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TECHNICAL DATA SHEET

NP1025

HIGH THERMAL CONDUCTIVITY EPOXY RESIN SYSTEM

Product Description

NP1025 is a two-part thermally conductive epoxy resin system with a low mix viscosity. The mixed system has a long pot life and can be cured at ambient or elevated temperatures. The flexibility of the resin and the very high filler loading make this system ideal for applications where temperature cycling and thermal stresses are encountered. Furthermore, the very low water uptake making this resin suitable for applications where water contact or immersion are required

Typical Uncured Physical Properties

Property	Base	Hardener	Mixed System
Viscosity (mPas)	40000	100	2000-4000
Colour	Grey	Clear	Grey
Specific Gravity	2.24-2.28	0.92-0.94	2.09-2.12
Mix Ratio	18 7.2	1 1	By Weight By Volume

Pot Life	90 Minutes	300 g @ 23°C
Gel Time	6 Hours	300 g @ 23°C
Peak Exotherm	+10°C	300 g @ 23 °C
Complete Cure	24 Hours	300 g @ 23°C

FEATURES

- Very High Thermal Conductivity
- Ambient or Elevated Temperature Dispensing and Curing
- Contains No Halogens and is Non-Toxic
- Low Stress on Components

APPLICATIONS

- Assemblies
- Power Supplies
- Modules
- Drivers

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Typical Cured Properties

Property		Result	Units
Operating Temperature		-40 to +180	°C Continuous (Application & Geometry Dependent)
Shore D Hardness		76	
Electric Strength		15	kV/mm
Thermal Conductivity		1.3	W/mK
Volume Resistivity		10 ^ 14	Ohm.cm
Cure Shrinkage		3	% (volume)
Water Uptake		0.4	% (30 days at 23 °C)
Flammability		To UL 94 V-0 Level @3mm	Not Certified
Deflection Temperature		70	°C
Coefficient of Thermal Expansion*	-30 - +20 °C	30	PPM/°C
	+20 - +70 °C	80	PPM/°C
	+70 - +120 °C	90	PPM/°C
Tensile Strength		28	MPa
% Elongation		4.6	%
Glass transition temperature (Tg)*		60	°C

*Ambient cure conditions

Note: The above technical information and data should be considered representative or typical only and should not be used for specification purposes.

Supply	Details
Twinpacks	Ideal for mixing without the entrapment of air.
Kits	The resin base and hardener are supplied in two separate containers, pre-weighed to facilitate accurate mixing for larger applications.
Bulk 5kg, 10kg, 20kg & 25kg	The NP1025 system is formulated to prevent sedimentation on storage. However, storage at higher ambient temperatures (above 25°C for instance) or for long times, can cause some settlement. It is important that any sediment is redispersed into the bulk resin prior to using the resin. This can be done by stirring with a long spatula.
Shelf Life	The materials should be stored in the original unopened containers under cool dry conditions at temperatures between 10 and 25°C. The shelf life is one year. Opened containers should be resealed.

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Health & Safety

Refer to Product Label and Material Safety Data Sheet for health and safety information before using this product. All Products should be used in accordance with your own COSHH Assessments. For additional health and safety information, call 01373 858234.

Technical Information

The technical information, recommendations and other statements contained in this document are basedupon tests or experience that ALH believes are reliable, but the accuracy or completeness of such information is not guaranteed.

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