORENE=>CH3OH+0.5C12H9+0.5C14H9	5.6600e+04
2.000 10200.00	
HCO+FLUORENE=>CH2O+0.5C12H9+0.5C14H9	2.5200e+05
2.000 12300.00	
CH3CO+FLUORENE=>CH3CHO+0.5C12H9+0.5C14H9	2.7000e+05
2.000 14000.00	
CH2CHO+FLUORENE=>CH3CHO+0.5C12H9+0.5C14H9	4.6000e+04
2.000 11500.00	
C3H3+FLUORENE=>C3H4-A+0.5C12H9+0.5C14H9	5.4000e+04
2.000 14000.00	
HCCO+FLUORENE=>CH2CO+0.5C12H9+0.5C14H9	8.5600e+04
2.000 5200.00	
CH3O2+FLUORENE=>CH3O2H+0.5C12H9+0.5C14H9	1.5200e+05
2.000 12600.00	
C2H5O2+FLUORENE=>C2H5O2H+0.5C12H9+0.5C14H9	1.5200e+05
2.000 12600.00	
NC3H7O2+FLUORENE=>C3H7OOH+0.5C12H9+0.5C14H9	1.5200e+05
2.000 12600.00	
IC3H7O2+FLUORENE=>C3H7OOH+0.5C12H9+0.5C14H9	1.5200e+05
2.000 12600.00	
HCO3+FLUORENE=>HCO3H+0.5C12H9+0.5C14H9	6.8000e+04
2.000 6500.00	
CH3CO3+FLUORENE=>CH3CO3H+0.5C12H9+0.5C14H9	6.8000e+04
2.000 6500.00	
CH3COCH2+FLUORENE=>CH3COCH3+0.5C12H9+0.5C14H9	4.6000e+04
2.000 8000.00	
C6H5O+FLUORENE=>C6H5OH+0.5C12H9+0.5C14H9	5.4000e+04
2.000 12500.00	
C5H7+FLUORENE=>LC5H8+0.5C12H9+0.5C14H9	5.4000e+04
2.000 15000.00	
C7H7+FLUORENE=>C7H8+0.5C12H9+0.5C14H9	2.7000e+04
2.000 16000.00	
CH3C6H4+FLUORENE=>C7H8+0.5C12H9+0.5C14H9	7.4000e+07
1.000 2000.00	

RCRESOLO+FLUORENE=>CRESOL+0.5C12H9+0.5C14H9 2.000 12800.00	5.4000e+04
C10H7+FLUORENE=>C10H8+0.5C12H9+0.5C14H9 1.000 2000.00	7.4000e+07
INDENYL+FLUORENE=>INDENE+0.5C12H9+0.5C14H9 2.000 16000.00	2.6000e+04
C10H6CH3+FLUORENE=>C10H7CH3+0.5C12H9+0.5C14H9 1.000 2000.00	7.4000e+07
H+C14H10=>H2+C14H9 2.000 9957.26	6.0000e+07
CH3+C14H10=>CH4+C14H9 2.000 11196.53	6.0000e+05
C2H3+C14H10=>C2H4+C14H9 2.000 9832.26	1.3560e+06
C2H5+C14H10=>C2H6+C14H9 2.000 13265.38	4.0000e+05
NC3H7+C14H10=>C3H8+C14H9 2.000 13265.38	2.7000e+05
IC3H7+C14H10=>C3H8+C14H9 2.000 17064.96	2.7000e+05
C3H5-S+C14H10=>C3H6+C14H9 2.000 10579.25	5.4000e+05
C3H5-T+C14H10=>C3H6+C14H9 2.000 10579.25	5.4000e+05
C3H5-A+C14H10=>C3H6+C14H9 2.000 20432.90	1.0780e+06
C4H5+C14H10=>C4H6+C14H9 2.000 10579.25	5.4000e+05
C4H71-4+C14H10=>C4H8-1+C14H9 2.000 13144.81	2.7000e+05
C4H71-3+C14H10=>C4H8-2+C14H9 2.000 21467.03	6.8000e+05
IC4H7+C14H10=>IC4H8+C14H9 2.000 21467.03	5.4000e+05
C4H3+C14H10=>C4H4+C14H9 2.000 11442.22	8.1800e+05
C6H5+C14H10=>C6H6+C14H9 1.000 6728.39	7.4000e+08

O+C14H10=>OH+C14H9	4.7000e+07
2.000 8057.53	
O2+C14H10=>HO2+C14H9	3.4000e+07
2.000 54834.21	
OH+C14H10=>H2O+C14H9	3.0000e+10
1.000 3830.11	
HO2+C14H10=>H2O2+C14H9	1.6000e+07
2.000 24090.27	
CH3O+C14H10=>CH3OH+C14H9	8.5600e+05
2.000 6755.27	
CH2OH+C14H10=>CH3OH+C14H9	5.6600e+05
2.000 17416.23	
HCO+C14H10=>CH2O+C14H9	2.5200e+06
2.000 19856.30	
CH3CO+C14H10=>CH3CHO+C14H9	2.7000e+06
2.000 21810.72	
CH2CHO+C14H10=>CH3CHO+C14H9	4.6000e+05
2.000 18930.41	
C3H3+C14H10=>C3H4-A+C14H9	5.4000e+05
2.000 21810.72	
HCCO+C14H10=>CH2CO+C14H9	8.5600e+05
2.000 11442.22	
CH3O2+C14H10=>CH3O2H+C14H9	1.5200e+06
2.000 20202.44	
C2H5O2+C14H10=>C2H5O2H+C14H9	1.5200e+06
2.000 20202.44	
NC3H7O2+C14H10=>C3H7OOH+C14H9	1.5200e+06
2.000 20202.44	
IC3H7O2+C14H10=>C3H7OOH+C14H9	1.5200e+06
2.000 20202.44	
HCO3+C14H10=>HCO3H+C14H9	6.8000e+05
2.000 13024.11	
CH3CO3+C14H10=>CH3CO3H+C14H9	6.8000e+05
2.000 13024.11	
CH3COCH2+C14H10=>CH3COCH3+C14H9	4.6000e+05
2.000 14821.74	
C6H5O+C14H10=>C6H5OH+C14H9	5.4000e+05
2.000 20087.13	



C5H7+C14H10=>LC5H8+C14H9	5.4000e+05
2.000 22952.95	
C7H7+C14H10=>C7H8+C14H9	2.7000e+05
2.000 24090.27	
CH3C6H4+C14H10=>C7H8+C14H9	7.4000e+08
1.000 6728.39	
RCRESOLO+C14H10=>CRESOL+C14H9	5.4000e+05
2.000 20432.90	
C10H7+C14H10=>C10H8+C14H9	7.4000e+08
1.000 6728.39	
INDENYL+C14H10=>INDENE+C14H9	2.6000e+05
2.000 24090.27	
C10H6CH3+C14H10=>C10H7CH3+C14H9	7.4000e+08
1.000 6728.39	
CH3+C6H5C2H4C6H5=>CH4+RBBENZ	2.7000e+05
2.000 5000.00	
C2H3+C6H5C2H4C6H5=>C2H4+RBBENZ	6.1020e+05
2.000 3900.00	
C2H5+C6H5C2H4C6H5=>C2H6+RBBENZ	1.8000e+05
2.000 6700.00	
NC3H7+C6H5C2H4C6H5=>C3H8+RBBENZ	1.2150e+05
2.000 6700.00	
IC3H7+C6H5C2H4C6H5=>C3H8+RBBENZ	1.2150e+05
2.000 9900.00	
C3H5-S+C6H5C2H4C6H5=>C3H6+RBBENZ	2.4300e+05
2.000 4500.00	
C3H5-T+C6H5C2H4C6H5=>C3H6+RBBENZ	2.4300e+05
2.000 4500.00	
C3H5-A+C6H5C2H4C6H5=>C3H6+RBBENZ	4.8510e+05
2.000 12800.00	
C4H5+C6H5C2H4C6H5=>C4H6+RBBENZ	2.4300e+05
2.000 4500.00	
C4H71-4+C6H5C2H4C6H5=>C4H8-1+RBBENZ	1.2150e+05
2.000 6600.00	
C4H71-3+C6H5C2H4C6H5=>C4H8-2+RBBENZ	3.0600e+05
2.000 13700.00	
IC4H7+C6H5C2H4C6H5=>IC4H8+RBBENZ	2.4300e+05
2.000 13700.00	

C4H3+C6H5C2H4C6H5=>C4H4+RBBENZ	3.6810e+05
2.000 5200.00	
C6H5+C6H5C2H4C6H5=>C6H6+RBBENZ	3.3300e+08
1.000 2000.00	
O+C6H5C2H4C6H5=>OH+RBBENZ	2.1150e+07
2.000 2500.00	
O2+C6H5C2H4C6H5=>HO2+RBBENZ	1.5300e+07
2.000 44000.00	
OH+C6H5C2H4C6H5=>H2O+RBBENZ	1.3500e+10
1.000 50.00	
HO2+C6H5C2H4C6H5=>H2O2+RBBENZ	7.2000e+06
2.000 16000.00	
CH3O+C6H5C2H4C6H5=>CH3OH+RBBENZ	3.8520e+05
2.000 1500.00	
CH2OH+C6H5C2H4C6H5=>CH3OH+RBBENZ	2.5470e+05
2.000 10200.00	
HCO+C6H5C2H4C6H5=>CH2O+RBBENZ	1.1340e+06
2.000 12300.00	
CH3CO+C6H5C2H4C6H5=>CH3CHO+RBBENZ	1.2150e+06
2.000 14000.00	
CH2CHO+C6H5C2H4C6H5=>CH3CHO+RBBENZ	2.0700e+05
2.000 11500.00	
C3H3+C6H5C2H4C6H5=>C3H4-A+RBBENZ	2.4300e+05
2.000 14000.00	
HCCO+C6H5C2H4C6H5=>CH2CO+RBBENZ	3.8520e+05
2.000 5200.00	
CH3O2+C6H5C2H4C6H5=>CH3O2H+RBBENZ	6.8400e+05
2.000 12600.00	
C2H5O2+C6H5C2H4C6H5=>C2H5O2H+RBBENZ	6.8400e+05
2.000 12600.00	
NC3H7O2+C6H5C2H4C6H5=>C3H7OOH+RBBENZ	6.8400e+05
2.000 12600.00	
IC3H7O2+C6H5C2H4C6H5=>C3H7OOH+RBBENZ	6.8400e+05
2.000 12600.00	
HCO3+C6H5C2H4C6H5=>HCO3H+RBBENZ	3.0600e+05
2.000 6500.00	
CH3CO3+C6H5C2H4C6H5=>CH3CO3H+RBBENZ	3.0600e+05
2.000 6500.00	

CH3COCH2+C6H5C2H4C6H5=>CH3COCH3+RBBENZ 2.000           8000.00	2.0700e+05
C6H5O+C6H5C2H4C6H5=>C6H5OH+RBBENZ 2.000           12500.00	2.4300e+05
C5H7+C6H5C2H4C6H5=>LC5H8+RBBENZ 2.000           15000.00	2.4300e+05
C7H7+C6H5C2H4C6H5=>C7H8+RBBENZ 2.000           16000.00	1.2150e+05
CH3C6H4+C6H5C2H4C6H5=>C7H8+RBBENZ 1.000           2000.00	3.3300e+08
RCRESOLO+C6H5C2H4C6H5=>RBBENZ+CRESOL 2.000           12800.00	2.4300e+05
C10H7+C6H5C2H4C6H5=>C10H8+RBBENZ 1.000           2000.00	3.3300e+08
INDENYL+C6H5C2H4C6H5=>RBBENZ+INDENE 2.000           16000.00	1.1700e+05
C10H6CH3+C6H5C2H4C6H5=>RBBENZ+C10H7CH3 1.000           2000.00	3.3300e+08
H+C6H5C2H4C6H5=>H2+RBBENZ 2.000           3950.57	1.0000e+08
H+STILB=>H2+H+C14H10 2.000           9957.26	1.2000e+07
CH3+STILB=>H+CH4+C14H10 2.000           11196.53	1.2000e+05
C2H3+STILB=>H+C2H4+C14H10 2.000           9832.26	2.7120e+05
C2H5+STILB=>H+C2H6+C14H10 2.000           13265.38	8.0000e+04
NC3H7+STILB=>H+C3H8+C14H10 2.000           13265.38	5.4000e+04
IC3H7+STILB=>H+C3H8+C14H10 2.000           17064.96	5.4000e+04
C3H5-S+STILB=>H+C3H6+C14H10 2.000           10579.25	1.0800e+05
C3H5-T+STILB=>H+C3H6+C14H10 2.000           10579.25	1.0800e+05
C3H5-A+STILB=>H+C3H6+C14H10 2.000           20432.90	2.1560e+05

C4H5+STILB=>H+C4H6+C14H10	1.0800e+05
2.000 10579.25	
C4H71-4+STILB=>H+C4H8-1+C14H10	5.4000e+04
2.000 13144.81	
C4H71-3+STILB=>H+C4H8-2+C14H10	1.3600e+05
2.000 21467.03	
IC4H7+STILB=>H+IC4H8+C14H10	1.0800e+05
2.000 21467.03	
C4H3+STILB=>H+C4H4+C14H10	1.6360e+05
2.000 11442.22	
C6H5+STILB=>H+C6H6+C14H10	1.4800e+08
1.000 6728.39	
O+STILB=>H+OH+C14H10	9.4000e+06
2.000 8057.53	
O2+STILB=>H+HO2+C14H10	6.8000e+06
2.000 54834.21	
OH+STILB=>H+H2O+C14H10	6.0000e+09
1.000 3830.11	
HO2+STILB=>H+H2O2+C14H10	3.2000e+06
2.000 24090.27	
CH3O+STILB=>H+CH3OH+C14H10	1.7120e+05
2.000 6755.27	
CH2OH+STILB=>H+CH3OH+C14H10	1.1320e+05
2.000 17416.23	
HCO+STILB=>H+CH2O+C14H10	5.0400e+05
2.000 19856.30	
CH3CO+STILB=>H+CH3CHO+C14H10	5.4000e+05
2.000 21810.72	
CH2CHO+STILB=>H+CH3CHO+C14H10	9.2000e+04
2.000 18930.41	
C3H3+STILB=>H+C3H4-A+C14H10	1.0800e+05
2.000 21810.72	
HCCO+STILB=>H+CH2CO+C14H10	1.7120e+05
2.000 11442.22	
CH3O2+STILB=>H+CH3O2H+C14H10	3.0400e+05
2.000 20202.44	
C2H5O2+STILB=>H+C2H5O2H+C14H10	3.0400e+05
2.000 20202.44	

NC3H7O2+STILB=>H+C3H7OOH+C14H10 2.000 20202.44	3.0400e+05
IC3H7O2+STILB=>H+C3H7OOH+C14H10 2.000 20202.44	3.0400e+05
HCO3+STILB=>H+HCO3H+C14H10 2.000 13024.11	1.3600e+05
CH3CO3+STILB=>H+CH3CO3H+C14H10 2.000 13024.11	1.3600e+05
CH3COCH2+STILB=>H+CH3COCH3+C14H10 2.000 14821.74	9.2000e+04
C6H5O+STILB=>H+C6H5OH+C14H10 2.000 20087.13	1.0800e+05
C5H7+STILB=>H+LC5H8+C14H10 2.000 22952.95	1.0800e+05
C7H7+STILB=>H+C7H8+C14H10 2.000 24090.27	5.4000e+04
CH3C6H4+STILB=>H+C7H8+C14H10 1.000 6728.39	1.4800e+08
STILB+RCRESOLO=>H+CRE SOL+C14H10 2.000 20432.90	1.0800e+05
STILB+C10H7=>H+C10H8+C14H10 1.000 6728.39	1.4800e+08
STILB+INDENYL=>H+INDENE+C14H10 2.000 24090.27	5.2000e+04
STILB+C10H6CH3=>H+C10H7CH3+C14H10 1.000 6728.39	1.4800e+08
H+C16H10=>H2+C16H9 2.000 9957.26	8.4000e+07
CH3+C16H10=>CH4+C16H9 2.000 11196.53	8.4000e+05
C2H3+C16H10=>C2H4+C16H9 2.000 9832.26	1.8984e+06
C2H5+C16H10=>C2H6+C16H9 2.000 13265.38	5.6000e+05
NC3H7+C16H10=>C3H8+C16H9 2.000 13265.38	3.7800e+05
IC3H7+C16H10=>C3H8+C16H9 2.000 17064.96	3.7800e+05

C3H5-S+C16H10=>C3H6+C16H9	7.5600e+05
2.000 10579.25	
C3H5-T+C16H10=>C3H6+C16H9	7.5600e+05
2.000 10579.25	
C3H5-A+C16H10=>C3H6+C16H9	1.5092e+06
2.000 20432.90	
C4H5+C16H10=>C4H6+C16H9	7.5600e+05
2.000 10579.25	
C4H71-4+C16H10=>C4H8-1+C16H9	3.7800e+05
2.000 13144.81	
C4H71-3+C16H10=>C4H8-2+C16H9	9.5200e+05
2.000 21467.03	
IC4H7+C16H10=>IC4H8+C16H9	7.5600e+05
2.000 21467.03	
C4H3+C16H10=>C4H4+C16H9	1.1452e+06
2.000 11442.22	
C6H5+C16H10=>C6H6+C16H9	1.0360e+09
1.000 6728.39	
O+C16H10=>OH+C16H9	6.5800e+07
2.000 8057.53	
O2+C16H10=>HO2+C16H9	4.7600e+07
2.000 54834.21	
OH+C16H10=>H2O+C16H9	4.2000e+10
1.000 3830.11	
HO2+C16H10=>H2O2+C16H9	2.2400e+07
2.000 24090.27	
CH3O+C16H10=>CH3OH+C16H9	1.1984e+06
2.000 6755.27	
CH2OH+C16H10=>CH3OH+C16H9	7.9240e+05
2.000 17416.23	
HCO+C16H10=>CH2O+C16H9	3.5280e+06
2.000 19856.30	
CH3CO+C16H10=>CH3CHO+C16H9	3.7800e+06
2.000 21810.72	
CH2CHO+C16H10=>CH3CHO+C16H9	6.4400e+05
2.000 18930.41	
C3H3+C16H10=>C3H4-A+C16H9	7.5600e+05
2.000 21810.72	

