

LORD® ES-95 Epoxy Encapsulant

Description

LORD® ES-95 encapsulant is a one-component epoxy designed for small volume potting and encapsulation. LORD ES-95 encapsulant can also be used as an adhesive.

Features and Benefits

Convenient – requires no mixing; provides excellent shelf life stability.

Environmentally Resistant – provides excellent resistance to thermal shock and stress fractures.

Fast Cure – cures quickly at 125°C, leaving no pits or voids for a smooth surface.

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

Application

Applying – Before use with dispensing equipment, allow encapsulant to be warmed to room temperature (ideally 20-25°C). Thaw encapsulant by placing the syringe in a vertical (upright) position with dispense tip facing downward in an ambient environment. Depending on container size, product could take up to 24 hours to warm to room temperature.

Apply encapsulant by syringe dispensing equipment or 5-gallon pail pump.

Curing – Allow encapsulant to cure for 30-60 minutes at 125°C. This time-at-temperature profile refers to the time the material should be allowed to cure once it reaches the target temperature. Allowance should be made for oven ramp rates, parts with large thermal mass and other circumstances that may delay material actually reaching the target temperature.

Typical Properties*

Uncured

Appearance	Black Paste
Viscosity, cps @ 25°C	75,000
Specific Gravity	1.33
Gel Time, min @ 125°C	7
Working Life, wk @ 25°C	6

Cured

Volume Resistivity, ohm-cm @ 25°C	>1 x 10 ¹⁴
Thermal Conductivity, W/mK	0.33
Coefficient of Linear Thermal Expansion, ppm/°C	
alpha 1	60
alpha 2	150
Glass Transition Temperature (Tg), °C	115
by TMA	
Hardness	88
Shore D	
Tensile Strength, MPa	40.7
ASTM D 638	

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

LORD TECHNICAL DATA

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. Do not use ketone or alcohol solvents which may cause polymerization. Solvent-cleaned utensils should be thoroughly dried before reuse; any remaining solvent can contaminate the next mixture.

Shelf Life/Storage

Shelf life is six months from date of manufacture when stored at 4°C or below in original, unopened container. Do not store containers outdoors or in non-ventilated exterior structures. Store product away from heat sources such as ovens or hot plates. Elevated storage temperatures will shorten product's shelf life.

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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