

# NANOPOX® F 440

NANOPOX® F 440 is a high performance, versatile, silica reinforced epoxy resin based on a mixture of bisphenol A and F for the use in fibre composites. The silica phase consists of surface-modified synthetic SiO<sub>2</sub> nanospheres of very small size (average diameter of 20 nm) with a narrow particle size distribution (maximum diameter 50 nm). Despite the high SiO<sub>2</sub> content of 40 wt%, NANOPOX® F 440 has a comparatively low viscosity due to the agglomerate-free colloidal dispersion of the nanoparticles in the resin.

## Technical data (no specification)

| Property                  | Units    | Typical Values  |
|---------------------------|----------|---|
| Base resin                |          | mixture of Bisphenol A and Bisphenol F diglycidyl ether |
| Appearance                |          | opaque liquid   |
| SiO <sub>2</sub> -content | [wt%]    | 40  |
| Density @ 20 °C           | [g/ml]   | 1.4   |
| Viscosity @ 25 °C         | [mPas]   | 45 000  |
| Epoxy equivalent weight   | [g/eq]   | 290   |
| Shelf life                | [months] | 6*  |

\*if stored in the original unopened container

## Processing Instructions

NANOPOX® F 440 can be used as any other Bisphenol A/F diglycidyl ether. However, the colloidal silica in NANOPOX® products tends to agglomerate if the stabilisation is affected by inappropriate formulation components like hydrocarbon solvents (e. g. xylene). Therefore the compatibility between NANOPOX® F 440 and all other formulation components should be tested separately before starting formulation development.

## Handling and Storage

NANOPOX® F 440 should be handled in accordance with good industrial practice. Detailed information is provided in the Material Safety Data Sheet.

Keep container(s) tightly closed when not in use!

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