LORD® 606 ADHESIVE WITH LORD ACCELERATOR 6GB

Technical Data Sheet

LORD® 606 adhesive when cured with LORD Accelerator 6GB creates a fast-setting adhesive system that will bond composites including DCPD (dicyclopentadiene) resin and modified DCPD resin based FRP (fiber reinforced plastic). This mixed adhesive can also cross-bond composites to many metals and plastics.

LORD 606 adhesive in combination with LORD Accelerator 6GB utilizes a unique patented technology to create exceptionally strong bonds with excellent surface cure and minimal surface preparation.

LORD Accelerator 6GB allows precise control of the adhesive bondline thickness due to its content of glass beads. For further detailed information, refer to applicable data sheet.

Features and Benefits

Versatile: bonds difficult-to-bond composites, such as DCPD based FRP, and a wide range of metals with minimal surface preparation.

Environmentally Resistant: resists dilute acids, alkalis, solvents, water immersion, moisture and weathering.

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. Some surfaces may require abrading for optimum performance.

Mixing: Mix LORD 606 adhesive with the proper amount of LORD Accelerator 6GB. Handheld cartridges will automatically dispense the correct volumetric ratio of each component. Even color distribution visually indicates a thorough mix. Once mixed, the adhesive cures rapidly.

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 material 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 Parker Lord representative if assistance is needed using this equipment.

Typical Properties*

Appearance	White to Off-white Paste
Viscosity, cP	100,000 - 300,000
Density lb/gal (kg/m^3)	 8.7 - 9.7 (1042 - 1162)
Flash Point, °F (°C)	59 (15)

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

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Curing: Cure begins immediately once adhesive and accelerator are mixed. Handling strength is achieved within 20-24 minutes. Complete cure requires 8-24 hours depending on temperature and bondline thickness. Mating surfaces must be held in contact during the entire cure period. Adhesive will cure to a tack-free surface.

Cleanup: Clean equipment and tools prior to the adhesive cure with solvents such as isopropyl alcohol, acetone or methyl ethyl ketone (MEK). Once adhesive is cured, heat the adhesive to 400°F (204°C) or above to soften the adhesive. This allows the parts to be separated and the adhesive to be more easily removed.

Shelf Life/Storage

Shelf life is six months when stored below 80°F (27°C) in original, unopened container. Storage temperatures of 40-50°F (4-10°C) are recommended. If stored cold, allow product to return to room temperature before using. Protect from exposure to direct sunlight.

LORD 606 adhesive is flammable. Do not store or use near heat, sparks or open flame.

Cautionary Information

Before using this or any Parker 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.

Typical Properties* of Adhesive Mixed with Recommended Accelerator

Mix Ratio, Adhesive to Accelerator by Weight by Volume	 7.3:1 10:1
Solids Content, %	100
Working Time, minutes @ 75°F (24°C)	4 - 6
Time to Handling Strength, minutes @ 75°F (24°C) Time to develop 100 psi	16 - 24
Mixed Appearance	Grey Paste
Cured Appearance	White to Grey

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

Typical Cured Properties*

Elongation, % ASTM D882-83A, modified	12
Glass Transition Temperature (Tg), °F (°C) ASTM E1640-99, by DMA	225 (107)

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Bond Performance**

Substrates	Aluminum to Aluminum	Galvanized Steel to Galvanized Steel	ABS to ABS	FRP to FRP	FRP to ABS
Lap Shear @ Room Temperature, psi (MPa)	2776 (19.1)	2063 (14.2)	595 (4.1)	1106 (7.6)	440 (3.0)
Failure Mode	75C, 25A	C	SB	FT	SB
Lap Shear @ Hot Strength [180°F (82°C)], psi (MPa)	1468 (10.1)	1320 (9.1)	–	970 (6.7)	–
Failure Mode	70C, 30A	C	–	C/FT	–
Lap Shear after 14 days @ 100°F (38°C), 100% RH, psi (MPa)	–	–	430 (2.96)	–	–
Failure Mode	–	–	SB	C	–

Substrate	Surface Treatment
Aluminum	IPA Wipe
Galvanized Steel	–
Acrylonitrile Butadiene Styrene (ABS)	–
Fiberglass (FRP)	Dry Rag Wipe

Bonded Parameters	Bond Area	Film Thickness	Cure	Mix Ratio
Metal Lap Shears	1.0" x 0.5"	0.010"	24 hr @ RT	10:1 by Volume
FRP Lap Shears	1.0" x 1.0"	0.030"	24 hr @ RT	10:1 by Volume

Failure Mode Definition	Abbreviation
Adhesive Failure	A
Cohesive Failure	C
Fiber Tear	FT
Stock Break	SB

**Bond performance data was obtained using LORD 606 adhesive/Accelerator 6GB. Please contact Parker Lord regarding the use and/or performance of using other accelerator combinations.

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