Chemlok® 259 Adhesive

Description

LORD Chemlok® 259 adhesive is a covercoat adhesive designed for use over Chemlok 207 primer. This adhesive system will bond uncured rubber to metal substrates during the vulcanization of the elastomer.

Features and Benefits

Versatile – when used in combination with Chemlok 207 primer, bonds a variety of elastomers (e.g. nitrile, natural, SBR, polychloroprene) to a variety of substrates including aluminum, brass and grit blasted or phosphatized steel.

Chemically Resistant – resists a variety of fluids including ethylene glycol, propylene glycol and silicone oil.

Environmentally Resistant – provides excellent resistance to water, humidity, salt spray and high temperatures.

Application

Surface Preparation – Thoroughly clean metal surfaces prior to primer 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.

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.

Typical Properties*

Appearance	Green-Black Liquid
Viscosity, cps @ 25°C (77°F) Brookfield LVT Spindle 2, 30 rpm	100-500
Density	
kg/m^3	982.6-1018.5
(lb/gal)	(8.2-8.5)
Solids Content by Weight, %	25-29
Flash Point (Seta), °C (°F)	6.6 (44)
Solvents	Toluene, Xylene

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

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Allow primer to thoroughly dry before applying Chemlok 259 adhesive. For further details on the use of Chemlok 207 primer, refer to the Chemlok 207 primer data sheet.

Mixing – Thoroughly stir Chemlok 259 adhesive before applying adhesive over primer. Agitate sufficiently during use to keep dispersed solids uniformly suspended. Use a high speed, propeller-type agitator or the agitator supplied with the drum. Use an explosion-proof mixer. If dilution is needed, use xylene or toluene as diluents.

Applying – Apply Chemlok 259 adhesive by brush, spray or dip methods. Regardless of application method, use the following recommended dry film thicknesses for optimum adhesion:

Chemlok 207	5.1-10.2 micron (0.2-0.4 mil)
Chemlok 259	10.2-20.3 micron (0.4-0.8 mil)

Drying/Curing – Allow the applied adhesive to dry prior to bonding assemblies.

Chemlok 259 adhesive can be used to bond rubber by compression, transfer, injection or other molding procedures used to make bonded parts. As with other Chemlok adhesives, maximum adhesion is obtained when the rubber has completely cured. Ideal bonding conditions exist when both the adhesive and the rubber cure at the same time. To accomplish this, load the adhesive coated metal parts in the mold and quickly fill the cavity with rubber.

Dry films of Chemlok 207 primer and Chemlok 259 adhesive remain firm at molding temperatures. During transfer or injection molding operations, the adhesive shows minimal tendency to wipe or sweep. During multiple-cavity loading, the prebaking begins with the first loaded metal parts. Keep mold loading cycles to a minimum to prevent adhesive and rubber pre-curing. However, Chemlok 259 adhesive will resist moderate prebaking times without affecting bond performance. Transfer or injection molds need properly designed runners and sprues, as well as adequate pressures. This prevents rubber pre-curing before the mold cavities are completely filled.

Although the hot tear strength of Chemlok 207 primer and Chemlok 259 adhesive is excellent, care should still be used when removing parts from the mold. Bonds formed with Chemlok 207 primer and Chemlok 259 adhesive are resistant to many adverse environmental conditions. Electroplating or anodizing of metal parts after fabrication will not affect bond strength. However, bonded assemblies should not be treated with ketone based paints or solutions as bond strength may be weakened.

Cleanup – Use solvents such as xylene and MEK to clean adhesive before heat is applied. Once cured, removal by solvent is not possible.

Shelf Life/Storage

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

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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