Chemlok® 289/290 Adhesive

Technical Data Sheet

Chemlok® 289/290 adhesive is an 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.

Mixing – Thoroughly stir primer and 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.

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, the recommended dry film thickness ranges are:

Chemlok 289	10.2-22.9 micron (0.4-0.9 mil)
Chemlok 290	2.5-15.2 micron (0.1-0.6 mil)

Optimal dry film thicknesses of primer and covercoat vary based on the end-use application (i.e., substrate, elastomer, application method, cure method, service environment, etc.).

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.

Typical Properties*

	289 Primer	290 Covercoat
Appearance	Green Liquid	Red Liquid
Viscosity cps @ 25°C (77°F) Brookfield LVT seconds	 200 - 450 Spindle 2, 30 rpm 20 - 40 Zahn Cup #4	 20 - 50 Spindle 1, 60 rpm 30 - 55 Zahn Cup #1
Density kg/m³ (lb/gal)	 922.6 - 958.6 (7.7 - 8.0)	 862.8 - 886.7 (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, MEK	Toluene
Theoretical Coverage, m²/gal (ft²/gal)	55 (591) @ 10.2 micron (0.4 mil) dry film thickness	95 (1018) @ 2.5 micron (0.1 mil) dry film thickness

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

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 Parker 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.

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 Stream				
Natural Rubber 24 hours @ 88°C (190°F) 60 Shore A	Chemlok 289	Chemlok 290	Chemlok 286	51#/100R
Natural Rubber 46 hours @ 82°C (180°F) 60 Shore A	Chemlok 289	Chemlok 290	Chemlok 286	57#/100R
EPDM 56 hours @ 85°C (185°F) 48 Shore A	Chemlok 289	Chemlok 290	EP5879-60	47#/100R
Chemical Cleaning				
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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