

## Nanosilica – Hydroxyethyl methacrylate – Composite

NANOCRYL® D 303 is a 60 wt% dispersion of colloidal silica in hydroxyethyl methacrylate, a mono-functional methacrylate monomer, for the use in dental applications. The silica phase consists of surface-modified, synthetic SiO<sub>2</sub>-nanospheres of very small size (Ø 20 nm), and narrow particle size distribution.

Despite the high SiO<sub>2</sub>-content NANOCRYL® D 303 is transparent, low viscous and shows no sedimentation due to the agglomerate-free dispersion of the nanoparticles in the monomer.

### Technical data (no specification)

Property	Units	Typical Values
Base methacrylate		Hydroxyethyl methacrylate
Appearance		clear, slightly yellow liquid
SiO <sub>2</sub> -content	[wt%]	60
Density (20 °C)	[g/cm <sup>3</sup> ]	1.4
Viscosity (25 °C)	[mPas]	150

### Application

NANOCRYL® D 303 can be used as any common methacrylate. However, the compatibility between NANOCRYL® D 303 and all other components should be tested separately before starting formulation development.

The colloidal silica in NANOCRYL® products tends to agglomerate if the stabilisation is affected by inappropriate formulation components like hydrocarbon solvents (e. g. xylene) or certain performance additives (e. g. several silicones or amines).

### Packaging and Storage

Packaging	5 kg canister, 25 kg pall
Shelf life	6 months in originally sealed containers
Storage	dry and dark, up to 30 °C (86 °F) in sealed containers

### Registration status

The ingredients of NANOCRYL® D 303 are listed in the following chemical inventories:

EINECS/ELINCS, TSCA, NDSL, ENCS, TCCL, PICCS, IECSC, TCSI

Further information is available on request.

## Handling and Storage

NANOCRYL® D 303 is hygroscopic. Therefore, keep container tightly closed when not in use! The product may polymerise under improper storage conditions.

The rules and regulations for the handling and use of chemicals have to be observed. Please refer to the Material Safety Data Sheet for further details.

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