

Chemlok® 250X Adhesive

Description

LORD Chemlok® 250X adhesive is a one-coat adhesive used to bond a variety of elastomers to various substrates during vulcanization of the elastomer.

Chemlok 250X adhesive is an all-xylene version of Chemlok 250 adhesive. It is composed a mixture of polymers, organic compounds and mineral fillers dissolved or dispersed in an organic solvent system.

A single coat of Chemlok 250X adhesive will bond compounds based on natural rubber (NR), polyisoprene (IR), styrene-butadiene (SBR), polybutadiene (BR), polychloroprene (CR), nitrile (NBR), butyl (IIR), EPDM and polyepichlorohydrin (ECO) polymers to a variety of metals. These metals include carbon and alloy steels, stainless steel, aluminum, copper and copper alloys, magnesium and zinc, as well as a variety of plastics, composites and fabrics.

Features and Benefits

Non-chlorinated Solvent System – suitable for solvent incineration, saving cost of recovery equipment.

Versatile – bonds a wide variety of elastomers to metals, plastics and fabrics.

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

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.

Typical Properties*

Appearance	Black Liquid
Viscosity, cps @ 25°C (77°F) Brookfield LVT Spindle 2, 30 rpm	100-550
Density kg/m ³ (lb/gal)	928.6-976.6 (7.75-8.15)
Solids Content by Weight, %	22-26
Flash Point (Seta), °C (°F)	28 (82)
Solvents	Xylene

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

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- **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.

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 stir Chemlok 250X adhesive before using, and agitate sufficiently during use to keep dispersed solids uniformly suspended.

Chemlok 250X adhesive is normally used full strength for brush and dip applications. For spray application, dilute adhesive with xylene or toluene to a Zahn Cup #2 viscosity of 28-30 seconds (approximately 3 parts adhesive to 1 part diluent, by volume).

Applying – Apply Chemlok 250X adhesive by brush, dip, spray or any other method that gives a uniform coating and avoids excessive runs and tears.

For optimum adhesion and environmental resistance, dry film thickness of Chemlok 250X adhesive should be 20.3-30.5 micron (0.8-1.2 mil). Where minimum environmental resistance is required, film thickness in the lower range can be used on easy-to-bond rubber compounds. Thicker films within this range may be necessary on certain hard-to-bond rubber compounds and where maximum environmental resistance is required.

Drying/Curing – Allow the applied adhesive to dry until visual examination of the film has shown that all solvent has evaporated. This will take approximately 30-60 minutes at room temperature. Drying times may be shortened by either preheating the metal inserts or oven drying after application. Metal parts may be preheated to a maximum of 65°C (150°F) prior to adhesive application. For coated parts, moderate drying temperatures should be used, but temperatures as high as 149°C (300°F) may be used for very short periods of time. Maximum air flow at minimum temperatures will give the best results.

Dried films of Chemlok 250X adhesive are non-tacky; therefore, coated parts can be piled into tote pans for subsequent processing. Wear clean gloves when handling coated parts and cover the tote pans to prevent contamination by dirt, dust, grease, oil, etc. If coated parts are properly protected, long layover times between adhesive application and bonding usually have no adverse effect on the bond. If humidity is high, layover time will be shortened.

Cleanup – Use xylene or toluene for clean up.

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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.

Chemlok 250X adhesive is moisture sensitive. Do not store container outside. During summer months, minimize exposure of the adhesive to moisture by preparing only what is needed for several hours of use.

Once opened, fit the 55-gallon drum of adhesive with desiccant tubes if anticipated contents usage exceeds two weeks. Information on desiccant tubes can be obtained from your LORD Technical Service Representative.

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.

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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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