

Chemlok® 219 Primer and/or Adhesive

Description

LORD Chemlok® 219 adhesive can be used as either a one-coat adhesive or a primer in combination with Chemlok 213 adhesive for applications that require increased environmental resistance. It is composed of a mixture of organic resins and polymers in an organic solvent system.

Chemlok 219 adhesive is used for bonding a wide variety of both polyether and polyester castable urethanes to metal. This adhesive bonds with polyether and polyester castable urethanes of varying hardness, based on both TDI and MDI. Chemlok 219 adhesive can also be used to bond certain thermoplastic polyurethanes (TPU).

Features and Benefits

Versatile – bonds a wide variety of polyether and polyester urethane based compounds to metal; can be used as a primer.

Economical – eliminates the need to inventory several adhesives due to the adhesive's versatility.

Convenient – requires only a single coat for most adhesive applications, minimizing application costs.

Time Saving – requires no agitation in preparation for use or during application, saving application time and reducing the potential for application errors. Non-settling Chemlok 219 adhesive is ready to dip or brush when opened.

Fast Drying – dries fast to allow rapid turnaround times, reducing the number of coated parts kept in inventory.

Application

Surface Preparation – Thoroughly clean metal surfaces prior to adhesive application. Remove protective oils, cutting oils and greases by solvent degreasing or alkaline cleaning. Remove rust, scale or oxide coatings by suitable chemical or mechanical cleaning methods.

- **Chemical Cleaning**

Chemical treatments are readily adapted to automated metal treatment and adhesive application lines. Chemical treatments are also used on metal parts that would be distorted by blast cleaning or where tight tolerances must be maintained. Phosphatizing is a commonly used chemical treatment for steel, while conversion coatings are commonly used for aluminum.

- **Mechanical Cleaning**

Grit blasting is the most widely used method of mechanical cleaning. However machining, grinding or wire brushing can be used. Use steel grit to blast clean steel, cast iron and other ferrous metals. Use aluminum oxide, sand or other nonferrous grit to blast clean stainless steel, aluminum, brass, zinc and other nonferrous metals.

Typical Properties*

Appearance	Clear to Amber Liquid
Viscosity, cps @ 25°C (77°F) Brookfield LVT Spindle 2, 30 rpm	50-110
Density kg/m ³ (lb/gal)	880.0-910.0 (7.3-7.6)
Solids Content by Weight, %	23.5-27.0
Flash Point (Seta), °C (°F)	14 (58)
Solvents	Ethanol, Methyl Isobutyl Ketone (MIBK)

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

LORD TECHNICAL DATA

For further detailed information on surface preparation of specific substrates, refer to Chemlok Adhesives application guide. Handle clean metal surfaces with clean gloves to avoid contamination with skin oils.

Mixing – No agitation is required before or during use. Chemlok 219 adhesive is clear to amber in color with no suspended materials; Chemlok 219 adhesive can be used as received.

If needed, proper dilution for the various application methods is best achieved by experience. Use MIBK or denatured ethanol as a diluent to reduce viscosity. For brush or dip application, use a ratio of 3:1 adhesive to diluent, by volume. Spray application generally requires more thinning; use a ratio of 1:1 adhesive to diluent, by volume.

Applying – Apply adhesive in a uniformly thin coat by brush, spray or dip methods. For optimum adhesion, dry film thickness of Chemlok 219 adhesive should be 12.7 micron (0.5 mil). Thicker adhesive films caused by repeated brushing or improper dipping drainage can compromise bondability.

Chemlok 219 adhesive doubles as an excellent primer for Chemlok 213 adhesive. For castable urethane, the properties of Chemlok 219 and Chemlok 213 adhesives are complimentary - Chemlok 219 adhesive provides excellent protection as a primer for the metal; Chemlok 213 adhesive bonds well to RIM, TPU and castable

polyurethanes. Chemlok 213 adhesive is also tolerant of processing conditions such as long prebakes. Together, they increase resistance to a variety of environmental elements.

If prebake lasts longer than one hour at 100°C (212°F), use Chemlok 219 adhesive as a primer with Chemlok 213 adhesive. Chemlok 219 adhesive is a heat-reactive system, therefore, do not allow excessive time and temperature during the prebake stage. When used with Chemlok 213 adhesive, both systems will tolerate prebakes as long as 16 hours at 121°C (250°F) or as high as 163°C (325°F) for 2 hours.

Drying – Allow coated parts to air-dry for 30-45 minutes at room temperature.

Shelf Life/Storage

Shelf life is one year from date of shipment when stored at 21-27°C (70-80°F) in original, unopened container. 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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