



Chemlok® 234B

Rubber-to-Metal Adhesive

Description

Chemlok® 234 is a general purpose covercoat adhesive that will bond a wide variety of vulcanized or unvulcanized rubber compounds to Chemlok 205 primed metal or other rigid substrates.

Chemlok 234B adhesive will bond compounds based on natural rubber (NR), polyisoprene (IR), styrene-butadiene (SBR), polybutadiene (BR), polychloroprene (CR), nitrile (NBR), butyl (IIR), chlorosulfonated polyethylene (CSM). This adhesive can be used under a wide range of cure conditions, such as 2 hours at 82°C (180°F) or 1 minute at 205°C (400°F). Chemlok 234 adhesive is also used for bonding rubber-to-rubber.

Features and Benefits

Versatile - bonds a variety of cured and uncured elastomer compounds.

Convenience - applies easily by brush, dip, roller, or spray methods.

Flexible - flexible enough to bond uncured to cured, or cured to cured rubbers with the same or different compositions.

Typical Properties* of Chemlok 234B Adhesive

Composition	A mixture of polymers, organic compounds, and mineral fillers dissolved or dispersed in an organic solvent system.
Appearance	Black liquid
Viscosity, cps Brookfield LVT, Spindle No. 2 @ 30 rpm @ 25°C (77°F) G.E. Zahn Cup No. 3	450 - 900 60 seconds
Non-volatile Content by weight	23.0 - 26.5%
Density kgs/m ³ lbs/gal	888 - 917.9 8.9 - 9.2
Flash Point (Seta)	28°C (83°F)
Solvents	Xylene, Trichloroethylene
Shelf Life	One year from date of shipment, unopened container, at 21°C - 27°C (70°F - 80°F) storage temperature.

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

Metal Surface Preparation

Thoroughly clean metal surfaces prior to applying the adhesive. Remove protective oils, cutting oils, greases, etc., by solvent degreasing or alkaline cleaning. Remove rust, scale or oxide coatings by suitable mechanical or chemical cleaning methods.

Grit blasting is the most widely used method of mechanical cleaning, but machining, grinding or wire brushing may be used. Steel grit is used for blast cleaning of steel, cast iron, or other ferrous metals. Aluminum oxide, sand or other nonferrous grit are used for blast cleaning of stainless steel, aluminum, brass, zinc, or other nonferrous metals.

Chemical cleaning or pretreatment of the metal will remove rust, scale or oxide coatings. 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 in cases where tight size tolerances must be maintained. Phosphatizing is a commonly used chemical treatment for steel, while chromate conversion coating is commonly used for aluminum.

Mixing

Thoroughly stir Chemlok 234B adhesive before using, and agitate sufficiently during use to keep dispensed solids uniformly suspended.

Application

Apply Chemlok 234B adhesive by brush, dip, or spray, or by any method used to apply Chemlok adhesives. If the application methods require dilution of the Chemlok 234B adhesive, use xylene, toluene, or chlorinated solvents as diluents. Xylene is the suggested diluent for spray application; toluene or chlorinated solvents are suggested for dip or brush application.

For optimum bond and environmental resistance, the dry film thickness of Chemlok 234B adhesive should be 12.5 - 17.5 microns (0.5 - 0.7 mils). For bonding cured rubber, dry film thickness of 21 - 37.5 microns (0.8 to 1.5 mils) is normally used. The Chemlok 234B adhesive can be applied to either the cured rubber or the metal.

PV bonds are obtained using bond-line temperature values of 20 - 40 minutes at 149°C - 177°C (300°F - 350°F). Maintain a 5 - 10% compression of the vulcanized rubber section during cure and cool down to ensure intimate contact at the rubber/metal interface. Light rubber processing oils are often used to assist in the assembly of the compressed parts prior to bonding.

Drying

The applied adhesive should be allowed to dry until visual examination of the film has shown that all solvent has evaporated. This will usually be accomplished in 30 to 60 minutes at room temperature.

Drying times may be shortened by the use of hot air drying ovens or tunnels. Moderate drying temperatures are satisfactory, but temperatures as high as 149°C (300°F) may be used for short periods of time. Maximum air flow at minimum temperatures will give the best results. Metal parts may be preheated to a maximum of 65°C (150°F).

Clean Up

Use xylene or toluene for clean up.

Subsequent Processing

Dried films of Chemlok 234B adhesive are non-tacky; therefore, coated parts can be piled into tote pans for subsequent processing. The usual handling precautions are necessary, however, to prevent contamination of the coated parts by dirt, dust, grease, oil, etc. Wear clean gloves when handling coated parts.

Long layover times between adhesive application and bonding usually have no adverse effect on the bond, provided the coated parts are covered to prevent contamination.

Packaging

- 3.8 Liter (1 Gallon) Container
- 19 Liter (5 Gallon) Container
- 208 Liter (55 Gallon) Container

Cautionary Information

Before using this or any other Lord product refer to the Material Safety Data Sheet (MSDS) and label for safe use and handling.

Values stated in this bulletin 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 Service Department.

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