HCCO+C16H10=>CH2CO+C16H9	1.1984e+06
2.000 11442.22	
CH3O2+C16H10=>CH3O2H+C16H9	2.1280e+06
2.000 20202.44	
C2H5O2+C16H10=>C2H5O2H+C16H9	2.1280e+06
2.000 20202.44	
NC3H7O2+C16H10=>C3H7OOH+C16H9	2.1280e+06
2.000 20202.44	
IC3H7O2+C16H10=>C3H7OOH+C16H9	2.1280e+06
2.000 20202.44	
HCO3+C16H10=>HCO3H+C16H9	9.5200e+05
2.000 13024.11	
CH3CO3+C16H10=>CH3CO3H+C16H9	9.5200e+05
2.000 13024.11	
CH3COCH2+C16H10=>CH3COCH3+C16H9	6.4400e+05
2.000 14821.74	
C6H5O+C16H10=>C6H5OH+C16H9	7.5600e+05
2.000 20087.13	
C5H7+C16H10=>LC5H8+C16H9	7.5600e+05
2.000 22952.95	
C7H7+C16H10=>C7H8+C16H9	3.7800e+05
2.000 24090.27	
CH3C6H4+C16H10=>C7H8+C16H9	1.0360e+09
1.000 6728.39	
RCRESOLO+C16H10=>CRESOL+C16H9	7.5600e+05
2.000 20432.90	
C10H7+C16H10=>C10H8+C16H9	1.0360e+09
1.000 6728.39	
INDENYL+C16H10=>INDENE+C16H9	3.6400e+05
2.000 24090.27	
C10H6CH3+C16H10=>C10H7CH3+C16H9	1.0360e+09
1.000 6728.39	
H+C18H10=>H2+C18H9	8.4000e+07
2.000 9957.26	
CH3+C18H10=>CH4+C18H9	8.4000e+05
2.000 11196.53	
C2H3+C18H10=>C2H4+C18H9	1.8984e+06
2.000 9832.26	

C2H5+C18H10=>C2H6+C18H9	5.6000e+05
2.000 13265.38	
NC3H7+C18H10=>C3H8+C18H9	3.7800e+05
2.000 13265.38	
IC3H7+C18H10=>C3H8+C18H9	3.7800e+05
2.000 17064.96	
C3H5-S+C18H10=>C3H6+C18H9	7.5600e+05
2.000 10579.25	
C3H5-T+C18H10=>C3H6+C18H9	7.5600e+05
2.000 10579.25	
C3H5-A+C18H10=>C3H6+C18H9	1.5092e+06
2.000 20432.90	
C4H5+C18H10=>C4H6+C18H9	7.5600e+05
2.000 10579.25	
C4H71-4+C18H10=>C4H8-1+C18H9	3.7800e+05
2.000 13144.81	
C4H71-3+C18H10=>C4H8-2+C18H9	9.5200e+05
2.000 21467.03	
IC4H7+C18H10=>IC4H8+C18H9	7.5600e+05
2.000 21467.03	
C4H3+C18H10=>C4H4+C18H9	1.1452e+06
2.000 11442.22	
C6H5+C18H10=>C6H6+C18H9	1.0360e+09
1.000 6728.39	
O+C18H10=>OH+C18H9	6.5800e+07
2.000 8057.53	
O2+C18H10=>HO2+C18H9	4.7600e+07
2.000 54834.21	
OH+C18H10=>H2O+C18H9	4.2000e+10
1.000 3830.11	
HO2+C18H10=>H2O2+C18H9	2.2400e+07
2.000 24090.27	
CH3O+C18H10=>CH3OH+C18H9	1.1984e+06
2.000 6755.27	
CH2OH+C18H10=>CH3OH+C18H9	7.9240e+05
2.000 17416.23	
HCO+C18H10=>CH2O+C18H9	3.5280e+06
2.000 19856.30	



CH3CO+C18H10=>CH3CHO+C18H9	3.7800e+06
2.000 21810.72	
CH2CHO+C18H10=>CH3CHO+C18H9	6.4400e+05
2.000 18930.41	
C3H3+C18H10=>C3H4-A+C18H9	7.5600e+05
2.000 21810.72	
HCCO+C18H10=>CH2CO+C18H9	1.1984e+06
2.000 11442.22	
CH3O2+C18H10=>CH3O2H+C18H9	2.1280e+06
2.000 20202.44	
C2H5O2+C18H10=>C2H5O2H+C18H9	2.1280e+06
2.000 20202.44	
NC3H7O2+C18H10=>C3H7OOH+C18H9	2.1280e+06
2.000 20202.44	
IC3H7O2+C18H10=>C3H7OOH+C18H9	2.1280e+06
2.000 20202.44	
HCO3+C18H10=>HCO3H+C18H9	9.5200e+05
2.000 13024.11	
CH3CO3+C18H10=>CH3CO3H+C18H9	9.5200e+05
2.000 13024.11	
CH3COCH2+C18H10=>CH3COCH3+C18H9	6.4400e+05
2.000 14821.74	
C6H5O+C18H10=>C6H5OH+C18H9	7.5600e+05
2.000 20087.13	
C5H7+C18H10=>LC5H8+C18H9	7.5600e+05
2.000 22952.95	
C7H7+C18H10=>C7H8+C18H9	3.7800e+05
2.000 24090.27	
CH3C6H4+C18H10=>C7H8+C18H9	1.0360e+09
1.000 6728.39	
RCRESOLO+C18H10=>CRESOL+C18H9	7.5600e+05
2.000 20432.90	
C10H7+C18H10=>C10H8+C18H9	1.0360e+09
1.000 6728.39	
INDENYL+C18H10=>INDENE+C18H9	3.6400e+05
2.000 24090.27	
C10H6CH3+C18H10=>C10H7CH3+C18H9	1.0360e+09
1.000 6728.39	

O2+C5H5=>O+C5H5O	1.5000e+11
0.000 19000.00	
C5H6+C5H5O=>CO+C3H5-A+C6H6	5.0000e+12
0.000 20000.00	
C5H5O=>H+CYC5H4O	1.0000e+13
0.000 52000.00	
H+CYC5H4O=>CO+C4H5	2.0000e+13
0.000 2000.00	
H+CYC5H4O=>H2+CO+C4H3	4.2000e+07
2.000 9705.55	
CH3+CYC5H4O=>CO+CH4+C4H3	4.2000e+05
2.000 10934.70	
C2H3+CYC5H4O=>CO+C2H4+C4H3	9.4920e+05
2.000 9581.60	
C2H5+CYC5H4O=>CO+C2H6+C4H3	2.8000e+05
2.000 12987.97	
NC3H7+CYC5H4O=>CO+C3H8+C4H3	1.8900e+05
2.000 12987.97	
IC3H7+CYC5H4O=>CO+C3H8+C4H3	1.8900e+05
2.000 16762.22	
C3H5-S+CYC5H4O=>CO+C3H6+C4H3	3.7800e+05
2.000 10322.38	
C3H5-T+CYC5H4O=>CO+C3H6+C4H3	3.7800e+05
2.000 10322.38	
C3H5-A+CYC5H4O=>CO+C3H6+C4H3	7.5460e+05
2.000 20110.38	
C4H5+CYC5H4O=>CO+C4H6+C4H3	3.7800e+05
2.000 10322.38	
C4H71-4+CYC5H4O=>CO+C4H8-1+C4H3	1.8900e+05
2.000 12868.27	
C4H71-3+CYC5H4O=>CO+C4H8-2+C4H3	4.7600e+05
2.000 21138.84	
IC4H7+CYC5H4O=>CO+IC4H8+C4H3	3.7800e+05
2.000 21138.84	
C4H3+CYC5H4O=>CO+C4H4+C4H3	5.7260e+05
2.000 11178.46	
C6H5+CYC5H4O=>CO+C4H3+C6H6	5.1800e+08
1.000 6528.60	

O+CYC5H4O=>OH+CO+C4H3	3.2900e+07
2.000 7822.71	
O2+CYC5H4O=>HO2+CO+C4H3	2.3800e+07
2.000 54376.43	
OH+CYC5H4O=>H2O+CO+C4H3	2.1000e+10
1.000 3670.39	
HO2+CYC5H4O=>H2O2+CO+C4H3	1.1200e+07
2.000 23748.43	
CH3O+CYC5H4O=>CO+CH3OH+C4H3	5.9920e+05
2.000 6533.22	
CH2OH+CYC5H4O=>CO+CH3OH+C4H3	3.9620e+05
2.000 17111.32	
HCO+CYC5H4O=>CO+CH2O+C4H3	1.7640e+06
2.000 19537.02	
CH3CO+CYC5H4O=>CO+CH3CHO+C4H3	1.8900e+06
2.000 21480.69	
CH2CHO+CYC5H4O=>CO+CH3CHO+C4H3	3.2200e+05
2.000 18616.45	
C3H3+CYC5H4O=>CO+C3H4-A+C4H3	3.7800e+05
2.000 21480.69	
HCCO+CYC5H4O=>CO+CH2CO+C4H3	5.9920e+05
2.000 11178.46	
CH3O2+CYC5H4O=>CO+CH3O2H+C4H3	1.0640e+06
2.000 19881.21	
C2H5O2+CYC5H4O=>CO+C2H5O2H+C4H3	1.0640e+06
2.000 19881.21	
NC3H7O2+CYC5H4O=>CO+C4H3+C3H7OOH	1.0640e+06
2.000 19881.21	
IC3H7O2+CYC5H4O=>CO+C4H3+C3H7OOH	1.0640e+06
2.000 19881.21	
HCO3+CYC5H4O=>CO+C4H3+HCO3H	4.7600e+05
2.000 12748.45	
CH3CO3+CYC5H4O=>CO+CH3CO3H+C4H3	4.7600e+05
2.000 12748.45	
CH3COCH2+CYC5H4O=>CO+CH3COCH3+C4H3	3.2200e+05
2.000 14533.50	
C6H5O+CYC5H4O=>CO+C4H3+C6H5OH	3.7800e+05
2.000 19766.54	

C5H7+CYC5H4O=>CO+C4H3+LC5H8	3.7800e+05
2.000      22616.91	
C7H7+CYC5H4O=>CO+C4H3+C7H8	1.8900e+05
2.000      23748.43	
CH3C6H4+CYC5H4O=>CO+C4H3+C7H8	5.1800e+08
1.000      6528.60	
CYC5H4O+RCRESOLO=>CO+C4H3+CRESOL	3.7800e+05
2.000      20110.38	
CYC5H4O+C10H7=>CO+C4H3+C10H8	5.1800e+08
1.000      6528.60	
CYC5H4O+INDENYL=>CO+C4H3+INDENE	1.8200e+05
2.000      23748.43	
CYC5H4O+C10H6CH3=>CO+C4H3+C10H7CH3	5.1800e+08
1.000      6528.60	
C6H5+M=LC6H5+M	3.0000e+18
0.000      67000.00	
C6H5 (+M) =H+BENZYNE (+M)	4.3000e+12
0.620      77301.63	
LOW/    1.00e+84      -18.870      90100.4/	
TROE/            0.9020    696.0    358.0    3856./	
H2/ 2.00/    H2O/ 12.00/    CO2/ 3.60/    CO/ 1.75/    AR/ 0.70/    CH4/ 2.00/	
C2H6/ 3.00/	
LC6H5=>C2H2+C4H3	1.0000e+14
0.000      38000.00	
LC6H5=>2C2H2+C2H	2.0000e+14
0.000      38000.00	
2C6H5=C6H6+BENZYNE	4.2600e-03
4.570      -5739.10	
H+INDENE=>C3H5-A+BENZYNE	2.5000e+13
0.000      12000.00	
C7H7=CH3+BENZYNE	2.0400e+135 -
34.080      169130.00	
PLOG /    1.300000e-02      2.040000e+135      -3.408000e+01      1.691300e+05	
/	
PLOG /    1.300000e-01      6.460000e+112      -2.750000e+01      1.553600e+05	
/	
PLOG /    1.000000e+00      5.500000e+89      -2.082000e+01      1.416800e+05	
/	
PLOG /    1.000000e+01      5.130000e+55      -1.123000e+01      1.165800e+05	
/	
BENZYNE=C2H2+C4H2	6.5400e+16
0.000      93293.00	
PLOG /    1.315000e-01      3.900000e+90      -2.130000e+01      1.393962e+05	
/	

PLOG /	1.000000e+00	4.140000e+85	-1.960000e+01	1.389014e+05
/				
PLOG /	5.000000e+00	1.580000e+76	-1.680000e+01	1.349034e+05
/				
PLOG /	1.000000e+01	1.580000e+76	-1.680000e+01	1.349034e+05
/				
PLOG /	1.000000e+02	6.540000e+16	0.000000e+00	9.329300e+04
/				
LC6H5=>H+C6H4				1.0000e+13
0.000	38000.00			
C2H2+C4H3=H+C6H4				2.0000e+13
0.000	20000.00			
H+C6H3=C6H4				1.0000e+13
0.000	0.00			
C2H+C6H4=C2H2+C6H3				2.0000e+13
0.000	5000.00			
C6H5+C6H3=C12H8				3.0000e+12
0.000	0.00			
H+C6H2=C6H3				2.0000e+13
0.000	2000.00			
H+C6H3=H2+C6H2				2.0000e+13
0.000	0.00			
OH+C6H2=>CO+C2H+C3H2				2.0000e+13
0.000	0.00			
H+C6H5=H2+C6H4				1.0000e+13
0.000	5000.00			
O+C6H5=OH+C6H4				2.0000e+13
0.000	0.00			
OH+C6H5=H2O+C6H4				2.0000e+13
0.000	0.00			
2C4H4=>C6H5C2H3				1.2000e+13
0.000	37400.00			
2C4H4=>H2+C6H5C2H				1.0000e+14
0.000	44000.00			
2C4H2=C2H2+C6H2				2.0000e+16
0.000	54000.00			
C2H+C6H3=2C4H2				5.5000e+12
0.000	5000.00			
H2+C6H2=C2H2+C4H2				5.0000e+16
0.000	63000.00			

C2H+C4H2=H+C6H2					7.5000e+12
0.000	5000.00				
C2H2+C6H2=H2+C8H2					5.0000e+13
0.000	44000.00				
2C4H2=H2+C8H2					2.5000e+14
0.000	44000.00				
C4H2+C6H2=C2H2+C8H2					6.0000e+15
0.000	44000.00				
C2H+C6H2=H+C8H2					5.0000e+12
0.000	5000.00				
C7H7=>H+C7H6					4.4700e+129 -
32.570	162410.00				
PLOG /	1.300000e-02	2.240000e+129	-3.257000e+01	1.624100e+05	
/					
PLOG /	1.300000e-01	6.450000e+122	-3.034000e+01	1.638300e+05	
/					
PLOG /	1.000000e+00	1.480000e+97	-2.295000e+01	1.482800e+05	
/					
PLOG /	1.500000e+00	4.100000e+14	0.000000e+00	8.070000e+04	
/					
PLOG /	1.000000e+01	6.300000e+38	-6.760000e+00	9.971000e+04	
/					
PLOG /	5.000000e+01	7.200000e+12	4.530000e-01	7.630000e+04	
/					
H+C7H6=>C7H7					4.4000e+08
1.200	-2020.00				
H+C7H6=H2+C7H5					1.9000e+08
1.847	4965.00				
CH3+C7H6=CH4+C7H5					1.8700e+04
2.724	6008.00				
C7H6=C2H2+CYC5H4					1.2600e+130 -
32.190	173970.00				
PLOG /	1.000000e-01	2.340000e+135	-3.358000e+01	1.794600e+05	
/					
PLOG /	1.000000e+00	3.020000e+124	-3.018000e+01	1.764600e+05	
/					
PLOG /	1.000000e+01	4.270000e+129	-3.111000e+01	1.910200e+05	
/					
C7H6=H+C7H5					2.0400e+116 -
28.460	157860.00				
PLOG /	1.000000e-01	2.040000e+116	-2.846000e+01	1.578600e+05	
/					
PLOG /	1.000000e+00	9.800000e+66	-1.464000e+01	1.195500e+05	
/					
PLOG /	1.000000e+01	2.340000e+27	-3.540000e+00	8.915000e+04	
/					

H+C7H5=>C2H2+CYC5H4				2.0000e+13
0.000	0.00			
C7H5=C3H3+C4H2				8.7100e+92 -
23.080	117070.00			
PLOG /	1.300000e-02	8.710000e+92	-2.308000e+01	1.170700e+05
/				
PLOG /	1.300000e-01	1.820000e+102	-2.522000e+01	1.303300e+05
/				
PLOG /	1.000000e+00	8.510000e+82	-1.918000e+01	1.253400e+05
/				
PLOG /	1.000000e+01	2.400000e+56	-1.165000e+01	1.067500e+05
/				
C7H5=C2H2+C5H3				3.1600e+83 -
20.810	109410.00			
PLOG /	1.300000e-02	3.160000e+83	-2.081000e+01	1.094100e+05
/				
PLOG /	1.300000e-01	7.590000e+102	-2.566000e+01	1.323900e+05
/				
PLOG /	1.000000e+00	2.820000e+90	-2.138000e+01	1.356200e+05
/				
PLOG /	1.000000e+01	4.370000e+90	-2.104000e+01	1.439900e+05
/				
H+C5H3=H2+C5H2				6.0300e+13
0.000	15103.00			
CH3+C5H3=C6H6				4.3000e+12
0.000	0.00			
CH+C5H3=>2H+C6H2				5.0000e+13
0.000	0.00			
CH2+C5H3=H+C6H4				5.0000e+13
0.000	0.00			
CH+C5H2=H+C6H2				5.0000e+13
0.000	0.00			
H+CYC5H4=>C5H5				6.6100e+12
0.300	770.00			
C5H5=>H+CYC5H4				5.3700e+17 -
0.550	115500.00			
C7H8+CYC5H4=C5H5+C7H7				4.4700e+03
2.370	3300.00			
CH4+CYC5H4=CH3+C5H5				1.2180e+10
1.466	10490.30			
CH3C6H4=CH3+C6H4				6.1100e+45 -
8.857	94350.60			
PLOG /	5.000000e-01	6.110000e+45	-8.857000e+00	9.435060e+04
/				
PLOG /	1.000000e+00	8.000000e+41	-7.720000e+00	9.230030e+04
/				

PLOG /	1.000000e+01	1.660000e+30	-4.318000e+00	8.575690e+04
/				
CH2OHCH2OH=2CH2OH	0.000	83000.00		1.0000e+16
CH2OHCH2OH=OH+PC2H4OH	0.000	93000.00		1.0000e+16
CH2OHCH2OH=CH3OH+CH2O	0.000	67000.00		1.0000e+14
CH2OHCH2OH=H2O+CH3CHO	0.000	67000.00		1.0000e+14
GLYCEROL=>H+CH2OH+CH2OHCHO	0.000	82000.00		1.0000e+16
GLYCEROL=>OH+CH2OH+CH3CHO	0.000	82000.00		1.0000e+16
GLYCEROL=H2O+CH2OHCOCH3	0.000	65000.00		4.0000e+13
GLYCEROL=H2O+CH2OHCH2CHO	0.000	65000.00		2.0000e+13
C3H4O3=>H+HCO+CHOCHO	0.000	77000.00		1.0000e+16
C4H6O2=2CH3CO	0.000	72000.00		1.0000e+16
C6H6O3=>H+HCO+FURFURAL	0.000	78000.00		4.0000e+16
C6H6O3=CH2O+FURFURAL	0.000	63000.00		1.0000e+14
FURAN=CH2CCHCHO	0.000	63000.00		5.0000e+11
CH2CCHCHO=CO+C3H4-P	0.000	28000.00		1.0000e+09
CH2CCHCHO=HCO+C3H3	0.000	69880.00		3.6000e+14
H+C4H3O=FURAN	0.000	0.00		1.0000e+14
FURAN=C2H2+CH2CO	0.000	71000.00		1.2000e+12
C4H3O=>CO+C3H3	0.000	38000.00		1.5000e+12



