



363

Two Component,

Modified Epoxy Adhesive

Description

Lord® 363 is a two component, fast set, modified epoxy adhesive.

Features and Benefits

Easy-to-Use Packaging - available in Lord-Pak™ dispensing systems, reducing material waste and increasing productivity.

Self-Leveling - flows into hard to reach places and is excellent for bonding parts which have tight tolerances.

Versatile - provides excellent adhesion to scuffed SMC, FRP, wood and other plastics.

Surface Preparation

Remove soil, grease, oil, fingerprints, dust, mold release agents, rust and other contaminants before applying Lord 363 adhesive.

In most cases, metal substrates which are free of oxidation need only an isopropyl alcohol wipe. Use an abrasive material to remove tarnish. Abrasion will also increase the substrate surface area and provide sites for physical bonding. Always follow abrasion by a second cleaning to ensure removal of loose particles.

Typical Properties* of Uncured Lord 363 Adhesive

	Resin - A	Hardener - B	Mixed
Appearance	Clear	Light Amber	Clear Amber
Viscosity, cP @ 25°C (77°F) Brookfield	7,000-11,000 HAT T-Bar @ 10rpm	10,000-16,000 HAT T-Bar @ 10rpm	8,000-12,000
Density lb/gal kg/m ³	9.67 1159	9.5 1138	-- --
Flash Point (closed cup)	>93°C (>200°F)	>93°C (>200°F)	>93°C (>200°F)
Percent Solids	100%	100%	100%
Working Time @ 25°C (77°F)	--	--	3 - 5 minutes
Full Properties	--	--	4 - 6 hours
Mix Ratio by Volume	1	1	--
Shelf Life from date of shipment at 25°C (77°F), unopened container	1 year	1 year	--

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

Mixing

Non-Automated

Measure each component to meet the mix ratio requirements. Thoroughly mix the components until uniform in color and consistency. Be careful not to whip excessive air into the adhesive.

Heat buildup due to an exothermic reaction between the two components will shorten the working time of the adhesive. Mixing smaller quantities or spreading the mixture over a large substrate area minimizes heat buildup. Do not use any adhesive that has begun to cure.

Automated

Lord 363 adhesive is packaged in Lord-Pak cartridge systems for convenient, automated mixing and application. Lord-Pak systems eliminate the waste involved in hand mixing and application without the capital investment of meter/mix/dispense equipment.

If the particular adhesive usage justifies the investment of M/M/D equipment, use positive displacement equipment. Consult your equipment supplier for details.

Application

Apply the mixed adhesive by spreading it on one or both of the substrates to be bonded using any convenient tool such as a stiff brush, spatula, or trowel. A paper cone can be used to apply the adhesive in a continuous bead. Because the adhesive is self-leveling, it may be difficult to control the bondline thickness; consequently, it is not recommended for applications which require gap filling. By adding a small amount of solid glass beads into the mixed adhesive, adhesive squeeze-out is minimized.

Join the part in such a way as to avoid entrapped air. Apply only enough pressure to ensure good wetting of the adhesive on both substrates. 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 setup 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 poor bond values.

Values stated in this bulletin 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 Service Department.

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Curing

Higher temperatures will provide faster cure rates; however, the bondline temperature should not exceed 162°C (325°F). Elevated temperature cure produces the highest bond strengths and impact resistance. Firm recommendations of cure times and temperatures are difficult to estimate because heat transmission varies according to material composition and heating methods.

At room temperature, the adhesive will cure fully in approximately 4 - 6 hours with handling strength in approximately 15 - 30 minutes, provided that the adhesive, substrates and ambient temperature are 18°C - 38°C (65°F - 100°F).

Storage

For maximum shelf life, ship and store Lord 363 adhesive in the original container at 4°C - 27°C (40°F - 80°F).

Clean Up

Uncured Adhesive

Clean up excess adhesive on the bonded assembly, as well as mixing and application equipment, before the adhesive sets up. Use hot water and detergent, or an organic solvent; ketones have been shown to work best.

Cured Adhesive

Removing cured Lord 363 adhesive is difficult because of its resistance to chemicals, solvents, and cleaning agents. Heat the adhesive to 204°C (400°F) or greater to soften the 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.

Subsequent Processing

After the adhesive has been cured, it may be filed, sanded, machined or otherwise handled in the same way as a light metal. Paints, lacquers, enamels, and other coatings may be applied without danger of solvent attack.

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.

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