

# Chemlok® 8116 Adhesive

## Description

LORD Chemlok® 8116 adhesive is a one-coat, aqueous adhesive used for vulcanization/bonding of peroxide cure elastomers, such as silicone rubber, EPDM, FKM, HNBR and NBR, to zinc phosphatized steel and other rigid substrates.

With good resistance to hot oils, hot water and other engine fluids, Chemlok 8116 adhesive is suitable for use in the manufacture of gaskets, seals and NVH components.

## Features and Benefits

**Convenient** – requires only a single coat for most applications, reducing labor, inventory and shipping costs.

**Environmentally Preferred** – uses water for dilution; provides reduced VOC emissions.

**Versatile** – bonds a wide range of silicone compounds to many rigid substrates, such as zinc phosphatized steel, nylon and aluminum.

**Environmentally Resistant** – provides good resistance to high temperature fluid environments; excellent for use in gasket or seals.

## 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	Black Liquid
Viscosity, cps @ 25°C (77°F) Brookfield LVT Spindle 2, 30 rpm	100-900
Density kg/m <sup>3</sup> (lb/gal)	1138-1174 (9.5-9.8)
Solids Content by Weight, %	32-36
Flash Point (Seta), °C (°F)	>93 (>200)
Solvents	Deionized Water

\*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** – Stir Chemlok 8116 adhesive for 10-20 minutes or until uniform in color. Make sure to lift solids from bottom of container. Do not shake.

Chemlok 8116 adhesive is used full strength for dip applications. For spray application, dilute as needed using deionized water.

**Applying** – Apply Chemlok 8116 adhesive by spray or dip methods. For optimum adhesion, the dry film thickness of Chemlok 8116 adhesive should be 7.6-17.8 micron (0.3-0.7 mil).

- Spraying  
Apply adhesive to parts that have been preheated to 60-65°C (140-150°F).
- Dipping  
Apply adhesive at room temperature.

**Drying/Curing** – Allow applied adhesive to air-dry for 30-60 minutes at room temperature. Use of heat forced air is recommended to thoroughly dry coated parts.

Chemlok 8116 adhesive cures and bonds during the rubber vulcanization process. Wear clean gloves when handling coated parts and keep coated parts covered to prevent airborne materials from contaminating the surface.

**Cleanup** – Use soap and water to remove wet adhesive. Remove dried adhesive with solvents such as acetone, MEK or alcohols.

## Shelf Life/Storage

Shelf life is nine months from date of shipment when stored at 21-27°C (70-80°F) in original, unopened container. Do not freeze product.

## 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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