

LORD® 360 Epoxy Adhesive

Description

LORD® 360 adhesive is an equal-mix, two-component epoxy adhesive system used in applications requiring rapid cure at room temperature.

Features and Benefits

Easy to Use – prepackaged kits include resin and hardener in the proper ratio, reducing material waste and increasing productivity.

Versatile – provides excellent adhesion to scuffed SMC, FRP, wood and other plastics; reaches handling strength in approximately 5 minutes at room temperature.

Environmentally Friendly – contains no solvent, nonflammable and virtually odorless.

Environmentally Resistant – resists high humidity, water, salt spray and temperature extremes.

Minimal Sag – provides minimal sag when applied on vertical or overhead surfaces, allowing for greater process flexibility.

Application

Surface Preparation – Remove soil, grease, oil, fingerprints, dust, mold release agents, rust and other contaminants from the surfaces to be bonded by solvent degreasing or alkaline cleaning.

On metal surfaces which are free of oxidation, use an isopropyl alcohol wipe. If necessary, use an abrasive material to remove tarnish. Always follow abrasion by a second cleaning to ensure removal of loose particles.

Handle prepared surfaces carefully to avoid contamination. Assemble as soon as possible.

Mixing – Thoroughly mix the proper amount of resin and hardener until uniform in color and consistency. Be careful not to whip excessive air into the adhesive system. Handheld cartridges will automatically dispense the correct volumetric ratio of each component.

Heat buildup due to an exothermic reaction between the two components will shorten the working time of the adhesive. Mixing smaller quantities will minimize heat buildup. Do not use any adhesive that has begun to cure.

Typical Properties*

	360-A Resin	360-B Hardener
Appearance	Tan to Light Brown Paste	Light Gray to Tan Paste
Viscosity, cP @ 77°F (25°C) Brookfield HBF Helipath, 5 rpm	90,000-180,000	40,000-180,000
Density		
lb/gal	12.0-13.5	8.5-9.5
(kg/m ³)	(1438-1618)	(1019-1138)
Flash Point (Closed Cup), °F (°C)	>200 (>93)	>200 (>93)

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

LORD TECHNICAL DATA

Applying – Apply the mixed adhesive to bond surfaces using automatic meter/mix/dispense equipment, hand-held cartridges or any convenient tool such as a stiff brush, spatula or trowel. For general use, a film thickness of approximately 0.02-0.03 in (0.51-0.76 mm) is recommended. To control bondline thickness, a small amount of solid glass beads can be added into the mixed adhesive.

Join the parts in such a way as to avoid entrapped air. Apply only enough pressure to ensure good wetting of the adhesive on both surfaces. Squeezing a little adhesive out at the edges is usually a sign of proper assembly. It is not necessary to clamp the assembly unless movement during adhesive cure is likely.

Maximum adhesion will occur only with parts which mate well without the need for excessive clamping pressure during cure. Excessive clamping may squeeze too much adhesive from the bond area which can result in a poor bond.

Curing – LORD 360 adhesive will cure to full strength in approximately 24 hours, provided that the adhesive, substrates and ambient temperature are 65°F (38°C) or higher.

Higher temperatures will provide faster cure times; however, the bondline temperature should not exceed 325°F (162°C). When heated at 180°F (82°C), full cure strength can be obtained in 20-30 minutes; when heated at 115°F (46°C), full cure strength can be obtained in 2-4 hours. Elevated temperature cure produces the highest bond strengths and impact resistance. Firm recommendations of cure times and temperatures depend on material composition and heating methods.

Once the adhesive has cured, it can be filed, sanded, machined or otherwise handled in the same way as a light metal. Paint, lacquers, enamels and other coatings can be applied to cured adhesive.

Cleanup – Clean excess adhesive on the bonded assembly, as well as the equipment, prior to the adhesive cure with hot water and detergent or an organic solvent such as ketones. Once adhesive has cured, heat the adhesive to 400°F (204°C) or above to soften the cured adhesive. This allows the parts to be separated and the adhesive to be more easily removed. Some success may be achieved with commercial epoxy strippers.

Shelf Life/Storage

Shelf life is two years from date of manufacture when stored at 70-80°F (21-27°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.

LORD TECHNICAL DATA

Typical Properties* of Resin Mixed with Hardener

Mix Ratio by Volume, Resin to Hardener	1:1
Solids Content, %	100
Working Time, min @ 75°F (24°C) 54 g mass	2-4
Time to Handling Strength, min @ 65-100°F (18-38°C)	5-10
Mixed Appearance	Tan Paste
Cured Appearance	Tan

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LORD TECHNICAL DATA

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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