

Chemlok® 8110 Adhesive

Description

LORD Chemlok® 8110 adhesive is a one-coat, aqueous adhesive used to bond nitrile (NBR) elastomers to metal during vulcanization. It is composed of a mixture of dispersed mineral fillers, organic compounds, resins and polymer latexes in an aqueous medium.

With good resistance to hot oils and transmission fluids, Chemlok 8110 adhesive is suitable for use in the manufacture of gaskets and seals such as shaft seals. Chemlok 8110 adhesive can also be used to bond poly-acrylic elastomers to metal.

Features and Benefits

Versatile – bonds a variety of NBR compounds and poly-acrylic elastomers.

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

Environmentally Resistant – provides good resistance to high temperature fluid environments; excellent for use in gaskets 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 1, 60 rpm	<100
Density kg/m ³ (lb/gal)	1114.4-1174.3 (9.3-9.8)
Solids Content by Weight, %	32-36.5
Flash Point (Seta), °C (°F)	>93 (>200)
Solvents	Deionized Water
pH	6-7

*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 – Thoroughly mix Chemlok 8110 adhesive before use. Do not shake. To prevent foaming, mechanical mixing should not exceed 30 rpm. The addition of anti-foaming agents is not recommended.

If dilution needed, use deionized water at a ratio of 1:1, by volume. More dilute solutions can be used if necessary. Slowly add water to the adhesive while mixing.

Applying – Apply Chemlok 8110 adhesive by dip or spray methods. For best results, preheat the metal parts to 49-60°C (120-140°F) prior to spray application.

For optimum adhesion and environmental resistance, dry film thickness of Chemlok 8110 adhesive should be 5.1-10.2 micron (0.2-0.4 mil).

Drying/Curing – Allow applied adhesive to air-dry for at least 60 minutes at room temperature prior to bonding. Drying can be accelerated by oven drying at 49-71°C (120-160°F).

Chemlok 8110 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 isopropyl alcohol.

Shelf Life/Storage

Shelf life is six months from date of shipment when stored in a well ventilated area 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 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 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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