

LORD® 521 Acrylic Adhesive

with LORD Accelerator 4, 17 or 19

Description

LORD® 521 acrylic adhesive when cured with LORD Accelerator 4, 17 or 19 creates a semi-flexible adhesive system that will bond a wide variety of plastics and prepared metals.

LORD 521 acrylic adhesive can be mixed with either LORD Accelerator 4, LORD Accelerator 17 or LORD Accelerator 19. LORD Accelerator 4 is a no-mix accelerator applied to the substrate before the acrylic adhesive. LORD Accelerators 17 and 19 must be mixed into the acrylic adhesive prior to application. LORD Accelerator 19 is available in off-white or black. For further detailed information on LORD Accelerator 4, LORD Accelerator 17 and LORD Accelerator 19, refer to the applicable data sheet.

Features and Benefits

Versatile – bonds a wide range of substrates with minimal surface preparation.; can be used with both Mix-In and No-Mix accelerators.

Convenient – provides working time of 20-30 minutes, suitable for large parts, long bondlines and part repositioning.

Room Temperature Cure – develops a high strength bond in less than one hour at room temperature; requires no ovens or other heat sources for curing.

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

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.

Typical Properties*

Appearance	Amber Paste
Viscosity, cP @ 77°F (25°C) Brookfield HBT Spindle 3, 10 rpm	20,000-70,000
Density	
lb/gal	8.1-8.6
(kg/m ³)	(971-1031)
Flash Point (Closed Cup), °F (°C)	37 (3)

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

LORD TECHNICAL DATA

Mixing

- No-Mix Accelerator
LORD 521 acrylic adhesive and LORD Accelerator 4 are not mixed prior to application.
- Mix-In Accelerator
Mix LORD 521 acrylic adhesive with the proper amount of LORD Accelerator 17 or 19. 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

- No-Mix Accelerator
Apply LORD Accelerator 4 to one or both substrate surfaces. Allow accelerator to dry. For further details on the use of LORD Accelerator 4, refer to the LORD Accelerator 4 data sheet.

Once accelerator is dry, apply adhesive to the other substrate surface using a handheld cartridge or automatic dispense equipment. Mate the two surfaces and slide into correct position within the working time of the adhesive.

- Mix-In Accelerator
Apply mixed 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. When using such equipment, all wetted parts must be made of stainless steel and all hoses should be Teflon®-lined high pressure hose.

Curing – Cure begins immediately once adhesive and accelerator come in contact. Handling strength is achieved within 25-30 minutes at room temperature. Exposure to severe environmental conditions should be avoided for 24 hours.

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Typical Properties* of Adhesive Mixed with Recommended Accelerator

	A4	A17	A19	A19 Black
Mix Ratio, Adhesive to Accelerator				
by Volume	No-Mix	10:1	10:5	10:5
by Weight	No-Mix	10:1.2	10:7.4	10:7.4
Solids Content, %	10	100	100	100
Working Time, min @ 75°F (24°C)	Unlimited	15-20	15-20	15-20
Time to Handling Strength**, min @ 77°F (25°C)	25-30	25-30	25-30	25-30
Mixed Appearance	—	Tan Paste	Tan Paste	Grey Paste
Cured Appearance	—	Tan to Green	Tan to Green	Black

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**Dependent on ambient air temperature and mass.

LORD TECHNICAL DATA

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.

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.

LORD TECHNICAL DATA

Values stated in this technical data sheet 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 Support Center.

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