C4H3O=>C2H2+HCCO 0.000        38000.00	1.5000e+12
C4H3O=>C2H+CH2CO 0.000        38000.00	1.5000e+12
CH3+C4H3O=>MEFU2 0.000        0.00	3.0000e+12
OH+C4H3O=>CO+CH2O+C2H2 0.000        0.00	5.0000e+12
H+FURAN=>C2H2+CH2CHO 0.000        2000.00	2.0000e+13
H+FURAN=>CO+C3H5-S 0.000        2000.00	1.0000e+13
H+FURAN=>CO+CH3+C2H2 0.000        2000.00	1.0000e+13
H+FURAN=>C2H3+CH2CO 0.000        2000.00	1.0000e+13
O2+FURAN=>CO2+C2H3CHO 0.000        45000.00	1.0000e+14
OH+FURAN=>HCO+C2H3CHO 0.000        3000.00	2.5000e+11
OH+FURAN=>CH2O+HCO+C2H2 0.000        3000.00	5.0000e+11
FURAN=CO+C3H4-P 0.000        80000.00	1.0000e+15
FURAN=CO+C3H4-A 0.000        80000.00	3.0000e+14
FURAN=HCO+C3H3 0.000        86500.00	1.0000e+15
MEFU2=>CO+C4H6 0.000        81000.00	2.0000e+15
MEFU2=>H+CH2CO+C3H3 0.000        85000.00	1.5000e+16
MEFU2=>H+HCCO+C3H4-P 0.000        85000.00	1.5000e+16
H+MEFU2=>CO+CH3+0.25C3H4-P+0.75C3H4-A 0.000        2500.00	2.0000e+13
H+MEFU2=>CO+0.75C4H71-3+0.25C4H71-4 0.000        2500.00	2.0000e+13

H+MEFU2=>CH3+FURAN	4.0000e+12
0.000 2500.00	
H+MEFU2=>CH3+C2H2+CH2CO	2.0000e+13
0.000 2500.00	
O2+MEFU2=>CO2+IC3H5CHO	1.0000e+14
0.000 45000.00	
OH+MEFU2=>HCO+IC3H5CHO	1.0000e+12
0.000 3000.00	
OH+MEFU2=>HCO+C2H2+CH3CHO	1.0000e+12
0.000 3000.00	
DMF=>CO+LC5H8	2.0000e+15
0.000 81500.00	
DMF=>CO+C2H4+C3H4-P	1.5000e+15
0.000 81500.00	
DMF=>CO+C2H4+C3H4-A	1.0000e+15
0.000 81500.00	
DMF=>H+DMF-3YL	2.5000e+16
0.000 81500.00	
DMF=>CO+CH3+C4H5	2.5000e+16
0.000 93000.00	
H+DMF=CH3CO+C4H6	8.0000e+12
0.000 2000.00	
H+DMF=CH3+MEFU2	2.5000e+13
0.000 2000.00	
H+DMF=CH2CO+C4H71-3	1.0000e+13
0.000 2000.00	
H+DMF=>CO+C2H2+NC3H7	1.5000e+13
0.000 2000.00	
DMF-3YL=>H2+C6H5O	3.0000e+13
0.000 30000.00	
DMF-3YL=>H+CO+C5H6	5.0000e+13
0.000 30000.00	
DMF-3YL=>CO+CH3+C4H4	6.0000e+13
0.000 30000.00	
DMF-3YL=>2C2H2+CH3CO	2.0000e+13
0.000 32000.00	
C6H10O5=>OH+HCO+CH2OHCHO+C2H3CHO	5.0000e+16
0.000 80000.00	

C6H10O5=>2OH+CH2CO+C4H6O2 0.000 88000.00	2.5000e+16
C6H10O5=>H2O+C6H8O4 0.000 64000.00	1.5000e+14
C6H10O5=>2H2O+C6H6O3 0.000 64000.00	1.5000e+14
C6H10O5=>CH2OHCH2CHO+C3H4O3 0.000 65000.00	1.7000e+13
C6H10O5=>CO2+C2H4+CH3CHO+HCOOH 0.000 64000.00	2.0000e+14
C6H8O4=>H2O+C6H6O3 0.000 65000.00	1.0000e+14
C5H8O4=>HCO+CH2CHO+CH2OHCHO 0.000 82000.00	1.7000e+16
C5H8O4=>2H2O+FURFURAL 0.000 65000.00	1.0000e+14
C5H8O4=CHOCH2CHO+CH3CO2H 0.000 65000.00	7.0000e+13
C5H8O4=CH2OHCHO+CHOCH2CHO 0.000 65000.00	3.0000e+13
C5H8O4=CHOCHO+CH2OHCH2CHO 0.000 65000.00	1.0000e+14
H+CH2OHCH2OH=>H2+OH+CH3CHO 2.000 4000.00	9.0000e+06
CH3+CH2OHCH2OH=>OH+CH4+CH3CHO 2.000 5000.00	9.0000e+04
C2H3+CH2OHCH2OH=>OH+C2H4+CH3CHO 2.000 3900.00	2.0340e+05
C2H5+CH2OHCH2OH=>OH+C2H6+CH3CHO 2.000 6700.00	6.0000e+04
NC3H7+CH2OHCH2OH=>OH+CH3CHO+C3H8 2.000 6700.00	4.0500e+04
IC3H7+CH2OHCH2OH=>OH+CH3CHO+C3H8 2.000 9900.00	4.0500e+04
C3H5-S+CH2OHCH2OH=>OH+CH3CHO+C3H6 2.000 4500.00	8.1000e+04
C3H5-T+CH2OHCH2OH=>OH+CH3CHO+C3H6 2.000 4500.00	8.1000e+04

C3H5-A+CH2OHCH2OH=>OH+CH3CHO+C3H6	1.6170e+05
2.000 12800.00	
C4H5+CH2OHCH2OH=>OH+CH3CHO+C4H6	8.1000e+04
2.000 4500.00	
C4H71-4+CH2OHCH2OH=>OH+CH3CHO+C4H8-1	4.0500e+04
2.000 6600.00	
C4H71-3+CH2OHCH2OH=>OH+CH3CHO+C4H8-2	1.0200e+05
2.000 13700.00	
IC4H7+CH2OHCH2OH=>OH+CH3CHO+IC4H8	8.1000e+04
2.000 13700.00	
C4H3+CH2OHCH2OH=>OH+CH3CHO+C4H4	1.2270e+05
2.000 5200.00	
C6H5+CH2OHCH2OH=>OH+CH3CHO+C6H6	1.1100e+08
1.000 2000.00	
O+CH2OHCH2OH=>2OH+CH3CHO	7.0500e+06
2.000 2500.00	
O2+CH2OHCH2OH=>OH+HO2+CH3CHO	5.1000e+06
2.000 44000.00	
OH+CH2OHCH2OH=>H2O+OH+CH3CHO	4.5000e+09
1.000 50.00	
HO2+CH2OHCH2OH=>OH+H2O2+CH3CHO	2.4000e+06
2.000 16000.00	
CH3O+CH2OHCH2OH=>OH+CH3OH+CH3CHO	1.2840e+05
2.000 1500.00	
CH2OH+CH2OHCH2OH=>OH+CH3OH+CH3CHO	8.4900e+04
2.000 10200.00	
HCO+CH2OHCH2OH=>OH+CH2O+CH3CHO	3.7800e+05
2.000 12300.00	
CH3CO+CH2OHCH2OH=>OH+2CH3CHO	4.0500e+05
2.000 14000.00	
CH2CHO+CH2OHCH2OH=>OH+2CH3CHO	6.9000e+04
2.000 11500.00	
C3H3+CH2OHCH2OH=>OH+CH3CHO+C3H4-A	8.1000e+04
2.000 14000.00	
HCCO+CH2OHCH2OH=>OH+CH3CHO+CH2CO	1.2840e+05
2.000 5200.00	
CH3O2+CH2OHCH2OH=>OH+CH3O2H+CH3CHO	2.2800e+05
2.000 12600.00	

C2H5O2+CH2OHCH2OH=>OH+C2H5O2H+CH3CHO	2.2800e+05
2.000 12600.00	
NC3H7O2+CH2OHCH2OH=>OH+CH3CHO+C3H7OOH	2.2800e+05
2.000 12600.00	
IC3H7O2+CH2OHCH2OH=>OH+CH3CHO+C3H7OOH	2.2800e+05
2.000 12600.00	
HCO3+CH2OHCH2OH=>OH+CH3CHO+HCO3H	1.0200e+05
2.000 6500.00	
CH3CO3+CH2OHCH2OH=>OH+CH3CHO+CH3CO3H	1.0200e+05
2.000 6500.00	
CH3COCH2+CH2OHCH2OH=>OH+CH3CHO+CH3COCH3	6.9000e+04
2.000 8000.00	
C6H5O+CH2OHCH2OH=>OH+CH3CHO+C6H5OH	8.1000e+04
2.000 12500.00	
C5H7+CH2OHCH2OH=>OH+CH3CHO+LC5H8	8.1000e+04
2.000 15000.00	
C7H7+CH2OHCH2OH=>OH+CH3CHO+C7H8	4.0500e+04
2.000 16000.00	
CH3C6H4+CH2OHCH2OH=>OH+CH3CHO+C7H8	1.1100e+08
1.000 2000.00	
RCRESOLO+CH2OHCH2OH=>OH+CH3CHO+CRESOL	8.1000e+04
2.000 12800.00	
C10H7+CH2OHCH2OH=>OH+CH3CHO+C10H8	1.1100e+08
1.000 2000.00	
INDENYL+CH2OHCH2OH=>OH+CH3CHO+INDENE	3.9000e+04
2.000 16000.00	
C10H6CH3+CH2OHCH2OH=>OH+CH3CHO+C10H7CH3	1.1100e+08
1.000 2000.00	
H+CH2OHCH2OH=>H2+0.5H+0.5CH2OH+0.5CH2O+0.5CH2OHCHO	6.0000e+06
2.000 4000.00	
CH3+CH2OHCH2OH=>0.5H+CH4+0.5CH2OH+0.5CH2O+0.5CH2OHCHO	6.0000e+04
2.000 5000.00	
C2H3+CH2OHCH2OH=>0.5H+0.5CH2OH+0.5CH2O+C2H4+0.5CH2OHCHO	1.3560e+05
2.000 3900.00	
C2H5+CH2OHCH2OH=>0.5H+0.5CH2OH+0.5CH2O+C2H6+0.5CH2OHCHO	4.0000e+04
2.000 6700.00	
NC3H7+CH2OHCH2OH=>0.5H+0.5CH2OH+0.5CH2O+0.5CH2OHCHO+C3H8	2.7000e+04
2.000 6700.00	

$\text{IC3H7} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + 0.5\text{CH2OH} + 0.5\text{CH2O} + 0.5\text{CH2OHCHO} + \text{C3H8}$  2.7000e+04  
 2.000 9900.00

$\text{C3H5-S} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + 0.5\text{CH2OH} + 0.5\text{CH2O} + 0.5\text{CH2OHCHO} + \text{C3H6}$  5.4000e+04  
 2.000 4500.00

$\text{C3H5-T} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + 0.5\text{CH2OH} + 0.5\text{CH2O} + 0.5\text{CH2OHCHO} + \text{C3H6}$  5.4000e+04  
 2.000 4500.00

$\text{C3H5-A} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + 0.5\text{CH2OH} + 0.5\text{CH2O} + 0.5\text{CH2OHCHO} + \text{C3H6}$  1.0780e+05  
 2.000 12800.00

$\text{C4H5} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + 0.5\text{CH2OH} + 0.5\text{CH2O} + 0.5\text{CH2OHCHO} + \text{C4H6}$  5.4000e+04  
 2.000 4500.00

$\text{C4H71-4} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + 0.5\text{CH2OH} + 0.5\text{CH2O} + 0.5\text{CH2OHCHO} + \text{C4H8-1}$  2.7000e+04  
 2.000 6600.00

$\text{C4H71-3} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + 0.5\text{CH2OH} + 0.5\text{CH2O} + 0.5\text{CH2OHCHO} + \text{C4H8-2}$  6.8000e+04  
 2.000 13700.00

$\text{IC4H7} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + 0.5\text{CH2OH} + 0.5\text{CH2O} + 0.5\text{CH2OHCHO} + \text{IC4H8}$  5.4000e+04  
 2.000 13700.00

$\text{C4H3} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + 0.5\text{CH2OH} + 0.5\text{CH2O} + 0.5\text{CH2OHCHO} + \text{C4H4}$  8.1800e+04  
 2.000 5200.00

$\text{C6H5} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + 0.5\text{CH2OH} + 0.5\text{CH2O} + 0.5\text{CH2OHCHO} + \text{C6H6}$  7.4000e+07  
 1.000 2000.00

$\text{O} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + \text{OH} + 0.5\text{CH2OH} + 0.5\text{CH2O} + 0.5\text{CH2OHCHO}$  4.7000e+06  
 2.000 2500.00

$\text{O2} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + \text{HO2} + 0.5\text{CH2OH} + 0.5\text{CH2O} + 0.5\text{CH2OHCHO}$  3.4000e+06  
 2.000 44000.00

$\text{OH} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + \text{H2O} + 0.5\text{CH2OH} + 0.5\text{CH2O} + 0.5\text{CH2OHCHO}$  3.0000e+09  
 1.000 50.00

$\text{HO2} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + \text{H2O2} + 0.5\text{CH2OH} + 0.5\text{CH2O} + 0.5\text{CH2OHCHO}$  1.6000e+06  
 2.000 16000.00

$\text{CH3O} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + \text{CH3OH} + 0.5\text{CH2OH} + 0.5\text{CH2O} + 0.5\text{CH2OHCHO}$  8.5600e+04  
 2.000 1500.00

$\text{CH2OH} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + \text{CH3OH} + 0.5\text{CH2OH} + 0.5\text{CH2O} + 0.5\text{CH2OHCHO}$  5.6600e+04  
 2.000 10200.00

$\text{HCO} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + 0.5\text{CH2OH} + 1.5\text{CH2O} + 0.5\text{CH2OHCHO}$  2.5200e+05  
 2.000 12300.00

$\text{CH3CO} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + 0.5\text{CH2OH} + 0.5\text{CH2O} + \text{CH3CHO} + 0.5\text{CH2OHCHO}$  2.7000e+05  
 2.000 14000.00

$\text{CH2CHO} + \text{CH2OHCH2OH} \Rightarrow 0.5\text{H} + 0.5\text{CH2OH} + 0.5\text{CH2O} + \text{CH3CHO} + 0.5\text{CH2OHCHO}$  4.6000e+04  
 2.000 11500.00

$C_3H_3 + CH_2OHCH_2OH \Rightarrow 0.5H + 0.5CH_2OH + 0.5CH_2O + 0.5CH_2OHCHO + C_3H_4 - A$  5.4000e+04  
 2.000 14000.00

$HCCO + CH_2OHCH_2OH \Rightarrow 0.5H + 0.5CH_2OH + 0.5CH_2O + CH_2CO + 0.5CH_2OHCHO$  8.5600e+04  
 2.000 5200.00

$CH_3O_2 + CH_2OHCH_2OH \Rightarrow 0.5H + CH_3O_2H + 0.5CH_2OH + 0.5CH_2O + 0.5CH_2OHCHO$  1.5200e+05  
 2.000 12600.00

$C_2H_5O_2 + CH_2OHCH_2OH \Rightarrow 0.5H + 0.5CH_2OH + 0.5CH_2O + C_2H_5O_2H + 0.5CH_2OHCHO$  1.5200e+05  
 2.000 12600.00

$NC_3H_7O_2 + CH_2OHCH_2OH \Rightarrow 0.5H + 0.5CH_2OH + 0.5CH_2O + 0.5CH_2OHCHO + C_3H_7OOH$  1.5200e+05  
 2.000 12600.00

$IC_3H_7O_2 + CH_2OHCH_2OH \Rightarrow 0.5H + 0.5CH_2OH + 0.5CH_2O + 0.5CH_2OHCHO + C_3H_7OOH$  1.5200e+05  
 2.000 12600.00

$HCO_3 + CH_2OHCH_2OH \Rightarrow 0.5H + 0.5CH_2OH + 0.5CH_2O + 0.5CH_2OHCHO + HCO_3H$  6.8000e+04  
 2.000 6500.00

$CH_3CO_3 + CH_2OHCH_2OH \Rightarrow 0.5H + 0.5CH_2OH + 0.5CH_2O + CH_3CO_3H + 0.5CH_2OHCHO$  6.8000e+04  
 2.000 6500.00

$CH_3COCH_2 + CH_2OHCH_2OH \Rightarrow 0.5H + 0.5CH_2OH + 0.5CH_2O + 0.5CH_2OHCHO + CH_3COCH_3$   
 4.6000e+04 2.000 8000.00

$C_6H_5O + CH_2OHCH_2OH \Rightarrow 0.5H + 0.5CH_2OH + 0.5CH_2O + 0.5CH_2OHCHO + C_6H_5OH$  5.4000e+04  
 2.000 12500.00

$C_5H_7 + CH_2OHCH_2OH \Rightarrow 0.5H + 0.5CH_2OH + 0.5CH_2O + 0.5CH_2OHCHO + LC_5H_8$  5.4000e+04  
 2.000 15000.00

$C_7H_7 + CH_2OHCH_2OH \Rightarrow 0.5H + 0.5CH_2OH + 0.5CH_2O + 0.5CH_2OHCHO + C_7H_8$  2.7000e+04  
 2.000 16000.00

$CH_3C_6H_4 + CH_2OHCH_2OH \Rightarrow 0.5H + 0.5CH_2OH + 0.5CH_2O + 0.5CH_2OHCHO + C_7H_8$  7.4000e+07  
 1.000 2000.00

$RCRESOLO + CH_2OHCH_2OH \Rightarrow 0.5H + 0.5CH_2OH + 0.5CH_2O + 0.5CH_2OHCHO + CRESOL$  5.4000e+04  
 2.000 12800.00

$C_{10}H_7 + CH_2OHCH_2OH \Rightarrow 0.5H + 0.5CH_2OH + 0.5CH_2O + 0.5CH_2OHCHO + C_{10}H_8$  7.4000e+07  
 1.000 2000.00

$INDENYL + CH_2OHCH_2OH \Rightarrow 0.5H + 0.5CH_2OH + 0.5CH_2O + 0.5CH_2OHCHO + INDENE$  2.6000e+04  
 2.000 16000.00

$C_{10}H_6CH_3 + CH_2OHCH_2OH \Rightarrow 0.5H + 0.5CH_2OH + 0.5CH_2O + 0.5CH_2OHCHO + C_{10}H_7CH_3$   
 7.4000e+07 1.000 2000.00

$H + GLYCEROL \Rightarrow H_2 + OH + CH_2OHCH_2CHO$  1.8000e+07  
 2.000 4000.00

$CH_3 + GLYCEROL \Rightarrow OH + CH_4 + CH_2OHCH_2CHO$  1.8000e+05  
 2.000 5000.00

