LORD® 810 Low Read-Through (LRT) Acrylic Adhesive with LORD Accelerator 20GB

Technical Data Sheet

LORD® 810 Low Read-Through (LRT) acrylic adhesive when cured with LORD Accelerator 20GB creates a flexible adhesive system for bonding ACM (Aluminum Composite Material); metals such as aluminum, galvanized steel and CRS; and engineered plastics such as PC-ABS. LORD 810 adhesive in combination with LORD Accelerator 20GB delivers fast cure speed and strong bonding with minimal bondline read-through (BLRT).

LORD Accelerator 20GB allows precise control of the adhesive bondline thickness due to its content of glass beads. For further detailed information, refer to the LORD Accelerator 20GB data sheet.

Features and Benefits:

Aesthetics – bonds thin and flexible substrates with little to no bondline read-through.

Convenient – requires little or no substrate preparation for bonding metals and plastics.

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

Temperature Resistant – performs at temperatures from -40°F to +300°F (-40°C to +149°C).

Note: Based on test results, LORD 810/20GB adhesive system exhibits post bake/powder coating temperature resistance up to 400°F (204°C) for 90 minutes. Customer specific substrates should always be evaluated for specific application performance.

Environmentally Resistant – resists dilute acids, alkalis, solvents, greases, oils and moisture; provides excellent resistance to indirect UV exposure and weathering.

Application:

Surface Preparation – Remove grease, loose contamination or poorly adhering oxides from metal surfaces. Normal amounts of mill oils and drawing compounds usually do not present a problem in adhesion. Most plastics require a simple cleaning before bonding. Some may require abrading for optimum performance.

Mixing – Mix LORD 810 adhesive with LORD Accelerator 20GB at a ratio of 2:1, adhesive to accelerator, by volume. Even color distribution visually indicates a thorough mix. Once mixed, the adhesive system cures rapidly.

Applying – Apply the mixed adhesive to bond surfaces using a handheld cartridge or automatic meter/mix/dispense equipment. Contact your Parker Lord representative if assistance is needed using this equipment.

Recommended bondline thickness is 10 mil (0.25 mm) for optimal bonding performance and less than 20 mil (0.50 mm) for minimal bondline read-through.

Curing – Initial cure (90% cure strength) is achieved after 30 minutes at room temperature [77°F (25°C)].Complete cure requires 24 hours at room temperature. Mating surfaces must be held in contact during the entire curing process.

Cure rate can be accelerated by applying modest heat [<150°F (<66°C)]. Customer should evaluate adhesive strength and quality through a functional trail of their intended application process. Consult with Parker Lord application engineer for recommended maximum temperature dependent on chosen adhesive cure speed.

Typical Properties*	
Appearance	Black Paste
Viscosity, cP @ 77°F (25°C) Brookfield	40,000 - 130,000
Density lb/gal (kg/m^3)	 7.8 - 8.1 (935 - 970)
Flash Point, °F (°C)	59 (15)

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

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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 one year when stored below 77°F (25°C) in original, unopened container. Storage temperatures of 40-60°F (4-15°C) are recommended. If stored cold, allow product to return to room temperature before using. Protect from exposure to direct sunlight.

After dispensing product from cartridge, remove the mixing tip immediately and install supplied cartridge plugs to avoid cured adhesive from plugging cartridge.

LORD 810 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	1.1:1
by Volume	2:1
Working Time, minutes @ 70°F (21°C)	8-12
Time to Handling Strength, minutes @ 70°F (21°C)	20-25
Mixed Appearance	Dark Grey Paste
Cured Appearance	Dark Grey

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

Typical Cured Properties**

Hardness Shore D	40
Tensile Strength at Break, psi (MPa)	841 (5.8)
Elongation, %	190
Glass Transition Temperature (Tg), °F (°C)	109 (43)

**Data obtained using LORD 810 adhesive/Accelerator 20GB cured for 24 hours at room temperature. Data is typical and not to be used for specification purposes.

Typical Post-Baked Properties†

Hardness Shore D	69
Tensile Strength at Break, psi (MPa)	2088 (14.4)
Elongation, %	22
Glass Transition Temperature (Tg), °F (°C)	136 (58)

† Data obtained using LORD 810 adhesive/Accelerator 20GB cured for 24 hours at room temperature then baked at 140°F (60°C) for 500 hours. Data is typical and not to be used for specification purposes.

OD DS4190 01/23 Rev.8

Parker Lord
Engineered Materials Group

111 LORD Drive
Cary, NC 27511-7923
USA

phone +1 877 275 5673

www.Parker.com/APS