

## Preliminary nanoreference values

The table below contains the agreed preliminary nanoreference values (NRV) applicable to the four classes of 'engineered nanoparticles (ENP's)'. The NRV's are meant only to serve as pragmatic guidance values and do not guarantee that exposures lower than the NRV are safe.

Class	Description	Density	NRV (8-hours time-weighted average)	Example
1	Rigid, biopersistent nanofibres which may have asbestos-like effects	-	0,01 fibres/cm <sup>3</sup> (= 10.000 fibres/m <sup>3</sup> )	Single- or multiwalled carbon nanotubes or fibrous metal oxides which may have asbestos-like effects according to the manufacturer
2	Biopersistent, granular nanomaterials within the range of 1 - 100 nm	> 6000 kg/m <sup>3</sup>	20.000 particles/cm <sup>3</sup>	Ag, Au, CeO <sub>2</sub> , CoO, Fe, Fe <sub>x</sub> O <sub>y</sub> , La, Pb, Sb <sub>2</sub> O <sub>5</sub> , SnO <sub>2</sub>
3	Biopersistent, granular and fibrous nanomaterials within the range of 1 - 100 nm	< 6000 kg/m <sup>3</sup>	40.000 particles/cm <sup>3</sup>	Al <sub>2</sub> O <sub>3</sub> , SiO <sub>2</sub> , TiN, TiO <sub>2</sub> , ZnO, nanoclay, Carbon Black, C60, dendrimers, polystyrene nanofibres, without asbestos-like effects as stated explicitly
4	Non-biopersistent granular nanomaterials within the range of 1 - 100 nm	-	Conventional limit	Fats, salt (=NaCl)