C2H3+GLYCEROL=>OH+C2H4+CH2OHCH2CHO 2.000            3900.00	4.0680e+05
C2H5+GLYCEROL=>OH+C2H6+CH2OHCH2CHO 2.000            6700.00	1.2000e+05
NC3H7+GLYCEROL=>OH+C3H8+CH2OHCH2CHO 2.000            6700.00	8.1000e+04
IC3H7+GLYCEROL=>OH+C3H8+CH2OHCH2CHO 2.000            9900.00	8.1000e+04
C3H5-S+GLYCEROL=>OH+C3H6+CH2OHCH2CHO 2.000            4500.00	1.6200e+05
C3H5-T+GLYCEROL=>OH+C3H6+CH2OHCH2CHO 2.000            4500.00	1.6200e+05
C3H5-A+GLYCEROL=>OH+C3H6+CH2OHCH2CHO 2.000            12800.00	3.2340e+05
C4H5+GLYCEROL=>OH+C4H6+CH2OHCH2CHO 2.000            4500.00	1.6200e+05
C4H71-4+GLYCEROL=>OH+C4H8-1+CH2OHCH2CHO 2.000            6600.00	8.1000e+04
C4H71-3+GLYCEROL=>OH+C4H8-2+CH2OHCH2CHO 2.000            13700.00	2.0400e+05
IC4H7+GLYCEROL=>OH+IC4H8+CH2OHCH2CHO 2.000            13700.00	1.6200e+05
C4H3+GLYCEROL=>OH+C4H4+CH2OHCH2CHO 2.000            5200.00	2.4540e+05
C6H5+GLYCEROL=>OH+C6H6+CH2OHCH2CHO 1.000            2000.00	2.2200e+08
O+GLYCEROL=>2OH+CH2OHCH2CHO 2.000            2500.00	1.4100e+07
O2+GLYCEROL=>OH+HO2+CH2OHCH2CHO 2.000            44000.00	1.0200e+07
OH+GLYCEROL=>H2O+OH+CH2OHCH2CHO 1.000            50.00	9.0000e+09
HO2+GLYCEROL=>OH+H2O2+CH2OHCH2CHO 2.000            16000.00	4.8000e+06
CH3O+GLYCEROL=>OH+CH3OH+CH2OHCH2CHO 2.000            1500.00	2.5680e+05
CH2OH+GLYCEROL=>OH+CH3OH+CH2OHCH2CHO 2.000            10200.00	1.6980e+05



HCO+GLYCEROL=>OH+CH2O+CH2OHCH2CHO 2.000      12300.00	7.5600e+05
CH3CO+GLYCEROL=>OH+CH3CHO+CH2OHCH2CHO 2.000      14000.00	8.1000e+05
CH2CHO+GLYCEROL=>OH+CH3CHO+CH2OHCH2CHO 2.000      11500.00	1.3800e+05
C3H3+GLYCEROL=>OH+C3H4-A+CH2OHCH2CHO 2.000      14000.00	1.6200e+05
HCCO+GLYCEROL=>OH+CH2CO+CH2OHCH2CHO 2.000      5200.00	2.5680e+05
CH3O2+GLYCEROL=>OH+CH3O2H+CH2OHCH2CHO 2.000      12600.00	4.5600e+05
C2H5O2+GLYCEROL=>OH+C2H5O2H+CH2OHCH2CHO 2.000      12600.00	4.5600e+05
NC3H7O2+GLYCEROL=>OH+C3H7OOH+CH2OHCH2CHO 2.000      12600.00	4.5600e+05
IC3H7O2+GLYCEROL=>OH+C3H7OOH+CH2OHCH2CHO 2.000      12600.00	4.5600e+05
HCO3+GLYCEROL=>OH+CH2OHCH2CHO+HCO3H 2.000      6500.00	2.0400e+05
CH3CO3+GLYCEROL=>OH+CH3CO3H+CH2OHCH2CHO 2.000      6500.00	2.0400e+05
CH3COCH2+GLYCEROL=>OH+CH3COCH3+CH2OHCH2CHO 2.000      8000.00	1.3800e+05
C6H5O+GLYCEROL=>OH+CH2OHCH2CHO+C6H5OH 2.000      12500.00	1.6200e+05
C5H7+GLYCEROL=>OH+CH2OHCH2CHO+LC5H8 2.000      15000.00	1.6200e+05
C7H7+GLYCEROL=>OH+CH2OHCH2CHO+C7H8 2.000      16000.00	8.1000e+04
CH3C6H4+GLYCEROL=>OH+CH2OHCH2CHO+C7H8 1.000      2000.00	2.2200e+08
RCRESOLO+GLYCEROL=>OH+CH2OHCH2CHO+CRESOL 2.000      12800.00	1.6200e+05
C10H7+GLYCEROL=>OH+C10H8+CH2OHCH2CHO 1.000      2000.00	2.2200e+08
INDENYL+GLYCEROL=>OH+CH2OHCH2CHO+INDENE 2.000      16000.00	7.8000e+04

C10H6CH3+GLYCEROL=>OH+CH2OHCH2CHO+C10H7CH3	2.2200e+08
1.000 2000.00	
H+GLYCEROL=>H2+OH+CH2OHCOCH3	4.5000e+06
2.000 2825.33	
CH3+GLYCEROL=>OH+CH4+CH2OHCOCH3	4.5000e+04
2.000 3778.15	
C2H3+GLYCEROL=>OH+C2H4+CH2OHCOCH3	1.0170e+05
2.000 2730.26	
C2H5+GLYCEROL=>OH+C2H6+CH2OHCOCH3	3.0000e+04
2.000 5405.42	
NC3H7+GLYCEROL=>OH+C3H8+CH2OHCOCH3	2.0250e+04
2.000 5405.42	
IC3H7+GLYCEROL=>OH+C3H8+CH2OHCOCH3	2.0250e+04
2.000 8487.19	
C3H5-S+GLYCEROL=>OH+C3H6+CH2OHCOCH3	4.0500e+04
2.000 3301.28	
C3H5-T+GLYCEROL=>OH+C3H6+CH2OHCOCH3	4.0500e+04
2.000 3301.28	
C3H5-A+GLYCEROL=>OH+C3H6+CH2OHCOCH3	8.0850e+04
2.000 11294.92	
C4H5+GLYCEROL=>OH+C4H6+CH2OHCOCH3	4.0500e+04
2.000 3301.28	
C4H71-4+GLYCEROL=>OH+C4H8-1+CH2OHCOCH3	2.0250e+04
2.000 5309.47	
C4H71-3+GLYCEROL=>OH+C4H8-2+CH2OHCOCH3	5.1000e+04
2.000 12168.47	
IC4H7+GLYCEROL=>OH+IC4H8+CH2OHCOCH3	4.0500e+04
2.000 12168.47	
C4H3+GLYCEROL=>OH+C4H4+CH2OHCOCH3	6.1350e+04
2.000 3969.14	
C6H5+GLYCEROL=>OH+C6H6+CH2OHCOCH3	5.5500e+07
1.000 1067.64	
O+GLYCEROL=>2OH+CH2OHCOCH3	3.5250e+06
2.000 1404.15	
O2+GLYCEROL=>OH+HO2+CH2OHCOCH3	2.5500e+06
2.000 41863.68	
OH+GLYCEROL=>H2O+OH+CH2OHCOCH3	2.2500e+09
1.000 -695.37	

HO2+GLYCEROL=>OH+H2O2+CH2OHCOCH3	1.2000e+06
2.000 14404.74	
CH3O+GLYCEROL=>OH+CH3OH+CH2OHCOCH3	6.4200e+04
2.000 463.75	
CH2OH+GLYCEROL=>OH+CH3OH+CH2OHCOCH3	4.2450e+04
2.000 8777.08	
HCO+GLYCEROL=>OH+CH2O+CH2OHCOCH3	1.8900e+05
2.000 10810.03	
CH3CO+GLYCEROL=>OH+CH3CHO+CH2OHCOCH3	2.0250e+05
2.000 12459.86	
CH2CHO+GLYCEROL=>OH+CH3CHO+CH2OHCOCH3	3.4500e+04
2.000 10034.85	
C3H3+GLYCEROL=>OH+C3H4-A+CH2OHCOCH3	4.0500e+04
2.000 12459.86	
HCCO+GLYCEROL=>OH+CH2CO+CH2OHCOCH3	6.4200e+04
2.000 3969.14	
CH3O2+GLYCEROL=>OH+CH3O2H+CH2OHCOCH3	1.1400e+05
2.000 11100.93	
C2H5O2+GLYCEROL=>OH+C2H5O2H+CH2OHCOCH3	1.1400e+05
2.000 11100.93	
NC3H7O2+GLYCEROL=>OH+C3H7OOH+CH2OHCOCH3	1.1400e+05
2.000 11100.93	
IC3H7O2+GLYCEROL=>OH+C3H7OOH+CH2OHCOCH3	1.1400e+05
2.000 11100.93	
HCO3+GLYCEROL=>OH+HCO3H+CH2OHCOCH3	5.1000e+04
2.000 5213.56	
CH3CO3+GLYCEROL=>OH+CH3CO3H+CH2OHCOCH3	5.1000e+04
2.000 5213.56	
CH3COCH2+GLYCEROL=>OH+CH3COCH3+CH2OHCOCH3	3.4500e+04
2.000 6654.87	
C6H5O+GLYCEROL=>OH+CH2OHCOCH3+C6H5OH	4.0500e+04
2.000 11003.95	
C5H7+GLYCEROL=>OH+CH2OHCOCH3+LC5H8	4.0500e+04
2.000 13431.81	
C7H7+GLYCEROL=>OH+CH2OHCOCH3+C7H8	2.0250e+04
2.000 14404.74	
CH3C6H4+GLYCEROL=>OH+CH2OHCOCH3+C7H8	5.5500e+07
1.000 1067.64	

RCRESOLO+GLYCEROL=>OH+CH2OHCOCH3+CRESOL 2.000        11294.92	4.0500e+04
C10H7+GLYCEROL=>OH+C10H8+CH2OHCOCH3 1.000        1067.64	5.5500e+07
INDENYL+GLYCEROL=>OH+CH2OHCOCH3+INDENE 2.000        14404.74	1.9500e+04
C10H6CH3+GLYCEROL=>OH+CH2OHCOCH3+C10H7CH3 1.000        1067.64	5.5500e+07
H+GLYCEROL=>H2+CH2OH+CH2OHCHO 2.000        6349.34	2.1000e+06
CH3+GLYCEROL=>CH4+CH2OH+CH2OHCHO 2.000        7443.70	2.1000e+04
C2H3+GLYCEROL=>CH2OH+C2H4+CH2OHCHO 2.000        6239.48	4.7460e+04
C2H5+GLYCEROL=>CH2OH+C2H6+CH2OHCHO 2.000        9289.16	1.4000e+04
NC3H7+GLYCEROL=>CH2OH+CH2OHCHO+C3H8 2.000        9289.16	9.4500e+03
IC3H7+GLYCEROL=>CH2OH+CH2OHCHO+C3H8 2.000        12725.62	9.4500e+03
C3H5-S+GLYCEROL=>CH2OH+CH2OHCHO+C3H6 2.000        6897.45	1.8900e+04
C3H5-T+GLYCEROL=>CH2OH+CH2OHCHO+C3H6 2.000        6897.45	1.8900e+04
C3H5-A+GLYCEROL=>CH2OH+CH2OHCHO+C3H6 2.000        15810.16	3.7730e+04
C4H5+GLYCEROL=>CH2OH+CH2OHCHO+C4H6 2.000        6897.45	1.8900e+04
C4H71-4+GLYCEROL=>CH2OH+CH2OHCHO+C4H8-1 2.000        9181.05	9.4500e+03
C4H71-3+GLYCEROL=>CH2OH+CH2OHCHO+C4H8-2 2.000        16763.05	2.3800e+04
IC4H7+GLYCEROL=>CH2OH+CH2OHCHO+IC4H8 2.000        16763.05	1.8900e+04
C4H3+GLYCEROL=>CH2OH+CH2OHCHO+C4H4 2.000        7661.72	2.8630e+04
C6H5+GLYCEROL=>CH2OH+CH2OHCHO+C6H6 1.000        3864.72	2.5900e+07

O+GLYCEROL=>OH+CH2OH+CH2OHCHO	1.6450e+06
2.000 4691.70	
O2+GLYCEROL=>HO2+CH2OH+CH2OHCHO	1.1900e+06
2.000 48272.65	
OH+GLYCEROL=>H2O+CH2OH+CH2OHCHO	1.0500e+09
1.000 1540.75	
HO2+GLYCEROL=>H2O2+CH2OH+CH2OHCHO	5.6000e+05
2.000 19190.53	
CH3O+GLYCEROL=>CH3OH+CH2OH+CH2OHCHO	2.9960e+04
2.000 3572.50	
CH2OH+GLYCEROL=>CH3OH+CH2OH+CH2OHCHO	1.9810e+04
2.000 13045.84	
HCO+GLYCEROL=>CH2OH+CH2O+CH2OHCHO	8.8200e+04
2.000 15279.95	
CH3CO+GLYCEROL=>CH2OH+CH3CHO+CH2OHCHO	9.4500e+04
2.000 17080.28	
CH2CHO+GLYCEROL=>CH2OH+CH3CHO+CH2OHCHO	1.6100e+04
2.000 14430.30	
C3H3+GLYCEROL=>CH2OH+CH2OHCHO+C3H4-A	1.8900e+04
2.000 17080.28	
HCCO+GLYCEROL=>CH2OH+CH2CO+CH2OHCHO	2.9960e+04
2.000 7661.72	
CH3O2+GLYCEROL=>CH3O2H+CH2OH+CH2OHCHO	5.3200e+04
2.000 15598.15	
C2H5O2+GLYCEROL=>CH2OH+C2H5O2H+CH2OHCHO	5.3200e+04
2.000 15598.15	
NC3H7O2+GLYCEROL=>CH2OH+CH2OHCHO+C3H7OOH	5.3200e+04
2.000 15598.15	
IC3H7O2+GLYCEROL=>CH2OH+CH2OHCHO+C3H7OOH	5.3200e+04
2.000 15598.15	
HCO3+GLYCEROL=>CH2OH+CH2OHCHO+HCO3H	2.3800e+04
2.000 9072.89	
CH3CO3+GLYCEROL=>CH2OH+CH3CO3H+CH2OHCHO	2.3800e+04
2.000 9072.89	
CH3COCH2+GLYCEROL=>CH2OH+CH2OHCHO+CH3COCH3	1.6100e+04
2.000 10690.26	
C6H5O+GLYCEROL=>CH2OH+CH2OHCHO+C6H5OH	1.8900e+04
2.000 15492.11	

C5H7+GLYCEROL=>CH2OH+CH2OHCHO+LC5H8	1.8900e+04
2.000 18136.38	
C7H7+GLYCEROL=>CH2OH+CH2OHCHO+C7H8	9.4500e+03
2.000 19190.53	
CH3C6H4+GLYCEROL=>CH2OH+CH2OHCHO+C7H8	2.5900e+07
1.000 3864.72	
RCRESOLO+GLYCEROL=>CH2OH+CH2OHCHO+CRESOL	1.8900e+04
2.000 15810.16	
C10H7+GLYCEROL=>CH2OH+CH2OHCHO+C10H8	2.5900e+07
1.000 3864.72	
INDENYL+GLYCEROL=>CH2OH+CH2OHCHO+INDENE	9.1000e+03
2.000 19190.53	
C10H6CH3+GLYCEROL=>CH2OH+CH2OHCHO+C10H7CH3	2.5900e+07
1.000 3864.72	
H+GLYCEROL=>H2+OH+CH2O+CH3CHO	4.2000e+06
2.000 6349.34	
CH3+GLYCEROL=>OH+CH4+CH2O+CH3CHO	4.2000e+04
2.000 7443.70	
C2H3+GLYCEROL=>OH+CH2O+C2H4+CH3CHO	9.4920e+04
2.000 6239.48	
C2H5+GLYCEROL=>OH+CH2O+C2H6+CH3CHO	2.8000e+04
2.000 9289.16	
NC3H7+GLYCEROL=>OH+CH2O+CH3CHO+C3H8	1.8900e+04
2.000 9289.16	
IC3H7+GLYCEROL=>OH+CH2O+CH3CHO+C3H8	1.8900e+04
2.000 12725.62	
C3H5-S+GLYCEROL=>OH+CH2O+CH3CHO+C3H6	3.7800e+04
2.000 6897.45	
C3H5-T+GLYCEROL=>OH+CH2O+CH3CHO+C3H6	3.7800e+04
2.000 6897.45	
C3H5-A+GLYCEROL=>OH+CH2O+CH3CHO+C3H6	7.5460e+04
2.000 15810.16	
C4H5+GLYCEROL=>OH+CH2O+CH3CHO+C4H6	3.7800e+04
2.000 6897.45	
C4H71-4+GLYCEROL=>OH+CH2O+CH3CHO+C4H8-1	1.8900e+04
2.000 9181.05	
C4H71-3+GLYCEROL=>OH+CH2O+CH3CHO+C4H8-2	4.7600e+04
2.000 16763.05	

IC4H7+GLYCEROL=>OH+CH2O+CH3CHO+IC4H8 2.000        16763.05	3.7800e+04
C4H3+GLYCEROL=>OH+CH2O+CH3CHO+C4H4 2.000        7661.72	5.7260e+04
C6H5+GLYCEROL=>OH+CH2O+CH3CHO+C6H6 1.000        3864.72	5.1800e+07
O+GLYCEROL=>2OH+CH2O+CH3CHO 2.000        4691.70	3.2900e+06
O2+GLYCEROL=>OH+HO2+CH2O+CH3CHO 2.000        48272.65	2.3800e+06
OH+GLYCEROL=>H2O+OH+CH2O+CH3CHO 1.000        1540.75	2.1000e+09
HO2+GLYCEROL=>OH+H2O2+CH2O+CH3CHO 2.000        19190.53	1.1200e+06
CH3O+GLYCEROL=>OH+CH3OH+CH2O+CH3CHO 2.000        3572.50	5.9920e+04
CH2OH+GLYCEROL=>OH+CH3OH+CH2O+CH3CHO 2.000        13045.84	3.9620e+04
HCO+GLYCEROL=>OH+2CH2O+CH3CHO 2.000        15279.95	1.7640e+05
CH3CO+GLYCEROL=>OH+CH2O+2CH3CHO 2.000        17080.28	1.8900e+05
CH2CHO+GLYCEROL=>OH+CH2O+2CH3CHO 2.000        14430.30	3.2200e+04
C3H3+GLYCEROL=>OH+CH2O+CH3CHO+C3H4-A 2.000        17080.28	3.7800e+04
HCCO+GLYCEROL=>OH+CH2O+CH3CHO+CH2CO 2.000        7661.72	5.9920e+04
CH3O2+GLYCEROL=>OH+CH3O2H+CH2O+CH3CHO 2.000        15598.15	1.0640e+05
C2H5O2+GLYCEROL=>OH+CH2O+C2H5O2H+CH3CHO 2.000        15598.15	1.0640e+05
NC3H7O2+GLYCEROL=>OH+CH2O+CH3CHO+C3H7OOH 2.000        15598.15	1.0640e+05
IC3H7O2+GLYCEROL=>OH+CH2O+CH3CHO+C3H7OOH 2.000        15598.15	1.0640e+05
HCO3+GLYCEROL=>OH+CH2O+CH3CHO+HCO3H 2.000        9072.89	4.7600e+04

