

LORD® Signlok™ 406 Adhesive

Description

LORD® Signlok™ 406 adhesive is a two-component adhesive system designed for bonding a wide variety of prepared or unprepared metals and engineered plastics. LORD Signlok 406 adhesive can be used to replace welding, brazing, riveting and other mechanical fastening methods. This adhesive system is formulated to provide some of the highest impact and peel strengths available in a room temperature curing adhesive.

Features and Benefits

Versatile – bonds a wide range of unprepared metals with minimal substrate preparation, as well as engineered thermoplastics including XENOY®, polycarbonate, ABS and acrylics.

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, moisture, salt spray and weathering; provides excellent resistance to indirect UV exposure.

UL Rated – UL 746C certified.

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

Precise Bondline – allows precise control of the adhesive bondline thickness due to its content of glass beads.

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 adhesive with accelerator at a ratio of 2:1, adhesive to accelerator, by volume. Even color distribution visually indicates a thorough mix. Once mixed, the adhesive cures rapidly.

Handheld cartridges will automatically dispense the correct volumetric ratio of each component. Adhesive components should be leveled/purged prior to installation of mixing tip.

XENOY is a trademark of General Electric Company.

Typical Properties*

	Adhesive (Part A)	Accelerator (Part B)
Appearance	Tan Paste	Off-white Paste
Density		
lb/gal	9.25-9.55	12.15-13.2
(kg/m ³)	(1108-1144)	(1456-1581)
Flash Point, °F (°C)	59 (15)	≥200 (93)

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

LORD TECHNICAL DATA

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

Curing – Cure begins immediately once adhesive and accelerator are mixed. 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 [$<150^{\circ}\text{F}$ ($<66^{\circ}\text{C}$)]. Cured adhesive is colored to visually indicate a full cure; cure color depends on the accelerator used.

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.

Typical Cured Properties*

Lap Shear Strength, psi (MPa)	
Aluminum	2000 (13.79)
Steel	2300 (15.86)
Peel Strength, pli (N/mm)	20-23 (3.5-4.0)
Aluminum	

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Typical Properties* of Adhesive Mixed with Accelerator

Mix Ratio by Volume, Adhesive to Accelerator	2:1
Solids Content, %	100
Working Time, min @ 75°F (24°C)	6-10
Time to Handling Strength, min @ 75°F (24°C) 50 psi Shear	12-17
Full Cure Time, hr @ 75°F (24°C)	24
Mixed Appearance	Tan Paste
Cured Appearance	Tan to Green

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Shelf Life/Storage

Shelf life of each component is 18 months when stored in a well ventilated area 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. Protect from exposure to direct sunlight.

LORD Signlok 406 adhesive is flammable. Do not store or use near heat, sparks or open flame.

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.

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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