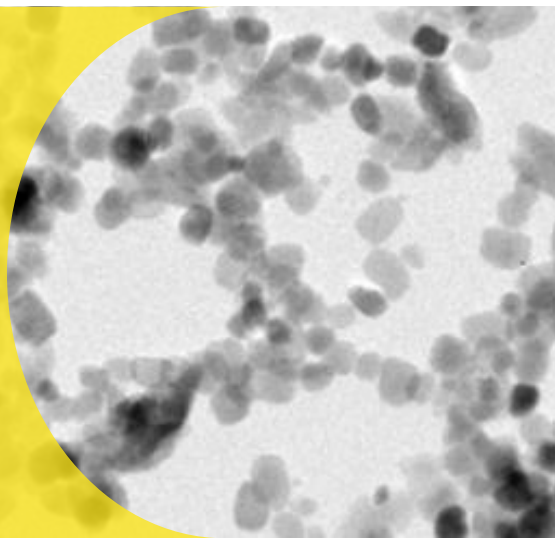




ZrO₂

Zirconia datasheet



Our offer

We offer zirconia nanoparticles dispersed in various media to be used in a wide range of applications. Our nanoparticles can be used as nanofillers in composite materials, for example in dental composites where they bring radiopacity and improve mechanical properties. They are compatible with all dental monomers.

They can be employed in nanostructured inorganic coatings and in composite coatings, where they increase the scratch and wear resistances and the refractive index of optical materials. They can also be applied for example in the areas of ceramic membrane filtration, catalysis and thermal insulation, and as sintering additives.

Main benefits

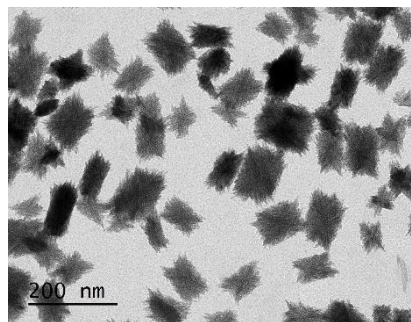
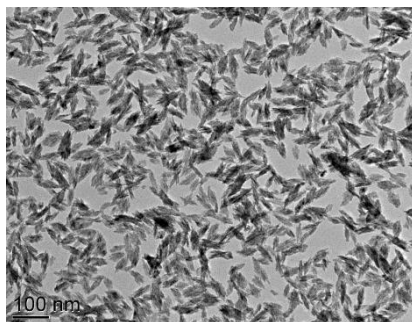
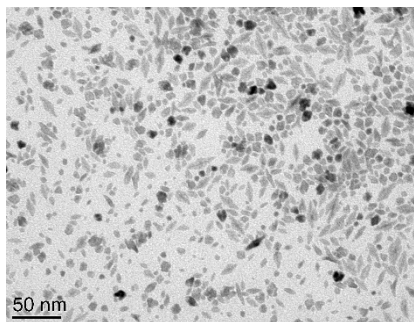
- Smallest nanoparticles on the market
- Variety of sizes and morphologies available
- Low viscosity dispersions
- Absence of agglomerates

Main properties

Chemical formula	ZrO ₂
Crystal structure	Monoclinic or tetragonal
Morphology	Nearly spherical, needle-like, square bundles
Average particle size	6 to 90 nm
Density (theoretical)	5.7 g/cm ³ *
Refractive index	≥ 2.14
Dispersion solid content	Up to 70% depending on size and dispersion medium
Dispersion medium	Water, alcohol, polyol, acetone, MEK, and other selected organic solvents, methacrylates, acrylates, customer specific monomer mixtures
Type of functionalization	Depends on dispersion medium and application requirements

* For monoclinic ZrO₂

Examples of particle morphologies



Industrial batches (up to 8 kg of dry matter depending on the grade) and samples available

Safety Data Sheet available

Provided data are typical values, they are not contractual.

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