



202

Very Fast Cure, Acrylic Adhesive for Metals and Plastics

Description

Lord® 202 acrylic adhesive provides very fast bonds a wide variety of prepared or unprepared metals and plastics. Lord 202 adhesive replaces welding, riveting and other mechanical fastening methods.

Features and Benefits

Bonds Unprepared Metal - requires little or no substrate preparation.

Very Fast Cure - cures quickly at room temperature.

Environmental and Chemical Resistance - thermosetting; resists dilute acids, alkalis, solvents, greases, oils, moisture, and weathering. Performs at temperatures from -40°C to 149°C (-40°F to 300°F). Excellent UV exposure resistance.

Versatile- bonds many different substrates such as metals, ceramics, and plastics. Insensitive to minor deviations from correct mix ratio.

Surface Preparation

Metals should be free of grease, loose contamination or poorly adhering oxides. Normal amounts of mill oils and drawing compounds usually do not present problems in adhesion. Some engineering plastics should be cleaned, primed or abraded for optimum performance, but this must be determined for each material.

Table 1: Typical Properties of Lord 202 Acrylic Adhesive*

	Lord 202	Accelerator 4	Accelerator 17	Accelerator 19
Appearance	Off-white liquid	Slightly hazy to clear amber liquid	Off-white to slightly yellow liquid	Off-white paste
Viscosity, cP Brookfield at 25°C (77°F)	10,000-26,000 (Spindle 3 at 10 rpm HBF)	10 (Spindle 1 at 30 rpm LVT)	10,000 - 100,000 (Spindle 4 at 12 rpm LVT)	150,000 - 450,000 (T-bar C @ 10 rpm)
Density kg/m ³ lb/gal	1174-1222 9.8 - 10.2	1222-1246 10.2 - 10.4	1162-1210 9.7 - 10.1	1426-1546 11.9 - 12.9
Solvents	None	Methylene chloride/ MIBK/Trichloroethylene	None	None
Flash Point (Closed Cup)	13°C (56°F)	>93°C (>200°F)	>93°C (>200°F)	>93°C (>200°F)
Working Time of Mix System at 24°C (75°F)	1 - 2 Minutes	—	—	—
Handleable Bonds at 24°C (75°F)	2 - 4 Minutes	—	—	—
90% of Ultimate Strength	1 - 2 Hours	—	—	—
Full Properties	24 Hours	—	—	—
Mix Ratio by Volume	10 Parts	No-Mix	1 Part	5 Parts
Shelf Life from date of shipment, 24°C (75°F), unopened container	6 Months	6 Months	6 Months	6 Months

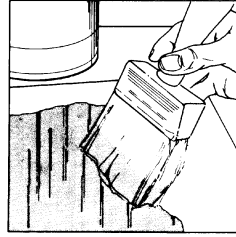
*Above properties data are typical and not to be used for specification purposes. For specification data, contact our Customer Service Department.

Mixing

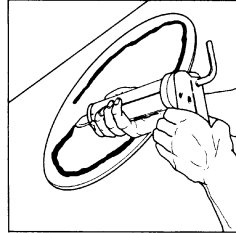
No-Mix System — Application may be made by spraying, rolling, or brushing Lord Accelerator 4 onto one or both substrates. Optimum bond line thickness is 127-254 microns (5-10 mils). If the bond line is under 635 microns (25 mils) thick, application to one substrate is usually sufficient. For bond lines of 635-1270 microns (25-50 mils), both substrates should be coated. Acrylic adhesive may be applied as soon as the accelerator is dry, 1 to 3 minutes at 24°C (75°F) or up to several weeks thereafter. Parts stored after coating should be kept in a clean, dry area without exposure to ultraviolet light or temperatures in excess of 24°C (75°F).

Refer to Procedure I illustrations for easy-to-follow application instructions using the No-Mix system.

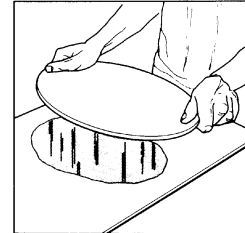
Procedure I — No-Mix System



1. Apply accelerator.



2. Apply acrylic adhesive.

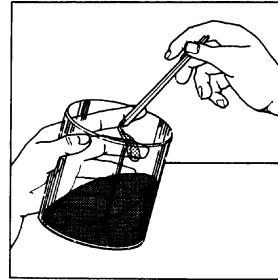


3. Assemble components.

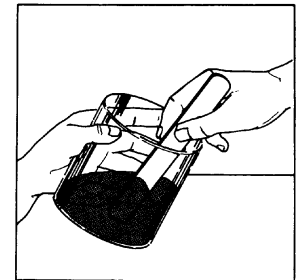
Mix-In System — Mix Lord 202 resin with the proper amount of Mix-In accelerator. Working time of the mixed system is approximately 1 to 2 minutes at 24°C (75°F). A handleable bond will develop in 2 to 4 minutes.

Refer to Procedure II illustrations for instructions on using the Mix-In system.

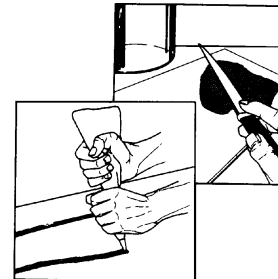
Procedure II — Mix-In System



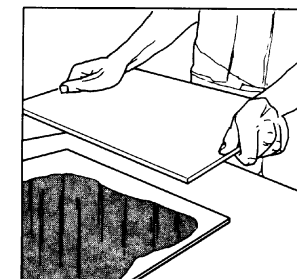
1. Pour accelerator into container containing acrylic adhesive.



2. Mix accelerator and acrylic adhesive.



3. Apply accelerator-acrylic adhesive mixture.



4. Assemble components.

Performance Data

Table 2: Typical Lap Shear Bond Values at Room Temperature for Lord 202/Accelerator 4 (Applied on one substrate)

Substrate	psi	Failure
Cold Rolled Steel SAE 1010	2000	AM/C
Aluminum 6061-T6	2160	AM/C
ABS	410	ABS failure

NOTES:

Metal 1/2" overlap, plastics 1" overlap
10 mil glue line thickness
24 hour layover before testing
ASTM D1002 modified to 0.5in./min. pull rate
AM/C—Acrylic Adhesive to Metal/Cohesive
All substrates were solvent wiped before bonding.

Application

Contact your Lord representative for recommended No-Mix and Mix-In dispense equipment. When using such equipment, all wetted parts must be made of stainless steel, and all hoses should be steel braided Teflon®.

Cure

Adhesive cure will begin on contact with the accelerator. Parts should be fixtured as soon as possible after adhesive application, and in less than one minute.

Storage

Ship and store Lord acrylic adhesives at temperatures below 27°C (80°F). Temperatures greater than 32°C (90°F) shorten the stability of Lord adhesive and accelerators. For maximum shelf life, store at 4°C - 10°C (40°F - 50°F).

Cautionary Information

Before using this or any Lord product, refer to the Material Safety Data Sheet (MSDS) 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.

Values stated in this bulletin 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 Service Department.

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