

## Supp data 1

**Table 1: Physicochemical properties of pristane (pAmo) and milled (mAmo) amosite particles**

	Size distribution quartiles (25/50/75) ( $\mu\text{m}$ )	Aspect ratio (AR) Length/width	Specific surface area ( $\text{m}^2/\text{g}$ )*	Surface Fe/Si <sup>°</sup> (at. %)	Surface oxidation state <sup>§§</sup> (binding energy, BE)	Leachable Fe in D.I. water ( $\text{Fe}^{3+}+\text{Fe}^{2+}$ ) <sup>§</sup>	Particle-derived free radicals <sup>£</sup>
<b>pAmo</b>	3.0/5.0/9.0	> 3	6	0.89 $\pm$ 0.03	55.8	Negligible	++++
<b>mAmo</b>	0.5/1.0/1.5	> 3 for 37% of mAmo	11	0.91 $\pm$ 0.03	56.6	Negligible	++

<sup>§</sup> Data from Davies et al, Br J. Exp. Path, 1986, 67: 415-430. The AR data were also recently confirmed by Leinardi et al, Int.J. Mol.Sci. 2023, 24, 15145.

\* N<sub>2</sub>-BET adsorption

<sup>°</sup> Measured as ratio between the XPS intensities of the Si2p and Fe3p photolines in Tomatis et al., 2010. Data indicate that there are not significant differences in the amount of iron exposed at the surface of two amosite samples.

<sup>§§</sup> Measured as XPS Fe3p photopeak position in **Tomatis** et al., 2010. Data indicate the presence of iron ions at higher oxidation state onto the mAmo surface, likely due to the oxidation process occurred during sample preparation.

<sup>§</sup> Data from **Graham** et al., Occup.Environ.Med. 1999; 56:606-611

<sup>£</sup> Measured as cleavage of a hydrogen-carbon bond in **Tomatis** et al., 2010. Data indicate that pAmo is a more potent radical generator than mAmo.