

Chemlok® 289/290 Adhesive

Description

LORD Chemlok® 289/290 adhesive is a primer/covercoat adhesive system designed for bonding rubber linings to steel, stainless steel, aluminum, titanium, wood and other substrates. It is composed of a mixture of polymers, organic compounds and mineral fillers dissolved or dispersed in an organic solvent system. Chemlok 289/290 adhesive is suitable for cure by autoclave, open steam or chemical techniques.

Features and Benefits

Versatile – bonds many rubber compounds to a variety of substrates.

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

Corrosion Resistant – provides excellent corrosion resistance.

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 grit blasting. Use steel grit to blast clean steel and other ferrous metals. Use aluminum oxide, sand or other nonferrous grit to blast clean stainless steel, aluminum 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 289 primer and Chemlok 290 covercoat before use, and agitate sufficiently during use to keep dispersed solids uniformly suspended.

Chemlok 289 primer and Chemlok 290 covercoat are normally used full strength for brush or roll coat applications. For spray application, dilute Chemlok 289 primer with a 1:1 MEK/xylene mixture; dilute Chemlok 290 covercoat with xylene or toluene.

Typical Properties*

	289 Primer	290 Covercoat
Appearance	Green Liquid	Red Liquid
Viscosity		
cps @ 25°C (77°F)	200 - 450	20 - 50
Brookfield LVT	Spindle 2, 30 rpm	Spindle 1, 60 rpm
seconds	20 - 40	30 - 55
	Zahn Cup #4	Zahn Cup #1
Density		
kg/m ³	922.6 - 958.6	862.8 - 886.7
(lb/gal)	(7.7 - 8.0)	(7.2 - 7.4)
Solids Content by Weight, %	23 - 26	5.5 - 7.5
Flash Point (Seta), °C (°F)	6 (42)	7 (44)
Solvents	Xylene, Methyl Ethyl Ketone (MEK)	Toluene
Theoretical Coverage, m ² /gal (ft ² /gal)	55 (591)	95 (1018)
	@ 10.2 micron (0.4 mil) dry film thickness	@ 2.5 micron (0.1 mil) dry film thickness

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

LORD TECHNICAL DATA

Applying – Separately apply primer and covercoat by brush, roll coat or spray methods. For best results, apply adhesive system to surfaces with temperatures less than 38°C (100°F).

Regardless of application method, use the following recommended dry film thicknesses for optimum adhesion:

Chemlok 289	10.2 micron (0.4 mil)
Chemlok 290	2.5 micron (0.1 mil)

Drying/Curing – Allow primer to air-dry for 30-60 minutes before applying covercoat to prevent solvent entrapment and subsequent blistering.

If parts applied with Chemlok 289 primer remain uncoated for more than seven days, primer must be reapplied prior to Chemlok 290 covercoat application. Parts coated with Chemlok 290 covercoat can be stored for up to seven days prior to rubber layup without affecting bond performance if protected from sunlight exposure.

Cleanup – Use xylene, toluene or MEK for clean up.

Shelf Life/Storage

Shelf life is one year from date of shipment when stored by the recipient in a well ventilated area at 21-27°C (70-80°F) in original, unopened container. Store container in a dry location, away from sunlight. Keep container closed when not in use.

Cautionary Information

Before using this or any LORD product, refer to the Safety Data Sheet (SDS) 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.

LORD TECHNICAL DATA

Typical Bond Data*

	Primer	Adhesive	Tack Coat	90° Peel Adhesion (pli)
Autoclave				
Natural Rubber 60' @ 132°C (270°F) 32 Shore A	Chemlok 289	Chemlok 290	Chemlok 286	30#/100R
Bromobutyl 60' @ 149°C (300°F) 52 Shore A	Chemlok 289	Chemlok 290	EP5879-60	67#/100R
Chloroprene 90' @ 146°C (295°F)	Chemlok 289	none	none (stock preheated)	113#/100R
Open Steam				
Natural Rubber 24 hr @ 88°C (190°F) 60 Shore A	Chemlok 289	Chemlok 290	Chemlok 286	51#/100R
Natural Rubber 46 hr @ 82°C (180°F) 60 Shore A	Chemlok 289	Chemlok 290	Chemlok 286	57#/100R
EPDM 56 hr @ 85°C (185°F) 48 Shore A	Chemlok 289	Chemlok 290	EP5879-60	47#/100R
Chemical Curing				
Natural Rubber Carbon Disulfide Cure 5 days @ 38°C (100°F) 57 Shore A	Chemlok 289	Chemlok 290	Chemlok 286	57#/100R
Natural Rubber Carbon Disulfide Cure 5 days @ 38°C (100°F) 53 Shore A	Chemlok 289	Chemlok 290	Chemlok 286	57#/100R

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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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