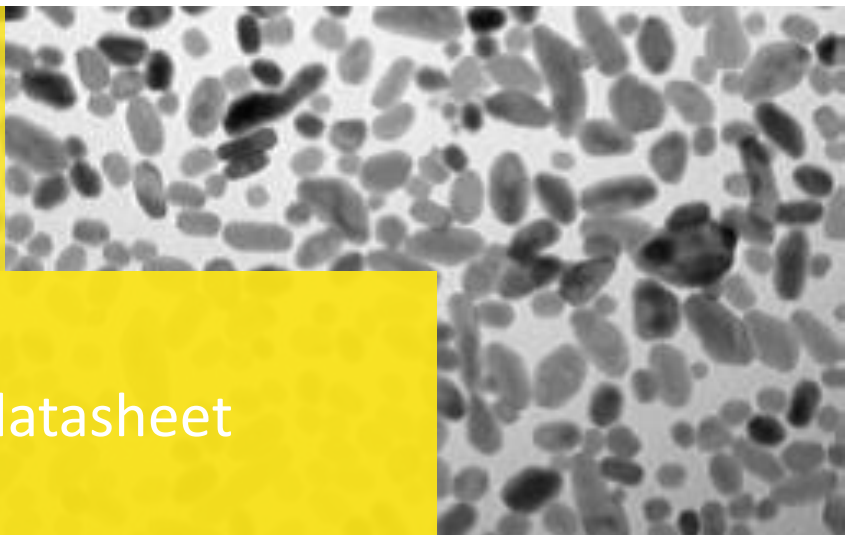




$\text{YbF}_3$

Ytterbium trifluoride datasheet



## Our offer

We offer YbF<sub>3</sub> nanoparticles to be used as radiopacifying fillers in dental composites. They are available dispersed in a variety of solvents and resins. Our dispersions contain the smallest YbF<sub>3</sub> nanoparticles on the market and exhibit the highest available solid contents. They are compatible with all dental monomers. YbF<sub>3</sub> nanoparticles can also be used for the manufacturing of optical components. Customized YbF<sub>3</sub> dispersions are available upon request.

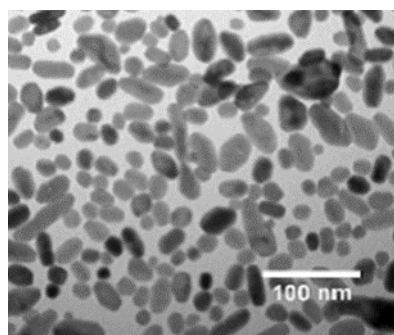
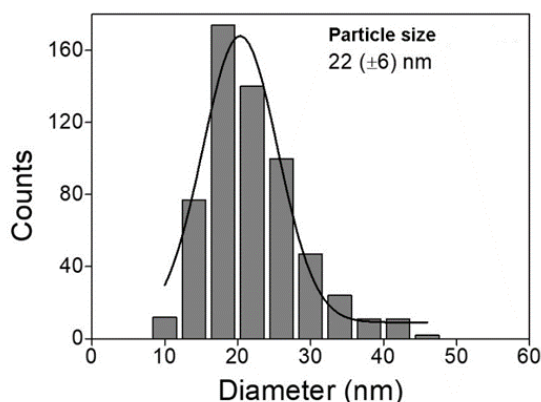
## Main benefits

- High translucency of dental composites
- Higher depth of cure
- Low viscosity at high particle loading
- Improved flexural strength
- Increase in filler concentration becomes possible

## Main properties

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

## Size distribution



Available batch and sample size : 100 g to 10 kg of dry matter - Safety Data Sheet available

Provided data are typical values, they are not contractual