

Thermoset 975-1052 Epoxy Encapsulant

Description

LORD Thermoset 975-1052 encapsulant is a two-component epoxy system designed specifically for encapsulating electronic components used in remote sensors and sensing devices. Thermoset 975-1052 encapsulant provides a semi-rigid epoxy system for use in applications where thermal shock is expected.

Features and Benefits

Low Stress – exhibits low shrinkage and stress on components as it cures.

Room Temperature Cure – suitable for curing at room temperature; may be mildly heat cured (43-60°C) to expedite cure.

Low Exotherm – exhibits low exothermic heat rise during room temperature cure, minimizing affect on heat-sensitive components.

Environmentally Resistant – provides excellent resistance to mechanical and thermal shock; retains flexibility even after heat aging.

Application

Mixing – Thoroughly mix Thermoset 975-1052 resin with Thermoset 975-1052 hardener at a 100:74 ratio, by weight. Automatic meter/mix/dispense equipment may be used for high volume production.

Applying – Pour encapsulant directly from mixing container on to application, or apply using automatic meter/mix/dispense equipment.

Curing – Allow material to cure for 24 hours at 25°C. This time-at-temperature profile refers to the time the material should be allowed to cure once it reaches the target temperature. Small masses of Thermoset 975-1052 encapsulant may be mildly heat cured (typically 43-60°C) to expedite the cure. Tests should be conducted to assure that elevated cure temperature does not sufficiently increase the exotherm, adversely affecting the electronic components.

Cleanup – Disposable containers and utensils are recommended when working with epoxies. However, when disposable materials are impractical, uncured encapsulant can be removed by cleaning equipment with solvent. Solvent-cleaned utensils should be thoroughly dried before reuse; any remaining solvent can contaminate the next mixture.

Typical Properties*

	975-1052 Resin	975-1052 Hardener	Mixed
Appearance	Black Liquid	Tan Liquid	Black Liquid
Viscosity, cps @ 25°C	22,000	5,000	20,000
Specific Gravity	1.53-1.63	1.34-1.44	1.53-1.55
Gel Time, min @ 25°C	–	–	35-45
Working Life, min @ 25°C	–	–	15-20

*Data is typical and not to be used for specification purposes.

LORD TECHNICAL DATA

Typical Cured Properties**

Volume Resistivity, ohm-cm @ 25°C ASTM D 257	1 x 10 ¹⁵
Coefficient of Linear Thermal Expansion, ppm/°C ASTM D 696	70
Hardness Shore D, ASTM D 2240	80
Tensile Strength, MPa ASTM D 412	40
Dielectric Strength, kV/mm ASTM D 149	15
Dielectric Constant @ 25°C 1 kHz, ASTM D 150	4.2
Dissipation Factor @ 25°C	0.03

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Shelf Life/Storage

Shelf life of each component is six months from date of manufacture when stored at 25°C in original, unopened container.

Cautionary Information

Before using this or any LORD product, refer to the Material Safety Data Sheet (MSDS) and label for safe use and handling instructions.

For industrial/commercial use only. Must be applied by trained personnel only. Not to be used in household applications. Not for consumer use.

Values stated in this technical data sheet represent typical values as not all tests are run on each lot of material produced. For formalized product specifications for specific product end uses, contact the Customer Support Center.

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