

# Chemlok® 205LH Primer

## Description

LORD Chemlok® 205LH primer is a low Hazardous Air Pollutant (HAP) primer designed for use under Chemlok covercoat adhesives to bond a wide variety of vulcanized and unvulcanized rubber compounds to metals and other rigid substrates. It is composed of a mixture of polymers, organic compounds and mineral fillers dissolved or dispersed in a low HAP organic solvent system.

## Features and Benefits

**Versatile** – can be used as a primer under a variety of Chemlok covercoat adhesives such as the Chemlok 6125 series or Chemlok 6254 series adhesives.

**Easy to Apply** – applies easily by brush, dip, spray or roll coat methods; suitable for existing production lines.

**Durable** – provides rubber tearing bonds and excellent environmental resistance when used in combination with Chemlok covercoat adhesives.

**Identifiable Appearance** – provides a brilliant blue color for easy identification when used over phosphatized substrates.

**Environmentally Friendly** – contains low HAP content (3.6 lb HAP/gal solid or 6.45% HAP content).

## 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	Blue Liquid
Viscosity	
cps	10-550
Brookfield LVT Spindle 2, 30 rpm	
seconds	10-100
Zahn Cup #2	
Density	
kg/m <sup>3</sup>	886.7-958.6
(lb/gal)	(7.4-8.0)
Solids Content by Weight, %	21.5-26.5
Flash Point (Seta), °C (°F)	13 (56)
Solvents	Methyl Propyl Ketone (MPK), N-butyl Propionate

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

# LORD TECHNICAL DATA

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.

Apply Chemlok 205LH primer to stainless steel, aluminum, brass or other nonferrous substrates within one hour after cleaning. For ferrous substrates such as steel, a slightly longer layover can be tolerated if no rust is formed.

**Mixing** – Thoroughly stir Chemlok 205LH primer before use, and agitate sufficiently during use to keep dispersed solids uniformly suspended. Use an air-driven or other explosion-proof mixer on the agitator contained in an agitator drum or on other smaller packages.

Chemlok 205LH primer is normally used full strength for brush, dip and roller coat applications. For spray application, dilute primer to a Zahn Cup #2 viscosity of 17-19 seconds. Chemlok 205LH primer may be diluted with a non-HAP, ketone-type solvents such as MPK without adverse effects on handling and application. The diluent must be slowly added to the primer while stirring. Careful attention should be given to agitation since dilution will accelerate settling. Refer to the Chemlok Adhesives application guide for further information.

**Applying** – Apply Chemlok 205LH primer by brush, dip, roll coat, spray or any method that gives a uniform coating and avoids excessive runs or tears.

For optimum adhesion, the dry film thickness of Chemlok 205LH primer should be 5.1-10.2 micron (0.2-0.4 mil). When using Chemlok 205LH primer over grit blasted substrates or when using it in conjunction with Chemlok 6125 series covercoats, apply a dry film thickness at the high end of the range. For all other applications (i.e., swaging or smooth substrates), apply Chemlok 205LH primer at the low end of the film thickness range.

**Drying/Curing** – Thoroughly dry parts coated with Chemlok 205LH primer before applying the covercoat adhesive. It is best to use temperatures of 65-93°C (150- 200°F) and abundant dry circulating air; however, forced air drying is possible at temperatures up to 149°C (300°F) for short periods of time. Maximum air flow at minimum temperatures will give the best results. After parts have dried, apply Chemlok covercoats using similar application methods.

Chemlok 205LH primer can be used to bond nitrile rubber by compression, transfer, injection or other molding procedures used to make bonded parts. 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 205LH primer 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 from pre-curing. However, Chemlok 205LH primer 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.

**Cleanup** – Clean areas with a rag as soon as possible using MPK or methyl ethyl ketone (MEK).

# LORD TECHNICAL DATA

## **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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