LORD TECHNICAL DATA

LORD® 7545 Urethane Adhesive

Description

LORD® 7545 adhesive is an equal-mix, two-component urethane adhesive system used to bond FRP, SMC and other plastics with little surface preparation. This adhesive also bonds primed metals and various combinations of dissimilar substrates. LORD 7545 adhesive system is available in a range of working times to accommodate a wide variety of process requirements.

Features and Benefits

Durable – demonstrates high strength and excellent durability for structural applications.

Non-Flammable – exceeds U.S. DOT requirements for non-flammability and does not require explosion-proof equipment.

Suitable Appearance – off-white color of cured adhesive provides an acceptable appearance when non-painted or visible.

Environmentally Recommended – does not contain ozone depleting chemicals.

Environmentally Resistant – resists weathering, humidity and salt spray.

Chemically Resistant – solvent resistant when cured. Painting and most cleaning processes do not affect bond strength.

Non-Sag – remains in position when applied on vertical or overhead surfaces, allowing for greater process flexibility.

Application

Surface Preparation – Surfaces should be free of grease, dirt and other contaminants. For plastics, clean the surface with a dry rag wipe or a rag dampened with solvent. For metals, prime or grit blast the surface, then solvent wash for optimum bond performance.

Mixing – Mix LORD 7545-A resin with the appropriate curative at a 1:1 ratio, by volume. Handheld cartridges will automatically dispense the correct volumetric ratio of each component. Once mixed, the adhesive cures rapidly.

Typical Properties*

	7545-A Resin	7545-G Curative	7545-B Curative	7545-C Curative	7545-D Curative	7545-E Curative	7545-F Curative
Appearance	Brown Paste	Black Paste	Off-white or Black Paste	Off-white Paste	Off-white or Black Paste	Off-white Paste	Off-white Paste
Viscosity, cP @ 77°F (25°C) Brookfield	25,000-70,000	230,000-650,000	230,000-650,000	230,000-650,000	230,000-650,000	230,000-650,000	230,000-650,000
Density lb/gal	12.5-12.8	10.8-11.2	10.8-11.2	10.8-11.2	10.6-11.0	10.6-11.0	10.5-11.1
(kg/m³)	(1498-1534)	(1294-1342)	(1294-1342)	(1294-1342)	(1270-1318)	(1270-1318)	(1258-1330)
Flash Point, °F (°C) (Closed Cup)	>200 (>93)	>200 (>93)	>200 (>93)	>200 (>93)	>200 (>93)	>200 (>93)	>200 (>93)

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

Applying – Apply adhesive using handheld cartridges or automatic meter/mix/dispense equipment.

- Handheld Cartridges
  1. Load the cartridge into the applicator gun and remove the end caps.
  2. Level the plungers by expelling a small amount of adhesive to ensure both sides are level.
  3. Attach mixing tip and expel a mixer's length of adhesive.
  4. Apply adhesive to substrate and mate the parts within the working time of the adhesive. Clamp in position until adhesive reaches handling strength.
- Meter/Mix/Dispense Equipment
  Contact your LORD representative if assistance is needed using this equipment.

For optimum adhesion, bondline thickness of LORD 7545 adhesive should be 10-40 mil (254-1016 micron). However, large gaps may be filled where mating surfaces are irregular.

Curing – LORD 7545 adhesive will cure to full strength in 24 hours at 75°F (24°C), depending on the curative used. Cure rate can be accelerated by applying modest heat (temperatures up to 250°F [121°C]).

Cleanup – Clean equipment and tools prior to the adhesive cure with organic solvents such as acetone or methyl ethyl ketone (MEK). Do not use alcohol. Once adhesive is cured, heat the adhesive to 300°F (149°C) or above 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 adhesive strippers.

Shelf Life/Storage

Shelf life is six months from date of shipment when stored in a clean, dry environment at 65-85°F (18-30°C) in original, unopened container.

After opening, protect adhesive from excessive exposure to moisture by installing desiccant cartridges and/or using dry nitrogen as an inert cover.

Typical Properties* of Resin Mixed with Curative

	7545-A/G	7545-A/B	7545-A/C	7545-A/D	7545-A/E	7545-A/F
Mix Ratio, Resin to Curative						
by Volume	1:1	1:1	1:1	1:1	1:1	1:1
by Weight	1:0.87	1:0.87	1:0.87	1:0.85	1:0.85	1:0.85
Solids Content, %						
by Weight	100	100	100	100	100	100
Working Time, min						
@ 75°F (24°C)	1.5	3-5	6-8	11-18	22-38	45-65
Purge Time, min						
@ 75°F (24°C)	1.5	3	7	15	30	45
Time to Handling Strength						
@ 75°F (24°C)	10 min	30 min	60 min	90 min	2-3 hr	4-5 hr

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RUDOLPH BROS. & CO
1-800-375-0605
Option 8 for 24/7 Service
www.rudolphbros.com
rbcsupport@rudbro.com

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.

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