LORD® 204 ACRYLIC ADHESIVE WITH LORD ACCELERATOR 17 OR 19

Technical Data Sheet

LORD® 204 acrylic adhesive when cured with LORD Accelerator 17 or 19 creates an adhesive system that will bond a wide variety of prepared or unprepared metals and plastics. LORD 204 acrylic adhesive in combination with the recommended accelerator replaces welding, brazing, riveting and other mechanical fastening methods.

LORD 204 acrylic adhesive can be cured with either LORD Accelerator 17 or LORD Accelerator 19. 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, refer to applicable data sheet.

Features and Benefits

Bonds Unprepared Metals: requires little or no substrate preparation.

Versatile: bonds a wide variety of substrates such as metals, ceramics and plastics; insensitive to minor deviations from correct mix ratio.

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).

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

UL Approved: when mixed with LORD Accelerator 19, adhesive system is UL 746C certified.

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 204 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 acrylic adhesive cures rapidly.

Applying: 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 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. When using such equipment, all wetted parts must be made of stainless steel and hoses should be Teflon®-lined high pressure hose.

Typical Properties*

Appearance	Off-white Paste
Viscosity, cP @ 77°F (25°C) Brookfield HAT Spindle 7, 20 rpm	100,000 - 300,000
Density lb/gal (kg/m^3)	 8.7 - 9.3 (1042 - 1114)
Flash Point (Closed Cup), °F (°C)	66 (19)

*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 20-30 minutes. Complete cure will take 24 hours at room temperature. Mating surfaces should be fixtured as soon as possible after adhesive application.

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 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

	A17	A19	A19 Black
Mix Ratio by Volume, Adhesive to Accelerator	10:1	10:5	10:5
Solids Content, %	100	100	100
Working Time, minutes @ 75°F (24°C)	6-8	4-6	4-6
Time to Handling Strength, minutes @ 75°F (24°C)	26-28	22-26	22-26
Mixed Appearance	Tan Paste	Tan Paste	Grey Paste
Cured Appearance	Tan to Green	Tan to Green	Black

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Typical Cured Properties** – LORD 204 Adhesive/LORD Accelerator 19

Tensile Strength at Break, psi (MPa) ASTM D638, modified	2810 (19.4)
Elongation, % ASTM D638, modified	4.9
Young's Modulus, psi (MPa) ASTM D638, modified	140,826 (971.0)
Glass Transition Temperature (Tg), °F (°C) ASTM E1640-99, by DMA	—

**Bond performance data was obtained using LORD 204 adhesive/Accelerator 19. Please contact Parker Lord regarding the use and/or performance of using other accelerator combinations (+1 877 275 5673).

Bond Performance** – LORD 204 Adhesive/LORD Accelerator 19

Substrates	Aluminum to Aluminum	Galvanized Steel to Galvanized Steel	Powder Coated Steel to Powder Coated Steel	ABS to ABS
Lap Shear @ Room Temperature, psi (MPa)	3553 (24.5)	2730 (18.8)	2640 (18.2)	542 (3.7)
Failure Mode	C/A	C/A	A	SB
Lap Shear @ Hot Strength [180°F (82°C)], psi (MPa)	1920 (13.2)	1750 (12.1)	930 (6.4)	181 (1.2)
Failure Mode	C/TLC	C	A	SB
Lap Shear after 500 hours Salt Spray Exposure, psi (MPa) Test after 24 hours	2840 (19.6)	2310 (15.9)	3010 (20.8)	—
Failure Mode	TLC	C	CF/A	—
Lap Shear after 14 days @ 100°F (38°C), 100% RH, psi (MPa)	3000 (20.7)	2670 (18.4)	2290 (15.8)	—
Failure Mode	TLC	CF/A	A	—
Lap Shear @ -30°F (-34°C), psi (MPa)	1570 (10.8)	2420 (16.7)	1880 (13.0)	680 (4.7)
Failure Mode	A	A	CF/A	SB
T-Peel, pli (N/mm)	29 (5.1)	47 (8.2)	37 (6.5)	—
Failure Mode	C	C	C/TLC	—

Substrate	Surface Treatment
Aluminum, 0.032" thick 6061T6	Dry Rag Wipe
Galvanized Steel, 0.030" thick electrogalvanized	Dry Rag Wipe
Powder Coated Steel, 0.035" thick, polyester on cold rolled steel	Dry Rag Wipe
Acrylonitrile Butadiene Styrene (ABS), 0.125" thick hair cell ABS	Dry Rag Wipe

Bonded Parameters	Bond Area	Film Thickness	Cure	Mix Ratio
Metal Lap Shears (ASTM D1002)	1.0"x0.5"	0.010"	24 hr @ RT	2:1 by Volume
ABS Lap Shears (ASTM D3163)	1.0"x1.0"	0.010"	24 hr @ RT	2:1 by Volume
T-Peel (ASTM D1876 modified)	1.0"x3.0"	0.010"	72 hr @ RT	2:1 by Volume

Failure Mode Definition	Abbreviation
Adhesive Failure	A
Cohesive Failure	C
Coating Failure	CF
Stock Break	SB
Thin Layer Cohesive Failure	TLC

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