CH3CO3+GLYCEROL=>OH+CH2O+CH3CHO+CH3CO3H 2.000        9072.89	4.7600e+04
CH3COCH2+GLYCEROL=>OH+CH2O+CH3CHO+CH3COCH3 2.000        10690.26	3.2200e+04
C6H5O+GLYCEROL=>OH+CH2O+CH3CHO+C6H5OH 2.000        15492.11	3.7800e+04
C5H7+GLYCEROL=>OH+CH2O+CH3CHO+LC5H8 2.000        18136.38	3.7800e+04
C7H7+GLYCEROL=>OH+CH2O+CH3CHO+C7H8 2.000        19190.53	1.8900e+04
CH3C6H4+GLYCEROL=>OH+CH2O+CH3CHO+C7H8 1.000        3864.72	5.1800e+07
RCRESOLO+GLYCEROL=>OH+CH2O+CH3CHO+CRESOL 2.000        15810.16	3.7800e+04
C10H7+GLYCEROL=>OH+CH2O+CH3CHO+C10H8 1.000        3864.72	5.1800e+07
INDENYL+GLYCEROL=>OH+CH2O+CH3CHO+INDENE 2.000        19190.53	1.8200e+04
C10H6CH3+GLYCEROL=>OH+CH2O+CH3CHO+C10H7CH3 1.000        3864.72	5.1800e+07
H+CH2OHCOCH3=>H2+CH3+CHOCHO 2.000        4000.00	9.0000e+06
CH3+CH2OHCOCH3=>CH4+CH3+CHOCHO 2.000        5000.00	9.0000e+04
C2H3+CH2OHCOCH3=>CH3+C2H4+CHOCHO 2.000        3900.00	2.0340e+05
C2H5+CH2OHCOCH3=>CH3+C2H6+CHOCHO 2.000        6700.00	6.0000e+04
NC3H7+CH2OHCOCH3=>CH3+CHOCHO+C3H8 2.000        6700.00	4.0500e+04
IC3H7+CH2OHCOCH3=>CH3+CHOCHO+C3H8 2.000        9900.00	4.0500e+04
C3H5-S+CH2OHCOCH3=>CH3+CHOCHO+C3H6 2.000        4500.00	8.1000e+04
C3H5-T+CH2OHCOCH3=>CH3+CHOCHO+C3H6 2.000        4500.00	8.1000e+04
C3H5-A+CH2OHCOCH3=>CH3+CHOCHO+C3H6 2.000        12800.00	1.6170e+05



C4H5+CH2OHCOCH3=>CH3+CHOCHO+C4H6	8.1000e+04
2.000        4500.00	
C4H71-4+CH2OHCOCH3=>CH3+CHOCHO+C4H8-1	4.0500e+04
2.000        6600.00	
C4H71-3+CH2OHCOCH3=>CH3+CHOCHO+C4H8-2	1.0200e+05
2.000        13700.00	
IC4H7+CH2OHCOCH3=>CH3+CHOCHO+IC4H8	8.1000e+04
2.000        13700.00	
C4H3+CH2OHCOCH3=>CH3+CHOCHO+C4H4	1.2270e+05
2.000        5200.00	
C6H5+CH2OHCOCH3=>CH3+CHOCHO+C6H6	1.1100e+08
1.000        2000.00	
O+CH2OHCOCH3=>OH+CH3+CHOCHO	7.0500e+06
2.000        2500.00	
O2+CH2OHCOCH3=>HO2+CH3+CHOCHO	5.1000e+06
2.000        44000.00	
OH+CH2OHCOCH3=>H2O+CH3+CHOCHO	4.5000e+09
1.000        50.00	
HO2+CH2OHCOCH3=>H2O2+CH3+CHOCHO	2.4000e+06
2.000        16000.00	
CH3O+CH2OHCOCH3=>CH3+CH3OH+CHOCHO	1.2840e+05
2.000        1500.00	
CH2OH+CH2OHCOCH3=>CH3+CH3OH+CHOCHO	8.4900e+04
2.000        10200.00	
HCO+CH2OHCOCH3=>CH3+CH2O+CHOCHO	3.7800e+05
2.000        12300.00	
CH3CO+CH2OHCOCH3=>CH3+CH3CHO+CHOCHO	4.0500e+05
2.000        14000.00	
CH2CHO+CH2OHCOCH3=>CH3+CH3CHO+CHOCHO	6.9000e+04
2.000        11500.00	
C3H3+CH2OHCOCH3=>CH3+CHOCHO+C3H4-A	8.1000e+04
2.000        14000.00	
HCCO+CH2OHCOCH3=>CH3+CH2CO+CHOCHO	1.2840e+05
2.000        5200.00	
CH3O2+CH2OHCOCH3=>CH3+CH3O2H+CHOCHO	2.2800e+05
2.000        12600.00	
C2H5O2+CH2OHCOCH3=>CH3+C2H5O2H+CHOCHO	2.2800e+05
2.000        12600.00	

NC3H7O2+CH2OHCOCH3=>CH3+CHOCHO+C3H7OOH 2.000 12600.00	2.2800e+05
IC3H7O2+CH2OHCOCH3=>CH3+CHOCHO+C3H7OOH 2.000 12600.00	2.2800e+05
HCO3+CH2OHCOCH3=>CH3+CHOCHO+HCO3H 2.000 6500.00	1.0200e+05
CH3CO3+CH2OHCOCH3=>CH3+CH3CO3H+CHOCHO 2.000 6500.00	1.0200e+05
CH3COCH2+CH2OHCOCH3=>CH3+CHOCHO+CH3COCH3 2.000 8000.00	6.9000e+04
CH2OHCOCH3+C6H5O=>CH3+CHOCHO+C6H5OH 2.000 12500.00	8.1000e+04
CH2OHCOCH3+C5H7=>CH3+CHOCHO+LC5H8 2.000 15000.00	8.1000e+04
CH2OHCOCH3+C7H7=>CH3+CHOCHO+C7H8 2.000 16000.00	4.0500e+04
CH2OHCOCH3+CH3C6H4=>CH3+CHOCHO+C7H8 1.000 2000.00	1.1100e+08
CH2OHCOCH3+RCRESOLO=>CH3+CHOCHO+CRESOL 2.000 12800.00	8.1000e+04
CH2OHCOCH3+C10H7=>CH3+CHOCHO+C10H8 1.000 2000.00	1.1100e+08
CH2OHCOCH3+INDENYL=>CH3+CHOCHO+INDENE 2.000 16000.00	3.9000e+04
CH2OHCOCH3+C10H6CH3=>CH3+CHOCHO+C10H7CH3 1.000 2000.00	1.1100e+08
H+C3H4O3=>H2+H+CO+CHOCHO 2.000 2573.61	2.4000e+07
CH3+C3H4O3=>H+CO+CH4+CHOCHO 2.000 3516.32	2.4000e+05
C2H3+C3H4O3=>H+CO+C2H4+CHOCHO 2.000 2479.60	5.4240e+05
C2H5+C3H4O3=>H+CO+C2H6+CHOCHO 2.000 5128.01	1.6000e+05
NC3H7+C3H4O3=>H+CO+CHOCHO+C3H8 2.000 5128.01	1.0800e+05
IC3H7+C3H4O3=>H+CO+CHOCHO+C3H8 2.000 8184.45	1.0800e+05

C3H5-S+C3H4O3=>H+CO+CHOCHO+C3H6	2.1600e+05
2.000 3044.41	
C3H5-T+C3H4O3=>H+CO+CHOCHO+C3H6	2.1600e+05
2.000 3044.41	
C3H5-A+C3H4O3=>H+CO+CHOCHO+C3H6	4.3120e+05
2.000 10972.41	
C4H5+C3H4O3=>H+CO+CHOCHO+C4H6	2.1600e+05
2.000 3044.41	
C4H71-4+C3H4O3=>H+CO+CHOCHO+C4H8-1	1.0800e+05
2.000 5032.93	
C4H71-3+C3H4O3=>H+CO+CHOCHO+C4H8-2	2.7200e+05
2.000 11840.29	
IC4H7+C3H4O3=>H+CO+CHOCHO+IC4H8	2.1600e+05
2.000 11840.29	
C4H3+C3H4O3=>H+CO+CHOCHO+C4H4	3.2720e+05
2.000 3705.38	
C6H5+C3H4O3=>H+CO+CHOCHO+C6H6	2.9600e+08
1.000 867.85	
O+C3H4O3=>H+OH+CO+CHOCHO	1.8800e+07
2.000 1169.32	
O2+C3H4O3=>H+HO2+CO+CHOCHO	1.3600e+07
2.000 41405.89	
OH+C3H4O3=>H+H2O+CO+CHOCHO	1.2000e+10
1.000 -855.10	
HO2+C3H4O3=>H+H2O2+CO+CHOCHO	6.4000e+06
2.000 14062.89	
CH3O+C3H4O3=>H+CO+CH3OH+CHOCHO	3.4240e+05
2.000 241.70	
CH2OH+C3H4O3=>H+CO+CH3OH+CHOCHO	2.2640e+05
2.000 8472.17	
HCO+C3H4O3=>H+CO+CH2O+CHOCHO	1.0080e+06
2.000 10490.75	
CH3CO+C3H4O3=>H+CO+CH3CHO+CHOCHO	1.0800e+06
2.000 12129.83	
CH2CHO+C3H4O3=>H+CO+CH3CHO+CHOCHO	1.8400e+05
2.000 9720.89	
C3H3+C3H4O3=>H+CO+CHOCHO+C3H4-A	2.1600e+05
2.000 12129.83	

HCCO+C3H4O3=>H+CO+CH2CO+CHOCHO 2.000            3705.38	3.4240e+05
CH3O2+C3H4O3=>H+CO+CH3O2H+CHOCHO 2.000            10779.70	6.0800e+05
C2H5O2+C3H4O3=>H+CO+C2H5O2H+CHOCHO 2.000            10779.70	6.0800e+05
NC3H7O2+C3H4O3=>H+CO+CHOCHO+C3H7OOH 2.000            10779.70	6.0800e+05
IC3H7O2+C3H4O3=>H+CO+CHOCHO+C3H7OOH 2.000            10779.70	6.0800e+05
HCO3+C3H4O3=>H+CO+CHOCHO+HCO3H 2.000            4937.89	2.7200e+05
CH3CO3+C3H4O3=>H+CO+CH3CO3H+CHOCHO 2.000            4937.89	2.7200e+05
CH3COCH2+C3H4O3=>H+CO+CHOCHO+CH3COCH3 2.000            6366.63	1.8400e+05
C6H5O+C3H4O3=>H+CO+CHOCHO+C6H5OH 2.000            10683.36	2.1600e+05
C5H7+C3H4O3=>H+CO+CHOCHO+LC5H8 2.000            13095.77	2.1600e+05
C7H7+C3H4O3=>H+CO+CHOCHO+C7H8 2.000            14062.89	1.0800e+05
CH3C6H4+C3H4O3=>H+CO+CHOCHO+C7H8 1.000            867.85	2.9600e+08
RCRESOLO+C3H4O3=>H+CO+CHOCHO+CRESOL 2.000            10972.41	2.1600e+05
C10H7+C3H4O3=>H+CO+CHOCHO+C10H8 1.000            867.85	2.9600e+08
INDENYL+C3H4O3=>H+CO+CHOCHO+INDENE 2.000            14062.89	1.0400e+05
C10H6CH3+C3H4O3=>H+CO+CHOCHO+C10H7CH3 1.000            867.85	2.9600e+08
H+C6H6O3=>H2+H+CO+FURFURAL 2.000            2573.61	1.2000e+07
CH3+C6H6O3=>H+CO+CH4+FURFURAL 2.000            3516.32	1.2000e+05
C2H3+C6H6O3=>H+CO+C2H4+FURFURAL 2.000            2479.60	2.7120e+05

C2H5+C6H6O3=>H+CO+C2H6+FURFURAL	8.0000e+04
2.000 5128.01	
NC3H7+C6H6O3=>H+CO+C3H8+FURFURAL	5.4000e+04
2.000 5128.01	
IC3H7+C6H6O3=>H+CO+C3H8+FURFURAL	5.4000e+04
2.000 8184.45	
C3H5-S+C6H6O3=>H+CO+C3H6+FURFURAL	1.0800e+05
2.000 3044.41	
C3H5-T+C6H6O3=>H+CO+C3H6+FURFURAL	1.0800e+05
2.000 3044.41	
C3H5-A+C6H6O3=>H+CO+C3H6+FURFURAL	2.1560e+05
2.000 10972.41	
C4H5+C6H6O3=>H+CO+C4H6+FURFURAL	1.0800e+05
2.000 3044.41	
C4H71-4+C6H6O3=>H+CO+C4H8-1+FURFURAL	5.4000e+04
2.000 5032.93	
C4H71-3+C6H6O3=>H+CO+C4H8-2+FURFURAL	1.3600e+05
2.000 11840.29	
IC4H7+C6H6O3=>H+CO+IC4H8+FURFURAL	1.0800e+05
2.000 11840.29	
C4H3+C6H6O3=>H+CO+C4H4+FURFURAL	1.6360e+05
2.000 3705.38	
C6H5+C6H6O3=>H+CO+C6H6+FURFURAL	1.4800e+08
1.000 867.85	
O+C6H6O3=>H+OH+CO+FURFURAL	9.4000e+06
2.000 1169.32	
O2+C6H6O3=>H+HO2+CO+FURFURAL	6.8000e+06
2.000 41405.89	
OH+C6H6O3=>H+H2O+CO+FURFURAL	6.0000e+09
1.000 -855.10	
HO2+C6H6O3=>H+H2O2+CO+FURFURAL	3.2000e+06
2.000 14062.89	
CH3O+C6H6O3=>H+CO+CH3OH+FURFURAL	1.7120e+05
2.000 241.70	
CH2OH+C6H6O3=>H+CO+CH3OH+FURFURAL	1.1320e+05
2.000 8472.17	
HCO+C6H6O3=>H+CO+CH2O+FURFURAL	5.0400e+05
2.000 10490.75	

CH3CO+C6H6O3=>H+CO+CH3CHO+FURFURAL	5.4000e+05
2.000 12129.83	
CH2CHO+C6H6O3=>H+CO+CH3CHO+FURFURAL	9.2000e+04
2.000 9720.89	
C3H3+C6H6O3=>H+CO+C3H4-A+FURFURAL	1.0800e+05
2.000 12129.83	
HCCO+C6H6O3=>H+CO+CH2CO+FURFURAL	1.7120e+05
2.000 3705.38	
CH3O2+C6H6O3=>H+CO+CH3O2H+FURFURAL	3.0400e+05
2.000 10779.70	
C2H5O2+C6H6O3=>H+CO+C2H5O2H+FURFURAL	3.0400e+05
2.000 10779.70	
NC3H7O2+C6H6O3=>H+CO+C3H7OOH+FURFURAL	3.0400e+05
2.000 10779.70	
IC3H7O2+C6H6O3=>H+CO+C3H7OOH+FURFURAL	3.0400e+05
2.000 10779.70	
HCO3+C6H6O3=>H+CO+HCO3H+FURFURAL	1.3600e+05
2.000 4937.89	
CH3CO3+C6H6O3=>H+CO+CH3CO3H+FURFURAL	1.3600e+05
2.000 4937.89	
CH3COCH2+C6H6O3=>H+CO+CH3COCH3+FURFURAL	9.2000e+04
2.000 6366.63	
C6H5O+C6H6O3=>H+CO+C6H5OH+FURFURAL	1.0800e+05
2.000 10683.36	
C5H7+C6H6O3=>H+CO+LC5H8+FURFURAL	1.0800e+05
2.000 13095.77	
C7H7+C6H6O3=>H+CO+C7H8+FURFURAL	5.4000e+04
2.000 14062.89	
CH3C6H4+C6H6O3=>H+CO+C7H8+FURFURAL	1.4800e+08
1.000 867.85	
RCRESOLO+C6H6O3=>H+CO+CRESOL+FURFURAL	1.0800e+05
2.000 10972.41	
C10H7+C6H6O3=>H+CO+C10H8+FURFURAL	1.4800e+08
1.000 867.85	
INDENYL+C6H6O3=>H+CO+INDENE+FURFURAL	5.2000e+04
2.000 14062.89	
C10H6CH3+C6H6O3=>H+CO+C10H7CH3+FURFURAL	1.4800e+08
1.000 867.85	

H+FURFURAL=>H2+1.5CO+0.5C3H3+0.5C4H3O 2.000            2573.61	2.4000e+07
CH3+FURFURAL=>1.5CO+CH4+0.5C3H3+0.5C4H3O 2.000            3516.32	2.4000e+05
C2H3+FURFURAL=>1.5CO+C2H4+0.5C3H3+0.5C4H3O 2.000            2479.60	5.4240e+05
C2H5+FURFURAL=>1.5CO+C2H6+0.5C3H3+0.5C4H3O 2.000            5128.01	1.6000e+05
NC3H7+FURFURAL=>1.5CO+C3H8+0.5C3H3+0.5C4H3O 2.000            5128.01	1.0800e+05
IC3H7+FURFURAL=>1.5CO+C3H8+0.5C3H3+0.5C4H3O 2.000            8184.45	1.0800e+05
C3H5-S+FURFURAL=>1.5CO+C3H6+0.5C3H3+0.5C4H3O 2.000            3044.41	2.1600e+05
C3H5-T+FURFURAL=>1.5CO+C3H6+0.5C3H3+0.5C4H3O 2.000            3044.41	2.1600e+05
C3H5-A+FURFURAL=>1.5CO+C3H6+0.5C3H3+0.5C4H3O 2.000            10972.41	4.3120e+05
C4H5+FURFURAL=>1.5CO+0.5C3H3+C4H6+0.5C4H3O 2.000            3044.41	2.1600e+05
C4H71-4+FURFURAL=>1.5CO+0.5C3H3+C4H8-1+0.5C4H3O 2.000            5032.93	1.0800e+05
C4H71-3+FURFURAL=>1.5CO+0.5C3H3+C4H8-2+0.5C4H3O 2.000            11840.29	2.7200e+05
IC4H7+FURFURAL=>1.5CO+0.5C3H3+IC4H8+0.5C4H3O 2.000            11840.29	2.1600e+05
C4H3+FURFURAL=>1.5CO+0.5C3H3+C4H4+0.5C4H3O 2.000            3705.38	3.2720e+05
C6H5+FURFURAL=>1.5CO+0.5C3H3+C6H6+0.5C4H3O 1.000            867.85	2.9600e+08
O+FURFURAL=>OH+1.5CO+0.5C3H3+0.5C4H3O 2.000            1169.32	1.8800e+07
O2+FURFURAL=>HO2+1.5CO+0.5C3H3+0.5C4H3O 2.000            41405.89	1.3600e+07
OH+FURFURAL=>H2O+1.5CO+0.5C3H3+0.5C4H3O 1.000            -855.10	1.2000e+10
HO2+FURFURAL=>H2O2+1.5CO+0.5C3H3+0.5C4H3O 2.000            14062.89	6.4000e+06

