

LORD® 5801S LOW VISCOSITY ACRYLIC ADHESIVE WITH LORD ACCELERATOR 61

Technical Data Sheet

LORD® 5801S acrylic adhesive in combination with LORD Accelerator 61 is a low viscosity adhesive system that can be used to replace welding, brazing, riveting and other mechanical fastening methods. This adhesive performs particularly well in low-temperature environments and applications that are subject to high strength.

LORD 5801S adhesive, when mixed with LORD Accelerator 61, creates an adhesive system that bonds a wide variety of prepared or unprepared metals and some engineered plastics. This adhesive system is specifically formulated to provide high strength in a room-temperature curing adhesive.

LORD Accelerator 61 contains a photo initiator that allows the use of UV or visible light to remove surface tack.

Features and Benefits

Versatile: bonds a wide range of unprepared metals with minimal substrate preparation, as well as polymer composite substrates such as FRP.

Durable: provides high strength for structural bonding applications.

UV Fluorescence: contains a UV indicator that allows use of a black light to detect adhesive application.

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

Low Viscosity: allows adhesive to wick into narrow spaces and flow easily.

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

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 5801S adhesive with the proper amount of LORD Accelerator 61. Handheld cartridges and meter/mix/dispense equipment 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.

Do not re-expose adhesive to air once parts are mated. Mated parts should be repositioned by sliding to achieve proper alignment.

- Meter/Mix/Dispense Equipment
Contact your Parker Lord representative if assistance is needed using this equipment.

Curing: Cure begins immediately once adhesive and accelerator are mixed. Tack-free surface can be achieved using UV or visible light. Wavelength, energy density and distance will impact exposure time. 1000 psi handling strength is achieved on aluminum lap shears in <10 minutes. Complete cure requires 3 hours at room temperature. Mating surfaces must be held in contact during the entire curing process.

Typical Properties*

	5801S	Accelerator 61
Appearance	Amber Liquid	Off-white Liquid
Viscosity, cP @ 77°F (25°C) Brookfield	40 - 95	4000 - 16,000
Density lb/gal (kg/m ³)	7.90 - 8.16 (947 - 978)	9.18 - 9.43 (1100 - 1130)
Flash Point, °F (°C)	52 (11)	≥201 (≥93)

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

Typical Properties* of Adhesive Mixed with Accelerator

Mix Ratio by Volume, Adhesive to Accelerator	10:1
Solids Content, %	100
Working Time, minutes @ 75°F (24°C)	1-2
Time to Handling Strength, minutes @ 75°F (24°C) 500 psi Shear	<5.5
Full Cure Time, hours @ 75°F (24°C)	3**
Mixed Appearance	Amber Liquid

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

**Reaches 90% of its full strength after 1 hour.

Typical Cured Properties*

Hardness Shore D	41
Tensile Strength at Break, psi (MPa) ISO 527	1500 (10.3)
Elongation, % ISO 527	40
Glass Transition Temperature (Tg), °F (°C) ASTM E1640-99, by DMA	198 (92)

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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 of each component is six months when stored in original, unopened container. For LORD 5801S adhesive, storage temperatures of 59-77°F (15-25°C) are recommended. For LORD Accelerator 61, storage temperatures of 40-50°F (4-10°C) are recommended. Protect from exposure to direct sunlight.

If stored cold, allow component to return to room temperature before using. LORD 5801S adhesive may crystallize if stored at cooler temperatures. If crystals appear, allow adhesive to return to room temperature, letting crystals melt before mixing.

LORD 5801S 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.

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