Chemlok® 6411LH Adhesive

Description

LORD Chemlok® 6411LH adhesive is a low Hazardous Air Pollutant (HAP) covercoat adhesive designed for use over Chemlok 205LH or 207LH primer. This adhesive system is used to bond a variety of rubber compounds to metal and plastic substrates during vulcanization. It is formulated without heavy metals and composed of a mixture of polymers and heat-reactive components dissolved or dispersed in a low HAP organic solvent system.

This adhesive system will bond compounds based on natural rubber (NR), polyisoprene (IR), styrene-butadiene (SBR), polybutadiene (BR), polychloroprene (CR), nitrile (NBR), butyl (IIR) and EPDM polymers to most metals, alloys and rigid plastic substrates.

Chemlok 205LH or 207LH primer helps to ensure environmental resistance of the bonded assembly and adhesion to the substrate.

Features and Benefits

Versatile – bonds a wide variety of elastomer compounds to rigid substrates during vulcanization.

Easy to Apply – applies easily by spray methods.

Environmentally Resistant – provides good resistance to heat, oil and corrosive-type conditions.

Environmentally Preferred – contains low HAP content; formulated without heavy metals.

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	100 - 700
Density	
kg/m^3	970.6 - 1018.5
(lb/gal)	(8.1 - 8.5)
Solids Content by Weight, %	22 - 26
Flash Point (Seta), °C (°F)	14 (58)
Solvents	N-Butyl Propionate, Dimethyl Carbonate, Naphtha

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

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 6411LH adhesive. For further details on the use of Chemlok 205LH or 207LH primer, refer to the applicable data sheet.

Mixing – Thoroughly stir Chemlok 6411LH adhesive before applying adhesive over primer. Agitate sufficiently during use to keep dispersed solids uniformly suspended.

Dilute adhesive to a Zahn Cup #2 viscosity of 25-28 seconds. Use t-butyl acetate in a ratio of approximately 75 parts adhesive to 25 parts solvent, by weight or by volume.

Applying – Apply Chemlok 6411LH adhesive by spray methods. Avoid applying thick coats which result in poor drying and may lead to film displacement during molding.

Tip sizes of 1.07-1.40 mm (0.042-0.055 in) are appropriate. Maintain atomization pressures at 0.345-0.379 MPa (50-55 psi) for best atomization.

Optimal film thickness for a particular bonded part is dependent on the rubber formulation and the level of adhesion required. The following dry film thicknesses are recommended for normal use:

Chemlok 205LH or 207LH	5.1-10.5 micron (0.2-0.4 mil)
Chemlok 6411LH	15.2-25.4 micron (0.6-1.0 mil)

Drying/Curing – Allow applied adhesive to air-dry for 30 minutes at room temperature. Drying time can be shortened by using hot air drying ovens or tunnels up to 90°C (194°F).

Dried films of Chemlok 6411LH 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 the tote pans to prevent contamination by dirt, dust, grease, oil, etc. If properly protected, coated parts can be stored for up to 30 days between adhesive application and bonding without adversely effecting the bond performance.

Shelf Life/Storage

Shelf life is six months from date of shipment when stored below 25°C (77°F) in original, unopened container.

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 provides valuable expertise in adhesives and coatings, vibration and motion control, and magnetically responsive technologies. Our people work in collaboration with our customers to help them increase the value of their products. Innovative and responsive in an ever-changing marketplace, we are focused on providing solutions for our customers worldwide ... Ask Us How.

LORD Corporation
World Headquarters
111 Lord Drive
Cary, NC 27511-7923
USA

Customer Support Center (in United States & Canada)
+1 877 ASK LORD (275 5673)

www.lord.com

For a listing of our worldwide locations, visit LORD.com.

LORD
Ask Us How™