CH3O+FURFURAL=>1.5CO+CH3OH+0.5C3H3+0.5C4H3O 2.000            241.70	3.4240e+05
CH2OH+FURFURAL=>1.5CO+CH3OH+0.5C3H3+0.5C4H3O 2.000            8472.17	2.2640e+05
HCO+FURFURAL=>1.5CO+CH2O+0.5C3H3+0.5C4H3O 2.000            10490.75	1.0080e+06
CH3CO+FURFURAL=>1.5CO+CH3CHO+0.5C3H3+0.5C4H3O 2.000            12129.83	1.0800e+06
CH2CHO+FURFURAL=>1.5CO+CH3CHO+0.5C3H3+0.5C4H3O 2.000            9720.89	1.8400e+05
C3H3+FURFURAL=>1.5CO+C3H4-A+0.5C3H3+0.5C4H3O 2.000            12129.83	2.1600e+05
HCCO+FURFURAL=>1.5CO+CH2CO+0.5C3H3+0.5C4H3O 2.000            3705.38	3.4240e+05
CH3O2+FURFURAL=>1.5CO+CH3O2H+0.5C3H3+0.5C4H3O 2.000            10779.70	6.0800e+05
C2H5O2+FURFURAL=>1.5CO+C2H5O2H+0.5C3H3+0.5C4H3O 2.000            10779.70	6.0800e+05
NC3H7O2+FURFURAL=>1.5CO+0.5C3H3+C3H7OOH+0.5C4H3O 2.000            10779.70	6.0800e+05
IC3H7O2+FURFURAL=>1.5CO+0.5C3H3+C3H7OOH+0.5C4H3O 2.000            10779.70	6.0800e+05
HCO3+FURFURAL=>1.5CO+0.5C3H3+HCO3H+0.5C4H3O 2.000            4937.89	2.7200e+05
CH3CO3+FURFURAL=>1.5CO+CH3CO3H+0.5C3H3+0.5C4H3O 2.000            4937.89	2.7200e+05
CH3COCH2+FURFURAL=>1.5CO+0.5C3H3+CH3COCH3+0.5C4H3O 2.000            6366.63	1.8400e+05
C6H5O+FURFURAL=>1.5CO+0.5C3H3+C6H5OH+0.5C4H3O 2.000            10683.36	2.1600e+05
C5H7+FURFURAL=>1.5CO+0.5C3H3+LC5H8+0.5C4H3O 2.000            13095.77	2.1600e+05
C7H7+FURFURAL=>1.5CO+0.5C3H3+C7H8+0.5C4H3O 2.000            14062.89	1.0800e+05
CH3C6H4+FURFURAL=>1.5CO+0.5C3H3+C7H8+0.5C4H3O 1.000            867.85	2.9600e+08
RCRESOLO+FURFURAL=>1.5CO+0.5C3H3+CRE SOL+0.5C4H3O 2.000            10972.41	2.1600e+05



C10H7+FURFURAL=>1.5CO+0.5C3H3+C10H8+0.5C4H3O 1.000           867.85	2.9600e+08
INDENYL+FURFURAL=>1.5CO+0.5C3H3+INDENE+0.5C4H3O 2.000           14062.89	1.0400e+05
C10H6CH3+FURFURAL=>1.5CO+0.5C3H3+C10H7CH3+0.5C4H3O 1.000           867.85	2.9600e+08
H+FURAN=>H2+C4H3O 2.000           9957.26	2.4000e+07
CH3+FURAN=>CH4+C4H3O 2.000           11196.53	2.4000e+05
C2H3+FURAN=>C2H4+C4H3O 2.000           9832.26	5.4240e+05
C2H5+FURAN=>C2H6+C4H3O 2.000           13265.38	1.6000e+05
NC3H7+FURAN=>C3H8+C4H3O 2.000           13265.38	1.0800e+05
IC3H7+FURAN=>C3H8+C4H3O 2.000           17064.96	1.0800e+05
C3H5-S+FURAN=>C3H6+C4H3O 2.000           10579.25	2.1600e+05
C3H5-T+FURAN=>C3H6+C4H3O 2.000           10579.25	2.1600e+05
C3H5-A+FURAN=>C3H6+C4H3O 2.000           20432.90	4.3120e+05
C4H5+FURAN=>C4H6+C4H3O 2.000           10579.25	2.1600e+05
C4H71-4+FURAN=>C4H8-1+C4H3O 2.000           13144.81	1.0800e+05
C4H71-3+FURAN=>C4H8-2+C4H3O 2.000           21467.03	2.7200e+05
IC4H7+FURAN=>IC4H8+C4H3O 2.000           21467.03	2.1600e+05
C4H3+FURAN=>C4H4+C4H3O 2.000           11442.22	3.2720e+05
C6H5+FURAN=>C6H6+C4H3O 1.000           6728.39	2.9600e+08
O+FURAN=>OH+C4H3O 2.000           8057.53	1.8800e+07

O2+FURAN=>HO2+C4H3O	1.3600e+07
2.000 54834.21	
OH+FURAN=>H2O+C4H3O	1.2000e+10
1.000 3830.11	
HO2+FURAN=>H2O2+C4H3O	6.4000e+06
2.000 24090.27	
CH3O+FURAN=>CH3OH+C4H3O	3.4240e+05
2.000 6755.27	
CH2OH+FURAN=>CH3OH+C4H3O	2.2640e+05
2.000 17416.23	
HCO+FURAN=>CH2O+C4H3O	1.0080e+06
2.000 19856.30	
CH3CO+FURAN=>CH3CHO+C4H3O	1.0800e+06
2.000 21810.72	
CH2CHO+FURAN=>CH3CHO+C4H3O	1.8400e+05
2.000 18930.41	
C3H3+FURAN=>C3H4-A+C4H3O	2.1600e+05
2.000 21810.72	
HCCO+FURAN=>CH2CO+C4H3O	3.4240e+05
2.000 11442.22	
CH3O2+FURAN=>CH3O2H+C4H3O	6.0800e+05
2.000 20202.44	
C2H5O2+FURAN=>C2H5O2H+C4H3O	6.0800e+05
2.000 20202.44	
NC3H7O2+FURAN=>C3H7OOH+C4H3O	6.0800e+05
2.000 20202.44	
IC3H7O2+FURAN=>C3H7OOH+C4H3O	6.0800e+05
2.000 20202.44	
HCO3+FURAN=>HCO3H+C4H3O	2.7200e+05
2.000 13024.11	
CH3CO3+FURAN=>CH3CO3H+C4H3O	2.7200e+05
2.000 13024.11	
CH3COCH2+FURAN=>CH3COCH3+C4H3O	1.8400e+05
2.000 14821.74	
C6H5O+FURAN=>C6H5OH+C4H3O	2.1600e+05
2.000 20087.13	
C5H7+FURAN=>LC5H8+C4H3O	2.1600e+05
2.000 22952.95	

C7H7+FURAN=>C7H8+C4H3O	1.0800e+05
2.000 24090.27	
CH3C6H4+FURAN=>C7H8+C4H3O	2.9600e+08
1.000 6728.39	
RCRESOLO+FURAN=>CRESOL+C4H3O	2.1600e+05
2.000 20432.90	
C10H7+FURAN=>C10H8+C4H3O	2.9600e+08
1.000 6728.39	
INDENYL+FURAN=>INDENE+C4H3O	1.0400e+05
2.000 24090.27	
C10H6CH3+FURAN=>C10H7CH3+C4H3O	2.9600e+08
1.000 6728.39	
H+MEFU2=>H2+CO+C4H5	1.2000e+07
2.000 4000.00	
CH3+MEFU2=>CO+CH4+C4H5	1.2000e+05
2.000 5000.00	
C2H3+MEFU2=>CO+C2H4+C4H5	2.7120e+05
2.000 3900.00	
C2H5+MEFU2=>CO+C2H6+C4H5	8.0000e+04
2.000 6700.00	
NC3H7+MEFU2=>CO+C3H8+C4H5	5.4000e+04
2.000 6700.00	
IC3H7+MEFU2=>CO+C3H8+C4H5	5.4000e+04
2.000 9900.00	
C3H5-S+MEFU2=>CO+C3H6+C4H5	1.0800e+05
2.000 4500.00	
C3H5-T+MEFU2=>CO+C3H6+C4H5	1.0800e+05
2.000 4500.00	
C3H5-A+MEFU2=>CO+C3H6+C4H5	2.1560e+05
2.000 12800.00	
C4H5+MEFU2=>CO+C4H6+C4H5	1.0800e+05
2.000 4500.00	
C4H71-4+MEFU2=>CO+C4H8-1+C4H5	5.4000e+04
2.000 6600.00	
C4H71-3+MEFU2=>CO+C4H8-2+C4H5	1.3600e+05
2.000 13700.00	
IC4H7+MEFU2=>CO+IC4H8+C4H5	1.0800e+05
2.000 13700.00	

C4H3+MEFU2=>CO+C4H5+C4H4	1.6360e+05
2.000 5200.00	
C6H5+MEFU2=>CO+C4H5+C6H6	1.4800e+08
1.000 2000.00	
O+MEFU2=>OH+CO+C4H5	9.4000e+06
2.000 2500.00	
O2+MEFU2=>HO2+CO+C4H5	6.8000e+06
2.000 44000.00	
OH+MEFU2=>H2O+CO+C4H5	6.0000e+09
1.000 50.00	
HO2+MEFU2=>H2O2+CO+C4H5	3.2000e+06
2.000 16000.00	
CH3O+MEFU2=>CO+CH3OH+C4H5	1.7120e+05
2.000 1500.00	
CH2OH+MEFU2=>CO+CH3OH+C4H5	1.1320e+05
2.000 10200.00	
HCO+MEFU2=>CO+CH2O+C4H5	5.0400e+05
2.000 12300.00	
CH3CO+MEFU2=>CO+CH3CHO+C4H5	5.4000e+05
2.000 14000.00	
CH2CHO+MEFU2=>CO+CH3CHO+C4H5	9.2000e+04
2.000 11500.00	
C3H3+MEFU2=>CO+C3H4-A+C4H5	1.0800e+05
2.000 14000.00	
HCCO+MEFU2=>CO+CH2CO+C4H5	1.7120e+05
2.000 5200.00	
CH3O2+MEFU2=>CO+CH3O2H+C4H5	3.0400e+05
2.000 12600.00	
C2H5O2+MEFU2=>CO+C2H5O2H+C4H5	3.0400e+05
2.000 12600.00	
NC3H7O2+MEFU2=>CO+C4H5+C3H7OOH	3.0400e+05
2.000 12600.00	
IC3H7O2+MEFU2=>CO+C4H5+C3H7OOH	3.0400e+05
2.000 12600.00	
HCO3+MEFU2=>CO+C4H5+HCO3H	1.3600e+05
2.000 6500.00	
CH3CO3+MEFU2=>CO+CH3CO3H+C4H5	1.3600e+05
2.000 6500.00	

CH3COCH2+MEFU2=>CO+CH3COCH3+C4H5	9.2000e+04
2.000 8000.00	
C6H5O+MEFU2=>CO+C4H5+C6H5OH	1.0800e+05
2.000 12500.00	
C5H7+MEFU2=>CO+C4H5+LC5H8	1.0800e+05
2.000 15000.00	
C7H7+MEFU2=>CO+C4H5+C7H8	5.4000e+04
2.000 16000.00	
CH3C6H4+MEFU2=>CO+C4H5+C7H8	1.4800e+08
1.000 2000.00	
RCRESOLO+MEFU2=>CO+C4H5+CRESOL	1.0800e+05
2.000 12800.00	
C10H7+MEFU2=>CO+C4H5+C10H8	1.4800e+08
1.000 2000.00	
INDENYL+MEFU2=>CO+C4H5+INDENE	5.2000e+04
2.000 16000.00	
C10H6CH3+MEFU2=>CO+C4H5+C10H7CH3	1.4800e+08
1.000 2000.00	
H+DMF=>H2+DMF-3YL	2.4000e+07
2.000 4000.00	
CH3+DMF=>CH4+DMF-3YL	2.4000e+05
2.000 5000.00	
C2H3+DMF=>C2H4+DMF-3YL	5.4240e+05
2.000 3900.00	
C2H5+DMF=>C2H6+DMF-3YL	1.6000e+05
2.000 6700.00	
NC3H7+DMF=>C3H8+DMF-3YL	1.0800e+05
2.000 6700.00	
IC3H7+DMF=>C3H8+DMF-3YL	1.0800e+05
2.000 9900.00	
C3H5-S+DMF=>C3H6+DMF-3YL	2.1600e+05
2.000 4500.00	
C3H5-T+DMF=>C3H6+DMF-3YL	2.1600e+05
2.000 4500.00	
C3H5-A+DMF=>C3H6+DMF-3YL	4.3120e+05
2.000 12800.00	
C4H5+DMF=>C4H6+DMF-3YL	2.1600e+05
2.000 4500.00	

C4H71-4+DMF=>C4H8-1+DMF-3YL 2.000        6600.00	1.0800e+05
C4H71-3+DMF=>C4H8-2+DMF-3YL 2.000        13700.00	2.7200e+05
IC4H7+DMF=>IC4H8+DMF-3YL 2.000        13700.00	2.1600e+05
C4H3+DMF=>C4H4+DMF-3YL 2.000        5200.00	3.2720e+05
C6H5+DMF=>C6H6+DMF-3YL 1.000        2000.00	2.9600e+08
O+DMF=>OH+DMF-3YL 2.000        2500.00	1.8800e+07
O2+DMF=>HO2+DMF-3YL 2.000        44000.00	1.3600e+07
OH+DMF=>H2O+DMF-3YL 1.000        50.00	1.2000e+10
HO2+DMF=>H2O2+DMF-3YL 2.000        16000.00	6.4000e+06
CH3O+DMF=>CH3OH+DMF-3YL 2.000        1500.00	3.4240e+05
CH2OH+DMF=>CH3OH+DMF-3YL 2.000        10200.00	2.2640e+05
HCO+DMF=>CH2O+DMF-3YL 2.000        12300.00	1.0080e+06
CH3CO+DMF=>CH3CHO+DMF-3YL 2.000        14000.00	1.0800e+06
CH2CHO+DMF=>CH3CHO+DMF-3YL 2.000        11500.00	1.8400e+05
C3H3+DMF=>C3H4-A+DMF-3YL 2.000        14000.00	2.1600e+05
HCCO+DMF=>CH2CO+DMF-3YL 2.000        5200.00	3.4240e+05
CH3O2+DMF=>CH3O2H+DMF-3YL 2.000        12600.00	6.0800e+05
C2H5O2+DMF=>C2H5O2H+DMF-3YL 2.000        12600.00	6.0800e+05
NC3H7O2+DMF=>C3H7OOH+DMF-3YL 2.000        12600.00	6.0800e+05

IC3H7O2+DMF=>C3H7OOH+DMF-3YL	6.0800e+05
2.000 12600.00	
HCO3+DMF=>HCO3H+DMF-3YL	2.7200e+05
2.000 6500.00	
CH3CO3+DMF=>CH3CO3H+DMF-3YL	2.7200e+05
2.000 6500.00	
CH3COCH2+DMF=>CH3COCH3+DMF-3YL	1.8400e+05
2.000 8000.00	
C6H5O+DMF=>C6H5OH+DMF-3YL	2.1600e+05
2.000 12500.00	
C5H7+DMF=>LC5H8+DMF-3YL	2.1600e+05
2.000 15000.00	
C7H7+DMF=>C7H8+DMF-3YL	1.0800e+05
2.000 16000.00	
CH3C6H4+DMF=>C7H8+DMF-3YL	2.9600e+08
1.000 2000.00	
RCRESOLO+DMF=>CRESOL+DMF-3YL	2.1600e+05
2.000 12800.00	
C10H7+DMF=>C10H8+DMF-3YL	2.9600e+08
1.000 2000.00	
INDENYL+DMF=>INDENE+DMF-3YL	1.0400e+05
2.000 16000.00	
C10H6CH3+DMF=>C10H7CH3+DMF-3YL	2.9600e+08
1.000 2000.00	
H+C6H10O5=>H2+1.75CH2O+CH2CHO+0.75CHOCHO+0.25C3H4O3	1.2000e+07
2.000 4000.00	
CH3+C6H10O5=>CH4+1.75CH2O+CH2CHO+0.75CHOCHO+0.25C3H4O3	1.2000e+05
2.000 5000.00	
C2H3+C6H10O5=>1.75CH2O+C2H4+CH2CHO+0.75CHOCHO+0.25C3H4O3	2.7120e+05
2.000 3900.00	
C2H5+C6H10O5=>1.75CH2O+C2H6+CH2CHO+0.75CHOCHO+0.25C3H4O3	8.0000e+04
2.000 6700.00	
NC3H7+C6H10O5=>1.75CH2O+CH2CHO+0.75CHOCHO+C3H8+0.25C3H4O3	5.4000e+04
2.000 6700.00	
IC3H7+C6H10O5=>1.75CH2O+CH2CHO+0.75CHOCHO+C3H8+0.25C3H4O3	5.4000e+04
2.000 9900.00	
C3H5-S+C6H10O5=>1.75CH2O+CH2CHO+0.75CHOCHO+C3H6+0.25C3H4O3	1.0800e+05
2.000 4500.00	

C3H5-T+C6H10O5=>1.75CH2O+CH2CHO+0.75CHOCHO+C3H6+0.25C3H4O3 1.0800e+05  
 2.000 4500.00

C3H5-A+C6H10O5=>1.75CH2O+CH2CHO+0.75CHOCHO+C3H6+0.25C3H4O3 2.1560e+05  
 2.000 12800.00

C4H5+C6H10O5=>1.75CH2O+CH2CHO+0.75CHOCHO+C4H6+0.25C3H4O3 1.0800e+05  
 2.000 4500.00

C4H71-4+C6H10O5=>1.75CH2O+CH2CHO+0.75CHOCHO+C4H8-1+0.25C3H4O3 5.4000e+04  
 2.000 6600.00

C4H71-3+C6H10O5=>1.75CH2O+CH2CHO+0.75CHOCHO+C4H8-2+0.25C3H4O3 1.3600e+05  
 2.000 13700.00

IC4H7+C6H10O5=>1.75CH2O+CH2CHO+0.75CHOCHO+IC4H8+0.25C3H4O3 1.0800e+05  
 2.000 13700.00

C4H3+C6H10O5=>1.75CH2O+CH2CHO+0.75CHOCHO+C4H4+0.25C3H4O3 1.6360e+05  
 2.000 5200.00

C6H5+C6H10O5=>1.75CH2O+CH2CHO+0.75CHOCHO+C6H6+0.25C3H4O3 1.4800e+08  
 1.000 2000.00

O+C6H10O5=>OH+1.75CH2O+CH2CHO+0.75CHOCHO+0.25C3H4O3 9.4000e+06  
 2.000 2500.00

O2+C6H10O5=>HO2+1.75CH2O+CH2CHO+0.75CHOCHO+0.25C3H4O3 6.8000e+06  
 2.000 44000.00

OH+C6H10O5=>H2O+1.75CH2O+CH2CHO+0.75CHOCHO+0.25C3H4O3 6.0000e+09  
 1.000 50.00

HO2+C6H10O5=>H2O2+1.75CH2O+CH2CHO+0.75CHOCHO+0.25C3H4O3 3.2000e+06  
 2.000 16000.00

CH3O+C6H10O5=>CH3OH+1.75CH2O+CH2CHO+0.75CHOCHO+0.25C3H4O3 1.7120e+05  
 2.000 1500.00

CH2OH+C6H10O5=>CH3OH+1.75CH2O+CH2CHO+0.75CHOCHO+0.25C3H4O3 1.1320e+05  
 2.000 10200.00

HCO+C6H10O5=>2.75CH2O+CH2CHO+0.75CHOCHO+0.25C3H4O3 5.0400e+05  
 2.000 12300.00

CH3CO+C6H10O5=>1.75CH2O+CH3CHO+CH2CHO+0.75CHOCHO+0.25C3H4O3 5.4000e+05  
 2.000 14000.00

CH2CHO+C6H10O5=>1.75CH2O+CH3CHO+CH2CHO+0.75CHOCHO+0.25C3H4O3 9.2000e+04  
 2.000 11500.00

C3H3+C6H10O5=>1.75CH2O+CH2CHO+0.75CHOCHO+C3H4-A+0.25C3H4O3 1.0800e+05  
 2.000 14000.00

HCCO+C6H10O5=>1.75CH2O+CH2CHO+CH2CO+0.75CHOCHO+0.25C3H4O3 1.7120e+05  
 2.000 5200.00



$\text{CH}_3\text{O}_2 + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{CH}_3\text{O}_2\text{H} + 1.75\text{CH}_2\text{O} + \text{CH}_2\text{CHO} + 0.75\text{CHOCHO} + 0.25\text{C}_3\text{H}_4\text{O}_3$  3.0400e+05  
 2.000 12600.00

