LORD® 975-1052 Epoxy Encapsulant

Technical Data Sheet

LORD® 975-1052 encapsulant is a two-component epoxy system designed specifically for encapsulating electronic components used in remote sensors and sensing devices. LORD 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 LORD 975-1052 A resin with LORD 975-1052 B 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 LORD 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 encapuslant 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.

Shelf Life/Storage:

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

Typical Properties*

	975-1052 A Resin	975-1052 B Hardener	Mixed
Appearance	Black or Gray Liquid	Amber Liquid	Black Liquid
Viscosity, cP @ 25°C	22,000	5000	20,000
Specific Gravity	1.65	1.40	1.54
Gel Time, minutes @ 25°C	–	–	35 - 45
Working Life, minutes @ 25°C	–	–	15 - 20

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

Typical Cured Properties*	
Coefficient of Linear Thermal Expansion, ppm/°C ASTM D 696	70
Hardness Shore D, ASTM D 2240	80
Tensile Strength, MPa (psi) ASTM D 412	40 (5802)
Volume Resistivity, ohm-cm @ 25°C ASTM D 257	1×10^{15}
Dielectric Strength, kV/mm (V/mil) ASTM D 149	15 (381)
Dielectric Constant @ 25°C 1 kHz, ASTM D 150	4.2
Dissipation Factor @ 25°C	0.03

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

Cautionary Information:

Before using this or any Parker LORD product, refer to the Safety Data Sheet (SDS) 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.

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