

NANOPOX® E 470

NANOPOX® E 470 is a high performance, versatile, silica reinforced Bisphenol A based epoxy resin for the use in electrical and electronic. The silica phase consists of surface-modified synthetic SiO₂ nanospheres of very small size (average diameter of 20 nm) with a narrow particle size distribution (maximum diameter 50 nm). Despite the high SiO₂ content of 40 wt%, NANOPOX® E 470 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		Bisphenol A diglycidyl ether
Appearance		opaque liquid
SiO ₂ -content	[wt%]	40
Density @ 20 °C	[g/ml]	1.4
Viscosity @ 25 °C	[mPas]	60 000
Epoxy equivalent weight	[g/eq]	295
Shelf life	[months]	6*

*if stored in the original unopened container

Processing Instructions

NANOPOX® E 470 can be used as any other Bisphenol A 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® E 470 and all other formulation components should be tested separately before starting formulation development.

Handling and Storage

NANOPOX® E 470 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!

NANOPOX® E 470 tends to crystallize at ambient temperatures. The product can be easily re-melted by heating it up to 70 °C for a short period of time.

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