$\text{C}_2\text{H}_5\text{O}_2 + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow 1.75\text{CH}_2\text{O} + \text{C}_2\text{H}_5\text{O}_2\text{H} + \text{CH}_2\text{CHO} + 0.75\text{CHOCHO} + 0.25\text{C}_3\text{H}_4\text{O}_3$  3.0400e+05  
 2.000 12600.00

$\text{NC}_3\text{H}_7\text{O}_2 + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow 1.75\text{CH}_2\text{O} + \text{CH}_2\text{CHO} + 0.75\text{CHOCHO} + \text{C}_3\text{H}_7\text{OOH} + 0.25\text{C}_3\text{H}_4\text{O}_3$  3.0400e+05  
 2.000 12600.00

$\text{IC}_3\text{H}_7\text{O}_2 + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow 1.75\text{CH}_2\text{O} + \text{CH}_2\text{CHO} + 0.75\text{CHOCHO} + \text{C}_3\text{H}_7\text{OOH} + 0.25\text{C}_3\text{H}_4\text{O}_3$  3.0400e+05  
 2.000 12600.00

$\text{HCO}_3 + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow 1.75\text{CH}_2\text{O} + \text{CH}_2\text{CHO} + 0.75\text{CHOCHO} + \text{HCO}_3\text{H} + 0.25\text{C}_3\text{H}_4\text{O}_3$  1.3600e+05  
 2.000 6500.00

$\text{CH}_3\text{CO}_3 + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow 1.75\text{CH}_2\text{O} + \text{CH}_2\text{CHO} + \text{CH}_3\text{CO}_3\text{H} + 0.75\text{CHOCHO} + 0.25\text{C}_3\text{H}_4\text{O}_3$  1.3600e+05  
 2.000 6500.00

$\text{CH}_3\text{COCH}_2 + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow 1.75\text{CH}_2\text{O} + \text{CH}_2\text{CHO} + 0.75\text{CHOCHO} + \text{CH}_3\text{COCH}_3 + 0.25\text{C}_3\text{H}_4\text{O}_3$   
 9.2000e+04 2.000 8000.00

$\text{C}_6\text{H}_5\text{O} + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow 1.75\text{CH}_2\text{O} + \text{CH}_2\text{CHO} + 0.75\text{CHOCHO} + \text{C}_6\text{H}_5\text{OH} + 0.25\text{C}_3\text{H}_4\text{O}_3$  1.0800e+05  
 2.000 12500.00

$\text{C}_5\text{H}_7 + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow 1.75\text{CH}_2\text{O} + \text{CH}_2\text{CHO} + 0.75\text{CHOCHO} + \text{LC}_5\text{H}_8 + 0.25\text{C}_3\text{H}_4\text{O}_3$  1.0800e+05  
 2.000 15000.00

$\text{C}_7\text{H}_7 + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow 1.75\text{CH}_2\text{O} + \text{CH}_2\text{CHO} + 0.75\text{CHOCHO} + \text{C}_7\text{H}_8 + 0.25\text{C}_3\text{H}_4\text{O}_3$  5.4000e+04  
 2.000 16000.00

$\text{CH}_3\text{C}_6\text{H}_4 + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow 1.75\text{CH}_2\text{O} + \text{CH}_2\text{CHO} + 0.75\text{CHOCHO} + \text{C}_7\text{H}_8 + 0.25\text{C}_3\text{H}_4\text{O}_3$  1.4800e+08  
 1.000 2000.00

$\text{RCRESOLO} + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow 1.75\text{CH}_2\text{O} + \text{CH}_2\text{CHO} + 0.75\text{CHOCHO} + \text{CRESOL} + 0.25\text{C}_3\text{H}_4\text{O}_3$  1.0800e+05  
 2.000 12800.00

$\text{C}_{10}\text{H}_7 + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow 1.75\text{CH}_2\text{O} + \text{CH}_2\text{CHO} + 0.75\text{CHOCHO} + \text{C}_{10}\text{H}_8 + 0.25\text{C}_3\text{H}_4\text{O}_3$  1.4800e+08  
 1.000 2000.00

$\text{INDENYL} + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow 1.75\text{CH}_2\text{O} + \text{CH}_2\text{CHO} + 0.75\text{CHOCHO} + \text{INDENE} + 0.25\text{C}_3\text{H}_4\text{O}_3$  5.2000e+04  
 2.000 16000.00

$\text{C}_{10}\text{H}_6\text{CH}_3 + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow 1.75\text{CH}_2\text{O} + \text{CH}_2\text{CHO} + 0.75\text{CHOCHO} + \text{C}_{10}\text{H}_7\text{CH}_3 + 0.25\text{C}_3\text{H}_4\text{O}_3$   
 1.4800e+08 1.000 2000.00

$\text{H} + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{H}_2 + \text{CO} + \text{CO}_2 + \text{CH}_3\text{O} + \text{CH}_2\text{O} + \text{C}_2\text{H}_4$  4.5000e+06  
 2.000 4000.00

$\text{CH}_3 + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{CO} + \text{CO}_2 + \text{CH}_4 + \text{CH}_3\text{O} + \text{CH}_2\text{O} + \text{C}_2\text{H}_4$  4.5000e+04  
 2.000 5000.00

$\text{C}_2\text{H}_3 + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{CO} + \text{CO}_2 + \text{CH}_3\text{O} + \text{CH}_2\text{O} + 2\text{C}_2\text{H}_4$  1.0170e+05  
 2.000 3900.00

$\text{C}_2\text{H}_5 + \text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{CO} + \text{CO}_2 + \text{CH}_3\text{O} + \text{CH}_2\text{O} + \text{C}_2\text{H}_6 + \text{C}_2\text{H}_4$  3.0000e+04  
 2.000 6700.00

NC3H7+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C3H8 2.000            6700.00	2.0250e+04
IC3H7+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C3H8 2.000            9900.00	2.0250e+04
C3H5-S+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C3H6 2.000            4500.00	4.0500e+04
C3H5-T+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C3H6 2.000            4500.00	4.0500e+04
C3H5-A+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C3H6 2.000            12800.00	8.0850e+04
C4H5+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C4H6 2.000            4500.00	4.0500e+04
C4H71-4+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C4H8-1 2.000            6600.00	2.0250e+04
C4H71-3+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C4H8-2 2.000            13700.00	5.1000e+04
IC4H7+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+IC4H8 2.000            13700.00	4.0500e+04
C4H3+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C4H4 2.000            5200.00	6.1350e+04
C6H5+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C6H6 1.000            2000.00	5.5500e+07
O+C6H10O5=>OH+CO+CO2+CH3O+CH2O+C2H4 2.000            2500.00	3.5250e+06
O2+C6H10O5=>HO2+CO+CO2+CH3O+CH2O+C2H4 2.000            44000.00	2.5500e+06
OH+C6H10O5=>H2O+CO+CO2+CH3O+CH2O+C2H4 1.000            50.00	2.2500e+09
HO2+C6H10O5=>H2O2+CO+CO2+CH3O+CH2O+C2H4 2.000            16000.00	1.2000e+06
CH3O+C6H10O5=>CO+CO2+CH3OH+CH3O+CH2O+C2H4 2.000            1500.00	6.4200e+04
CH2OH+C6H10O5=>CO+CO2+CH3OH+CH3O+CH2O+C2H4 2.000            10200.00	4.2450e+04
HCO+C6H10O5=>CO+CO2+CH3O+2CH2O+C2H4 2.000            12300.00	1.8900e+05
CH3CO+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+CH3CHO 2.000            14000.00	2.0250e+05

CH2CHO+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+CH3CHO 2.000 11500.00	3.4500e+04
C3H3+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C3H4-A 2.000 14000.00	4.0500e+04
HCCO+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+CH2CO 2.000 5200.00	6.4200e+04
CH3O2+C6H10O5=>CO+CO2+CH3O2H+CH3O+CH2O+C2H4 2.000 12600.00	1.1400e+05
C2H5O2+C6H10O5=>CO+CO2+CH3O+CH2O+C2H5O2H+C2H4 2.000 12600.00	1.1400e+05
NC3H7O2+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C3H7OOH 2.000 12600.00	1.1400e+05
IC3H7O2+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C3H7OOH 2.000 12600.00	1.1400e+05
HCO3+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+HCO3H 2.000 6500.00	5.1000e+04
CH3CO3+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+CH3CO3H 2.000 6500.00	5.1000e+04
CH3COCH2+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+CH3COCH3 2.000 8000.00	3.4500e+04
C6H5O+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C6H5OH 2.000 12500.00	4.0500e+04
C5H7+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+LC5H8 2.000 15000.00	4.0500e+04
C7H7+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C7H8 2.000 16000.00	2.0250e+04
CH3C6H4+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C7H8 1.000 2000.00	5.5500e+07
RCRESOLO+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+CRESOL 2.000 12800.00	4.0500e+04
C10H7+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C10H8 1.000 2000.00	5.5500e+07
INDENYL+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+INDENE 2.000 16000.00	1.9500e+04
C10H6CH3+C6H10O5=>CO+CO2+CH3O+CH2O+C2H4+C10H7CH3 1.000 2000.00	5.5500e+07
H+C6H10O5=>H2+OH+0.5CO+0.5CH2O+0.5C4H6O2+0.5C6H8O4 2.000 4000.00	3.0000e+06

$\text{CH}_3+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+\text{CH}_4+0.5\text{CH}_2\text{O}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  3.0000e+04  
 2.000 5000.00

$\text{C}_2\text{H}_3+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{C}_2\text{H}_4+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  6.7800e+04  
 2.000 3900.00

$\text{C}_2\text{H}_5+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{C}_2\text{H}_6+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  2.0000e+04  
 2.000 6700.00

$\text{NC}_3\text{H}_7+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{C}_3\text{H}_8+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  1.3500e+04  
 2.000 6700.00

$\text{IC}_3\text{H}_7+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{C}_3\text{H}_8+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  1.3500e+04  
 2.000 9900.00

$\text{C}_3\text{H}_5\text{-S}+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{C}_3\text{H}_6+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  2.7000e+04  
 2.000 4500.00

$\text{C}_3\text{H}_5\text{-T}+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{C}_3\text{H}_6+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  2.7000e+04  
 2.000 4500.00

$\text{C}_3\text{H}_5\text{-A}+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{C}_3\text{H}_6+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  5.3900e+04  
 2.000 12800.00

$\text{C}_4\text{H}_5+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{C}_4\text{H}_6+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  2.7000e+04  
 2.000 4500.00

$\text{C}_4\text{H}_7\text{-1}+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{C}_4\text{H}_8\text{-1}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  1.3500e+04  
 2.000 6600.00

$\text{C}_4\text{H}_7\text{-3}+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{C}_4\text{H}_8\text{-2}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  3.4000e+04  
 2.000 13700.00

$\text{IC}_4\text{H}_7+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{IC}_4\text{H}_8+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  2.7000e+04  
 2.000 13700.00

$\text{C}_4\text{H}_3+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{C}_4\text{H}_4+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  4.0900e+04  
 2.000 5200.00

$\text{C}_6\text{H}_5+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{C}_6\text{H}_6+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  3.7000e+07  
 1.000 2000.00

$\text{O}+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow 2\text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  2.3500e+06  
 2.000 2500.00

$\text{O}_2+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+\text{HO}_2+0.5\text{CO}+0.5\text{CH}_2\text{O}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  1.7000e+06  
 2.000 44000.00

$\text{OH}+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{H}_2\text{O}+\text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  1.5000e+09  
 1.000 50.00

$\text{HO}_2+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+\text{H}_2\text{O}_2+0.5\text{CO}+0.5\text{CH}_2\text{O}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  8.0000e+05  
 2.000 16000.00

$\text{CH}_3\text{O}+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+\text{CH}_3\text{OH}+0.5\text{CH}_2\text{O}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  4.2800e+04  
 2.000 1500.00

$\text{CH}_2\text{OH}+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+\text{CH}_3\text{OH}+0.5\text{CH}_2\text{O}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  2.8300e+04  
 2.000 10200.00

$\text{HCO}+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+1.5\text{CH}_2\text{O}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  1.2600e+05  
 2.000 12300.00

$\text{CH}_3\text{CO}+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{CH}_3\text{CHO}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  1.3500e+05  
 2.000 14000.00

$\text{CH}_2\text{CHO}+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{CH}_3\text{CHO}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  2.3000e+04  
 2.000 11500.00

$\text{C}_3\text{H}_3+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{C}_3\text{H}_4-\text{A}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  2.7000e+04  
 2.000 14000.00

$\text{HCCO}+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{CH}_2\text{CO}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  4.2800e+04  
 2.000 5200.00

$\text{CH}_3\text{O}_2+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+\text{CH}_3\text{O}_2\text{H}+0.5\text{CH}_2\text{O}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  7.6000e+04  
 2.000 12600.00

$\text{C}_2\text{H}_5\text{O}_2+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{C}_2\text{H}_5\text{O}_2\text{H}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  7.6000e+04  
 2.000 12600.00

$\text{NC}_3\text{H}_7\text{O}_2+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{C}_3\text{H}_7\text{OOH}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  7.6000e+04  
 2.000 12600.00

$\text{IC}_3\text{H}_7\text{O}_2+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{C}_3\text{H}_7\text{OOH}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  7.6000e+04  
 2.000 12600.00

$\text{HCO}_3+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{HCO}_3\text{H}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  3.4000e+04  
 2.000 6500.00

$\text{CH}_3\text{CO}_3+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{CH}_3\text{CO}_3\text{H}+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  3.4000e+04  
 2.000 6500.00

$\text{CH}_3\text{COCH}_2+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{CH}_3\text{COCH}_3+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$   
 2.3000e+04 2.000 8000.00

$\text{C}_6\text{H}_5\text{O}+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+0.5\text{C}_4\text{H}_6\text{O}_2+\text{C}_6\text{H}_5\text{OH}+0.5\text{C}_6\text{H}_8\text{O}_4$  2.7000e+04  
 2.000 12500.00

$\text{C}_5\text{H}_7+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+0.5\text{C}_4\text{H}_6\text{O}_2+\text{LC}_5\text{H}_8+0.5\text{C}_6\text{H}_8\text{O}_4$  2.7000e+04  
 2.000 15000.00

$\text{C}_7\text{H}_7+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+0.5\text{C}_4\text{H}_6\text{O}_2+\text{C}_7\text{H}_8+0.5\text{C}_6\text{H}_8\text{O}_4$  1.3500e+04  
 2.000 16000.00

$\text{CH}_3\text{C}_6\text{H}_4+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+0.5\text{C}_4\text{H}_6\text{O}_2+\text{C}_7\text{H}_8+0.5\text{C}_6\text{H}_8\text{O}_4$  3.7000e+07  
 1.000 2000.00

$\text{RCRESOLO}+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+0.5\text{C}_4\text{H}_6\text{O}_2+\text{CRESOL}+0.5\text{C}_6\text{H}_8\text{O}_4$  2.7000e+04  
 2.000 12800.00

$\text{C}_{10}\text{H}_7+\text{C}_6\text{H}_{10}\text{O}_5 \Rightarrow \text{OH}+0.5\text{CO}+0.5\text{CH}_2\text{O}+\text{C}_{10}\text{H}_8+0.5\text{C}_4\text{H}_6\text{O}_2+0.5\text{C}_6\text{H}_8\text{O}_4$  3.7000e+07  
 1.000 2000.00

INDENYL+C6H10O5=>OH+0.5CO+0.5CH2O+0.5C4H6O2+INDENE+0.5C6H8O4	1.3000e+04
2.000 16000.00	
C10H6CH3+C6H10O5=>OH+0.5CO+0.5CH2O+0.5C4H6O2+C10H7CH3+0.5C6H8O4	
3.7000e+07 1.000 2000.00	
H+C6H8O4=>H2+OH+C6H6O3	6.0000e+06
2.000 4000.00	
CH3+C6H8O4=>OH+CH4+C6H6O3	6.0000e+04
2.000 5000.00	
C2H3+C6H8O4=>OH+C2H4+C6H6O3	1.3560e+05
2.000 3900.00	
C2H5+C6H8O4=>OH+C2H6+C6H6O3	4.0000e+04
2.000 6700.00	
NC3H7+C6H8O4=>OH+C3H8+C6H6O3	2.7000e+04
2.000 6700.00	
IC3H7+C6H8O4=>OH+C3H8+C6H6O3	2.7000e+04
2.000 9900.00	
C3H5-S+C6H8O4=>OH+C3H6+C6H6O3	5.4000e+04
2.000 4500.00	
C3H5-T+C6H8O4=>OH+C3H6+C6H6O3	5.4000e+04
2.000 4500.00	
C3H5-A+C6H8O4=>OH+C3H6+C6H6O3	1.0780e+05
2.000 12800.00	
C4H5+C6H8O4=>OH+C4H6+C6H6O3	5.4000e+04
2.000 4500.00	
C4H71-4+C6H8O4=>OH+C4H8-1+C6H6O3	2.7000e+04
2.000 6600.00	
C4H71-3+C6H8O4=>OH+C4H8-2+C6H6O3	6.8000e+04
2.000 13700.00	
IC4H7+C6H8O4=>OH+IC4H8+C6H6O3	5.4000e+04
2.000 13700.00	
C4H3+C6H8O4=>OH+C4H4+C6H6O3	8.1800e+04
2.000 5200.00	
C6H5+C6H8O4=>OH+C6H6+C6H6O3	7.4000e+07
1.000 2000.00	
O+C6H8O4=>2OH+C6H6O3	4.7000e+06
2.000 2500.00	
O2+C6H8O4=>OH+HO2+C6H6O3	3.4000e+06
2.000 44000.00	

