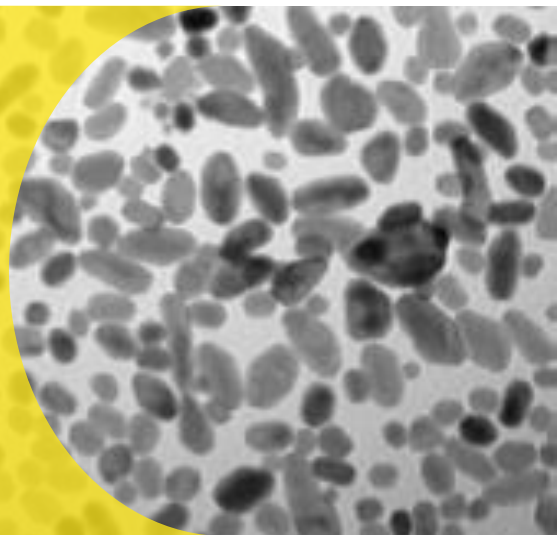




YbF_3

Ytterbium fluoride datasheet



Our offer

We offer YbF₃ nanoparticles to be used as radiopacifying fillers in dental composites. They are available dispersed in a broad range of solvents and resins. Our dispersions contain the smallest YbF₃ nanoparticles on the market and exhibit the highest available solid contents. They are compatible with all dental monomers. YbF₃ nanoparticles can also be used for the manufacturing of 3D printing resins and feedstocks, biomedical implants, adhesives, and optical components. Customized YbF₃ dispersions are available upon request.

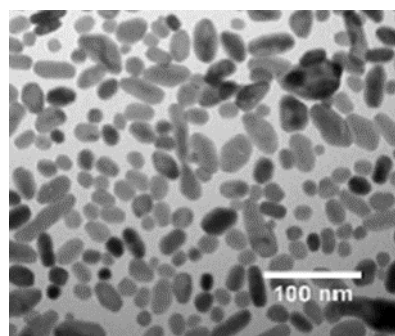
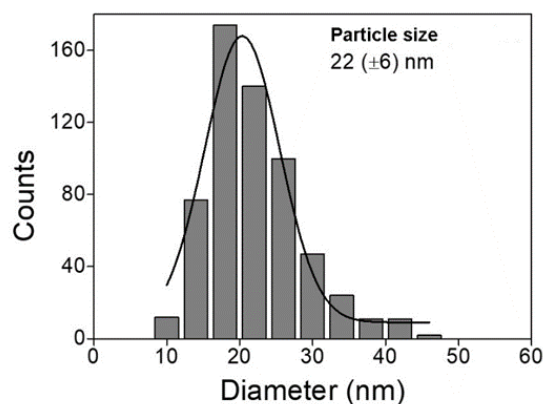
Main benefits

- Smallest YbF₃ nanoparticles on the market
- High translucency of dental composites
- Higher depth of cure
- Low viscosity at high particle loading
- Improved flexural strength
- Highest filler loading

Main properties

Chemical formula	YbF ₃
Crystal structure	Orthorhombic
Average particle size	20 nm (all applications) or 40 nm (non-dental applications)
Density (theoretical)	8.2 g/cm ³
Refractive index (theoretical)	1.53
Dispersion solid content	Up to 70 wt.% depending on dispersion medium
Dispersion medium	Water, acetone, methacrylate-based dental resins and customer specific monomer mixtures
Type of functionalization	Depends on dispersion medium and application requirements
Viscosity (example 1)	YbF ₃ in UDMA (30wt.%): 50 Pa.s (shear rate: 1s ⁻¹)
Viscosity (example 2)	YbF ₃ in TEGDMA (50wt.%): 6.9 Pa.s (shear rate: 1s ⁻¹)

Example of size distribution (20 nm)



Industrial batches (up to 11 kg of dry matter) and samples available - Safety Data Sheet available

Provided data are typical values, they are not contractual.

Revised 02/2023