Chemlok® 234B (NW) Adhesive

Description

LORD Chemlok® 234B (NW) adhesive is a general purpose covercoat adhesive designed for use over Chemlok 205 primer. This adhesive system will bond a wide variety of vulcanized or unvulcanized rubber compounds to primed metal or other rigid substrates. It is composed of a mixture of polymers, organic compounds and mineral fillers dissolved or dispersed in an organic solvent system.

Chemlok 234B (NW) adhesive will bond compounds based on natural rubber (NR), polyisoprene (IR), styrene-butadiene (SBR), polybutadiene (BR), polychloroprene (CR), nitrile (NBR), butyl (IIR) and chlorosulfonated polyethylene (CSM).

Features and Benefits

Versatile – when used in combination with Chemlok 205 primer, bonds a variety of cured and uncured elastomer compounds; flexible enough to bond uncured to cured, or cured to cured rubbers with the same or different compositions.

Easy to Apply – applies easily by brush, dip, roll coat or spray methods.

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	700-1500
Density	
kg/m^3	1025.44-1072.2
(lb/gal)	(8.55-8.95)
Solids Content by Weight, %	16.0-19.5
Flash Point (Seta), °C (°F)	28 (83)
Solvents	Xylene, Trichloroethylene

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

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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.

Allow primer to thoroughly dry before applying Chemlok 234B (NW) adhesive. For further details on the use of Chemlok 205 primer, refer to the Chemlok 205 primer data sheet.

Mixing – Special attention should be given to mixing the adhesive. Agitation methods and times will vary depending on container size and time in inventory. The following guidelines must be followed to ensure a homogenous mix and uniform appearance.

- Quart container – hand stirred with a paint stick or placed on a paint shaker for 15-30 minutes.
- Gallon container – hand stirred with a paint stick, placed on a paint shaker, or agitated with an air-driven mixer for 20-30 minutes.
- 5-Gallon pail – first hand stirred to loosen any sediment followed by agitation with an air-driven mixer for 45-60 minutes.
- 55-Gallon drum – hand cranked initially to loosen any sediment followed by agitation with an air-driven motor for 8 hours at 40-60 rpm. Drum roller can also be used to loosen any sediment by rolling at 30 rpm for 2 hours followed by agitation with an air-driven mixer for 4 hours at 40-60 rpm.

Evaluate all mixed containers for any remaining sediment prior to applying adhesive. Repeat recommended mixing procedure if sediment is found.

Recommended Mixing Procedures		
Container	**Mixing Method**	**Mixing Time**
Quart (1.1 L)	Hand stir	10-15 minutes
	Paint Shaker	10-15 minutes
Gallon (3.8 L)	Hand stir	20-30 minutes
	Paint Shaker	20-30 minutes
	Air-driven mixer	20-30 minutes
5 Gallon (18.9 L)	Hand stir and air-driven mixer	45-60 minutes
55 Gallon (208.2 L)	Hand crank and air-driven mixer	8 hours
	Roller and air-driven mixer	2 hours (roller) 4 hours (mixer)

If the application method requires dilution, use xylene or toluene as diluents. Xylene is the suggested diluent for spray application; toluene is suggested for dip or brush application.

Applying – Apply Chemlok 234B (NW) adhesive by brush, dip, spray or any method that gives a uniform coating and avoids excessive runs or tears.

For optimum adhesion and environmental resistance, the dry film thickness of Chemlok 234B (NW) adhesive should be 12.7-25.4 micron (0.5-1.0 mil). For bonding cured rubber, dry film thickness of 20.3-38.1 micron (0.8-1.5 mil) is normally used.

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 time can 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 234B (NW) 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 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.

Post-Vulcanization Bonding – PV bonds are obtained when bondline temperature reaches 149-177°C (300-350°F) in 20-40 minutes. Maintain a 5-10% compression of the vulcanized rubber section during cure and cool down to ensure intimate contact at the rubber/metal interface. Assembly lubricants may be necessary depending on the molded assembly configuration. Naphthenic assembly oils can be used if assembly without lubrication is not possible.

Cleanup – Use xylene or toluene for clean up.

Shelf Life/Storage

Shelf life is one year from date of shipment when stored in a well ventilated area 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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