OH+C6H8O4=>H2O+OH+C6H6O3	3.0000e+09
1.000            50.00	
H2O2+C6H8O4=>OH+H2O2+C6H6O3	1.6000e+06
2.000            16000.00	
CH3O+C6H8O4=>OH+CH3OH+C6H6O3	8.5600e+04
2.000            1500.00	
CH2OH+C6H8O4=>OH+CH3OH+C6H6O3	5.6600e+04
2.000            10200.00	
HCO+C6H8O4=>OH+CH2O+C6H6O3	2.5200e+05
2.000            12300.00	
CH3CO+C6H8O4=>OH+CH3CHO+C6H6O3	2.7000e+05
2.000            14000.00	
CH2CHO+C6H8O4=>OH+CH3CHO+C6H6O3	4.6000e+04
2.000            11500.00	
C3H3+C6H8O4=>OH+C3H4-A+C6H6O3	5.4000e+04
2.000            14000.00	
HCCO+C6H8O4=>OH+CH2CO+C6H6O3	8.5600e+04
2.000            5200.00	
CH3O2+C6H8O4=>OH+CH3O2H+C6H6O3	1.5200e+05
2.000            12600.00	
C2H5O2+C6H8O4=>OH+C2H5O2H+C6H6O3	1.5200e+05
2.000            12600.00	
NC3H7O2+C6H8O4=>OH+C3H7OOH+C6H6O3	1.5200e+05
2.000            12600.00	
IC3H7O2+C6H8O4=>OH+C3H7OOH+C6H6O3	1.5200e+05
2.000            12600.00	
HCO3+C6H8O4=>OH+HCO3H+C6H6O3	6.8000e+04
2.000            6500.00	
CH3CO3+C6H8O4=>OH+CH3CO3H+C6H6O3	6.8000e+04
2.000            6500.00	
CH3COCH2+C6H8O4=>OH+CH3COCH3+C6H6O3	4.6000e+04
2.000            8000.00	
C6H5O+C6H8O4=>OH+C6H5OH+C6H6O3	5.4000e+04
2.000            12500.00	
C5H7+C6H8O4=>OH+LC5H8+C6H6O3	5.4000e+04
2.000            15000.00	
C7H7+C6H8O4=>OH+C7H8+C6H6O3	2.7000e+04
2.000            16000.00	

CH3C6H4+C6H8O4=>OH+C7H8+C6H6O3	7.4000e+07
1.000 2000.00	
RCRESOLO+C6H8O4=>OH+CRESOL+C6H6O3	5.4000e+04
2.000 12800.00	
C10H7+C6H8O4=>OH+C10H8+C6H6O3	7.4000e+07
1.000 2000.00	
INDENYL+C6H8O4=>OH+INDENE+C6H6O3	2.6000e+04
2.000 16000.00	
C10H6CH3+C6H8O4=>OH+C10H7CH3+C6H6O3	7.4000e+07
1.000 2000.00	
H+C5H8O4=>H2+H2O+OH+FURFURAL	6.0000e+06
2.000 4000.00	
CH3+C5H8O4=>H2O+OH+CH4+FURFURAL	6.0000e+04
2.000 5000.00	
C2H3+C5H8O4=>H2O+OH+C2H4+FURFURAL	1.3560e+05
2.000 3900.00	
C2H5+C5H8O4=>H2O+OH+C2H6+FURFURAL	4.0000e+04
2.000 6700.00	
NC3H7+C5H8O4=>H2O+OH+C3H8+FURFURAL	2.7000e+04
2.000 6700.00	
IC3H7+C5H8O4=>H2O+OH+C3H8+FURFURAL	2.7000e+04
2.000 9900.00	
C3H5-S+C5H8O4=>H2O+OH+C3H6+FURFURAL	5.4000e+04
2.000 4500.00	
C3H5-T+C5H8O4=>H2O+OH+C3H6+FURFURAL	5.4000e+04
2.000 4500.00	
C3H5-A+C5H8O4=>H2O+OH+C3H6+FURFURAL	1.0780e+05
2.000 12800.00	
C4H5+C5H8O4=>H2O+OH+C4H6+FURFURAL	5.4000e+04
2.000 4500.00	
C4H71-4+C5H8O4=>H2O+OH+C4H8-1+FURFURAL	2.7000e+04
2.000 6600.00	
C4H71-3+C5H8O4=>H2O+OH+C4H8-2+FURFURAL	6.8000e+04
2.000 13700.00	
IC4H7+C5H8O4=>H2O+OH+IC4H8+FURFURAL	5.4000e+04
2.000 13700.00	
C4H3+C5H8O4=>H2O+OH+C4H4+FURFURAL	8.1800e+04
2.000 5200.00	



C6H5+C5H8O4=>H2O+OH+C6H6+FURFURAL	7.4000e+07
1.000 2000.00	
O+C5H8O4=>H2O+2OH+FURFURAL	4.7000e+06
2.000 2500.00	
O2+C5H8O4=>H2O+OH+HO2+FURFURAL	3.4000e+06
2.000 44000.00	
OH+C5H8O4=>2H2O+OH+FURFURAL	3.0000e+09
1.000 50.00	
HO2+C5H8O4=>H2O+OH+H2O2+FURFURAL	1.6000e+06
2.000 16000.00	
CH3O+C5H8O4=>H2O+OH+CH3OH+FURFURAL	8.5600e+04
2.000 1500.00	
CH2OH+C5H8O4=>H2O+OH+CH3OH+FURFURAL	5.6600e+04
2.000 10200.00	
HCO+C5H8O4=>H2O+OH+CH2O+FURFURAL	2.5200e+05
2.000 12300.00	
CH3CO+C5H8O4=>H2O+OH+CH3CHO+FURFURAL	2.7000e+05
2.000 14000.00	
CH2CHO+C5H8O4=>H2O+OH+CH3CHO+FURFURAL	4.6000e+04
2.000 11500.00	
C3H3+C5H8O4=>H2O+OH+C3H4-A+FURFURAL	5.4000e+04
2.000 14000.00	
HCCO+C5H8O4=>H2O+OH+CH2CO+FURFURAL	8.5600e+04
2.000 5200.00	
CH3O2+C5H8O4=>H2O+OH+CH3O2H+FURFURAL	1.5200e+05
2.000 12600.00	
C2H5O2+C5H8O4=>H2O+OH+C2H5O2H+FURFURAL	1.5200e+05
2.000 12600.00	
NC3H7O2+C5H8O4=>H2O+OH+C3H7OOH+FURFURAL	1.5200e+05
2.000 12600.00	
IC3H7O2+C5H8O4=>H2O+OH+C3H7OOH+FURFURAL	1.5200e+05
2.000 12600.00	
HCO3+C5H8O4=>H2O+OH+HCO3H+FURFURAL	6.8000e+04
2.000 6500.00	
CH3CO3+C5H8O4=>H2O+OH+CH3CO3H+FURFURAL	6.8000e+04
2.000 6500.00	
CH3COCH2+C5H8O4=>H2O+OH+CH3COCH3+FURFURAL	4.6000e+04
2.000 8000.00	

C6H5O+C5H8O4=>H2O+OH+C6H5OH+FURFURAL 2.000 12500.00	5.4000e+04
C5H7+C5H8O4=>H2O+OH+LC5H8+FURFURAL 2.000 15000.00	5.4000e+04
C7H7+C5H8O4=>H2O+OH+C7H8+FURFURAL 2.000 16000.00	2.7000e+04
CH3C6H4+C5H8O4=>H2O+OH+C7H8+FURFURAL 1.000 2000.00	7.4000e+07
RCRESOLO+C5H8O4=>H2O+OH+CRESOL+FURFURAL 2.000 12800.00	5.4000e+04
C10H7+C5H8O4=>H2O+OH+C10H8+FURFURAL 1.000 2000.00	7.4000e+07
INDENYL+C5H8O4=>H2O+OH+INDENE+FURFURAL 2.000 16000.00	2.6000e+04
C10H6CH3+C5H8O4=>H2O+OH+C10H7CH3+FURFURAL 1.000 2000.00	7.4000e+07
H+C5H8O4=>H2+CO+CH2CHO+CH2OHCHO 2.000 4000.00	6.0000e+06
CH3+C5H8O4=>CO+CH4+CH2CHO+CH2OHCHO 2.000 5000.00	6.0000e+04
C2H3+C5H8O4=>CO+C2H4+CH2CHO+CH2OHCHO 2.000 3900.00	1.3560e+05
C2H5+C5H8O4=>CO+C2H6+CH2CHO+CH2OHCHO 2.000 6700.00	4.0000e+04
NC3H7+C5H8O4=>CO+CH2CHO+CH2OHCHO+C3H8 2.000 6700.00	2.7000e+04
IC3H7+C5H8O4=>CO+CH2CHO+CH2OHCHO+C3H8 2.000 9900.00	2.7000e+04
C3H5-S+C5H8O4=>CO+CH2CHO+CH2OHCHO+C3H6 2.000 4500.00	5.4000e+04
C3H5-T+C5H8O4=>CO+CH2CHO+CH2OHCHO+C3H6 2.000 4500.00	5.4000e+04
C3H5-A+C5H8O4=>CO+CH2CHO+CH2OHCHO+C3H6 2.000 12800.00	1.0780e+05
C4H5+C5H8O4=>CO+CH2CHO+CH2OHCHO+C4H6 2.000 4500.00	5.4000e+04
C4H71-4+C5H8O4=>CO+CH2CHO+CH2OHCHO+C4H8-1 2.000 6600.00	2.7000e+04

C4H71-3+C5H8O4=>CO+CH2CHO+CH2OHCHO+C4H8-2 2.000        13700.00	6.8000e+04
IC4H7+C5H8O4=>CO+CH2CHO+CH2OHCHO+IC4H8 2.000        13700.00	5.4000e+04
C4H3+C5H8O4=>CO+CH2CHO+CH2OHCHO+C4H4 2.000        5200.00	8.1800e+04
C6H5+C5H8O4=>CO+CH2CHO+CH2OHCHO+C6H6 1.000        2000.00	7.4000e+07
O+C5H8O4=>OH+CO+CH2CHO+CH2OHCHO 2.000        2500.00	4.7000e+06
O2+C5H8O4=>HO2+CO+CH2CHO+CH2OHCHO 2.000        44000.00	3.4000e+06
OH+C5H8O4=>H2O+CO+CH2CHO+CH2OHCHO 1.000        50.00	3.0000e+09
HO2+C5H8O4=>H2O2+CO+CH2CHO+CH2OHCHO 2.000        16000.00	1.6000e+06
CH3O+C5H8O4=>CO+CH3OH+CH2CHO+CH2OHCHO 2.000        1500.00	8.5600e+04
CH2OH+C5H8O4=>CO+CH3OH+CH2CHO+CH2OHCHO 2.000        10200.00	5.6600e+04
HCO+C5H8O4=>CO+CH2O+CH2CHO+CH2OHCHO 2.000        12300.00	2.5200e+05
CH3CO+C5H8O4=>CO+CH3CHO+CH2CHO+CH2OHCHO 2.000        14000.00	2.7000e+05
CH2CHO+C5H8O4=>CO+CH3CHO+CH2CHO+CH2OHCHO 2.000        11500.00	4.6000e+04
C3H3+C5H8O4=>CO+CH2CHO+CH2OHCHO+C3H4-A 2.000        14000.00	5.4000e+04
HCCO+C5H8O4=>CO+CH2CHO+CH2CO+CH2OHCHO 2.000        5200.00	8.5600e+04
CH3O2+C5H8O4=>CO+CH3O2H+CH2CHO+CH2OHCHO 2.000        12600.00	1.5200e+05
C2H5O2+C5H8O4=>CO+C2H5O2H+CH2CHO+CH2OHCHO 2.000        12600.00	1.5200e+05
NC3H7O2+C5H8O4=>CO+CH2CHO+CH2OHCHO+C3H7OOH 2.000        12600.00	1.5200e+05
IC3H7O2+C5H8O4=>CO+CH2CHO+CH2OHCHO+C3H7OOH 2.000        12600.00	1.5200e+05

HCO3+C5H8O4=>CO+CH2CHO+CH2OHCHO+HCO3H	6.8000e+04
2.000 6500.00	
CH3CO3+C5H8O4=>CO+CH2CHO+CH3CO3H+CH2OHCHO	6.8000e+04
2.000 6500.00	
CH3COCH2+C5H8O4=>CO+CH2CHO+CH2OHCHO+CH3COCH3	4.6000e+04
2.000 8000.00	
C6H5O+C5H8O4=>CO+CH2CHO+CH2OHCHO+C6H5OH	5.4000e+04
2.000 12500.00	
C5H7+C5H8O4=>CO+CH2CHO+CH2OHCHO+LC5H8	5.4000e+04
2.000 15000.00	
C7H7+C5H8O4=>CO+CH2CHO+CH2OHCHO+C7H8	2.7000e+04
2.000 16000.00	
CH3C6H4+C5H8O4=>CO+CH2CHO+CH2OHCHO+C7H8	7.4000e+07
1.000 2000.00	
RCRESOLO+C5H8O4=>CO+CH2CHO+CH2OHCHO+CRESOL	5.4000e+04
2.000 12800.00	
C10H7+C5H8O4=>CO+CH2CHO+CH2OHCHO+C10H8	7.4000e+07
1.000 2000.00	
INDENYL+C5H8O4=>CO+CH2CHO+CH2OHCHO+INDENE	2.6000e+04
2.000 16000.00	
C10H6CH3+C5H8O4=>CO+CH2CHO+CH2OHCHO+C10H7CH3	7.4000e+07
1.000 2000.00	
H+C5H8O4=>H2+0.5OH+0.5HCO+0.5CH3CHO+CHOCHO+0.5C2H3CHO	6.0000e+06
2.000 4000.00	
CH3+C5H8O4=>0.5OH+CH4+0.5HCO+0.5CH3CHO+CHOCHO+0.5C2H3CHO	6.0000e+04
2.000 5000.00	
C2H3+C5H8O4=>0.5OH+0.5HCO+C2H4+0.5CH3CHO+CHOCHO+0.5C2H3CHO	1.3560e+05
2.000 3900.00	
C2H5+C5H8O4=>0.5OH+0.5HCO+C2H6+0.5CH3CHO+CHOCHO+0.5C2H3CHO	4.0000e+04
2.000 6700.00	
NC3H7+C5H8O4=>0.5OH+0.5HCO+0.5CH3CHO+CHOCHO+C3H8+0.5C2H3CHO	2.7000e+04
2.000 6700.00	
IC3H7+C5H8O4=>0.5OH+0.5HCO+0.5CH3CHO+CHOCHO+C3H8+0.5C2H3CHO	2.7000e+04
2.000 9900.00	
C3H5-S+C5H8O4=>0.5OH+0.5HCO+0.5CH3CHO+CHOCHO+C3H6+0.5C2H3CHO	5.4000e+04
2.000 4500.00	
C3H5-T+C5H8O4=>0.5OH+0.5HCO+0.5CH3CHO+CHOCHO+C3H6+0.5C2H3CHO	5.4000e+04
2.000 4500.00	

$C_3H_5-A + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + C_3H_6 + 0.5C_2H_3CHO$  1.0780e+05  
 2.000 12800.00

$C_4H_5 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + C_4H_6$  5.4000e+04  
 2.000 4500.00

$C_4H_7-4 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + C_4H_8-1$   
 2.7000e+04 2.000 6600.00

$C_4H_7-3 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + C_4H_8-2$   
 6.8000e+04 2.000 13700.00

$IC_4H_7 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + IC_4H_8$  5.4000e+04  
 2.000 13700.00

$C_4H_3 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + C_4H_4$  8.1800e+04  
 2.000 5200.00

$C_6H_5 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + C_6H_6$  7.4000e+07  
 1.000 2000.00

$O + C_5H_8O_4 \Rightarrow 1.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO$  4.7000e+06  
 2.000 2500.00

$O_2 + C_5H_8O_4 \Rightarrow 0.5OH + HO_2 + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO$  3.4000e+06  
 2.000 44000.00

$OH + C_5H_8O_4 \Rightarrow H_2O + 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO$  3.0000e+09  
 1.000 50.00

$HO_2 + C_5H_8O_4 \Rightarrow 0.5OH + H_2O_2 + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO$  1.6000e+06  
 2.000 16000.00

$CH_3O + C_5H_8O_4 \Rightarrow 0.5OH + CH_3OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO$  8.5600e+04  
 2.000 1500.00

$CH_2OH + C_5H_8O_4 \Rightarrow 0.5OH + CH_3OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO$  5.6600e+04  
 2.000 10200.00

$HCO + C_5H_8O_4 \Rightarrow 0.5OH + CH_2O + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO$  2.5200e+05  
 2.000 12300.00

$CH_3CO + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 1.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO$  2.7000e+05  
 2.000 14000.00

$CH_2CHO + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 1.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO$  4.6000e+04  
 2.000 11500.00

$C_3H_3 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + C_3H_4-A + 0.5C_2H_3CHO$  5.4000e+04  
 2.000 14000.00

$HCCO + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CH_2CO + CHOCHO + 0.5C_2H_3CHO$  8.5600e+04  
 2.000 5200.00

$CH_3O_2 + C_5H_8O_4 \Rightarrow 0.5OH + CH_3O_2H + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO$  1.5200e+05  
 2.000 12600.00

$C_2H_5O_2 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + C_2H_5O_2H + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO$   
 1.5200e+05      2.000      12600.00

$NC_3H_7O_2 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + C_3H_7OOH$   
 1.5200e+05      2.000      12600.00

$IC_3H_7O_2 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + C_3H_7OOH$   
 1.5200e+05      2.000      12600.00

$HCO_3 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + HCO_3H$  6.8000e+04  
 2.000      6500.00

$CH_3CO_3 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CH_3CO_3H + CHOCHO + 0.5C_2H_3CHO$   
 6.8000e+04      2.000      6500.00

$CH_3COCH_2 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + CH_3COCH_3$   
 4.6000e+04      2.000      8000.00

$C_6H_5O + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + C_6H_5OH$  5.4000e+04  
 2.000      12500.00

$C_5H_7 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + LC_5H_8$  5.4000e+04  
 2.000      15000.00

$C_7H_7 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + C_7H_8$  2.7000e+04  
 2.000      16000.00

$CH_3C_6H_4 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + C_7H_8$  7.4000e+07  
 1.000      2000.00

$RCRESOLO + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + CRESOL$   
 5.4000e+04      2.000      12800.00

$C_{10}H_7 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + C_{10}H_8$  7.4000e+07  
 1.000      2000.00

$INDENYL + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + INDENE$   
 2.6000e+04      2.000      16000.00

$C_{10}H_6CH_3 + C_5H_8O_4 \Rightarrow 0.5OH + 0.5HCO + 0.5CH_3CHO + CHOCHO + 0.5C_2H_3CHO + C_{10}H_7CH_3$   
 7.4000e+07      1.000      2000.00

END