

Thermoset MA-420 Epoxy Adhesive

Description

LORD Thermoset MA-420 adhesive is a one-component epoxy adhesive that provides snap cure for high-speed printed circuit board assembly. Thermoset MA-420 adhesive can be used for high-speed dispensing, screen and stencil printing without sacrificing performance.

Features and Benefits

Application Diversity – allows high-speed, accurate syringe dispensing at speeds in excess of 50,000 dots per hour; can be used with time/pressure, positive displacement, linear dispense heads or jetting; superior dot profile and high dot aspect ratio are ideal for screen or stencil printing.

Fast Cure – rapidly cures at 150°C and 120°C.

High Green Strength – maintains excellent tack during component placement, preventing skewing and misregistrations of components.

Non-Sag – unique rheology eliminates stringing, slumping or tailing, providing consistent high dot profile.

Reworkability – easily removed with isopropyl alcohol; low modulus at elevated temperatures allows material to be easily repaired.

Application

Applying – Before using, allow adhesive to be warmed to room temperature (ideally 20-25°C). If material is in syringe, place syringe in a vertical (upright) position with dispense tip facing downward in an ambient environment. Consult handling instructions** for specific guidelines.

***Handling instructions are available on LORD.com*

Typical Properties*

Uncured

Appearance	Red Paste
Viscosity, cps @ 25°C Brookfield 2HB Spindle CP52, 0.1 rpm	2,100,000
Specific Gravity	1.33

Cured

Volume Resistivity, ohm-cm	9×10^{15}
Coefficient of Linear Thermal Expansion, ppm/°C	
alpha 1	45
alpha 2	140
Glass Transition Temperature (Tg), °C by TMA	70
Tensile Shear Strength, MPa	>13.8
Storage Modulus, GPa @ 1 kHz by TMA	2.3
Dielectric Strength, V/mil	1379
Dielectric Constant 1 MHz	4.6
Dissipation Factor 1 MHz	0.03

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

LORD TECHNICAL DATA

If applying by syringe, mount syringe onto the dispensing equipment that has been thoroughly cleaned and purge adhesive through the system until an unbroken flow of material is extruded.

If applying by printing method, initially apply a minimal amount of material in material reservoir, then replenish as needed.

Curing – Allow adhesive to cure for 60-90 seconds at 150°C, or for 3 minutes at 120°C.

Cleanup – Remove uncured adhesive using common organic solvents such as isopropyl alcohol.

Shelf Life/Storage

Shelf life is nine months from date of manufacture when stored at 0-25°C in original, unopened container. Syringe must be maintained in vertical (upright) position with the dispense tip facing down. Do not store syringe on its side (horizontally).

Cautionary Information

Before using this or any 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.

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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