

LORD® 7701 Adhesion Enhancer/Surface Modifier

Description

LORD® 7701 adhesion enhancer/surface modifier is a solvent-based surface treatment for use on various vulcanized and thermoplastic polymeric materials. LORD 7701 adhesion enhancer/surface modifier chemically alters the surface of the rubber, making it more receptive to bonding. Do not apply to metal surfaces.

LORD 7701 adhesion enhancer/surface modifier is used in conjunction with a broad range of LORD adhesives, including epoxy and urethane adhesives, for bonding cured rubber. It improves adhesion to a variety of cured and thermoplastic polymeric materials, including natural rubber, synthetic polyisoprene, SBR, butyl, polybutadiene, neoprene, EPDM, nitrile, polyurethane, styrene-butadiene block copolymers, styrene isoprene rubbers and polyvinyl chloride.

Features and Benefits

Versatile – functions as a cleaner and surface conditioner; treats a wide variety of elastomer functional materials.

Easy to Apply – applies easily by wipe, brush, dip or flood methods.

Convenient – requires no mixing.

Improved Adhesion – improves adhesion to cast urethanes and cured rubber.

Fast Drying – adhesion enhancer/surface modifier flashes off within five minutes or less.

Environmentally Resistant – promotes increased environmental resistance by allowing the treated surface to be more easily wet.

Application

Surface Preparation – Remove contaminants from rubber surface using a solvent wipe.

Applying – Apply LORD 7701 adhesion enhancer/surface modifier by wipe, brush, dip or flood methods. Spray application is not recommended due to the reactivity of the material.

Transfer the minimum amount of material necessary for the application into a new, clean container.

Typical Properties*

Appearance	Clear to Cloudy Liquid
Density	
lb/gal	7.3-7.8
(kg/m ³)	(870.0-930.0)
Solids Content by Weight, %	2.3-3.5
Flash Point (Seta), °F (°C)	25 (-4)
Solvent	Ethyl Acetate

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

- Wiping (preferred method)
Apply adhesion enhancer/surface modifier using a clean cotton rag. Change the rag frequently as it becomes contaminated with materials picked up from the surface being treated.
- Brushing
Apply adhesion enhancer/surface modifier using a bristle or foam brush. Check foam-type brushes for compatibility before use. Use bristle brushes from man-made materials. Do not allow brushes with metal handles or metal collars to come in contact with the adhesion enhancer/surface modifier.
- Dipping
Immerse parts in adhesion enhancer/surface modifier. Place treated parts on a rack to allow excess material to drip off and the solvent to flash off.

To prevent contamination, discard excess material; do not return excess material to original container.

The treatment is complete after the solvent flashes off (<5 minutes). Rinsing is not necessary. The best bonds are achieved by assembling parts shortly after the solvent has flashed off. However, effective bonds have been obtained on parts stored under controlled conditions. Parts can be retreated, as necessary.

Cleanup – Use ethyl acetate for clean up. In the event of a spill, use large quantities of water to flush the area.

Shelf Life/Storage

Shelf life is six months from date of shipment when stored at 70-80°F (21-27°C) in original, unopened container.

Avoid storage in lit areas. Store material in original container or UV-filtering plastic or glass container. Do not store in metal containers. Store LORD 7701 adhesion enhancer/surface modifier in a cool, dark area away from oil, grease, sawdust, floor sweepings, easily oxidized organic compounds, ammonia, amines, ammonia salts, and metallic materials. Do not contaminate with water or alcohol.

Bond Performance of Epoxy Adhesive*

	Epoxy Adhesive to Natural	Epoxy Adhesive to SBR	Epoxy Adhesive to Nitrile
LORD 7701 Adhesion Enhancer/ Surface Modifier	40-50 pli 100% R	105-120 pli 100% R	75-85 pli 100% R

* Typical ranges reflect results of lab testing using LORD 305-1/305-2 adhesive (1:1 by weight) or LORD 320/310B adhesive (1:1 by weight).
 R = Rubber Failure
 1/10" x 6" x 1" (0.3 cm x 15 cm x 2 cm) rubber part bonded to grit-blasted steel; cure 48 hours @ room temperature
 ASTM D429-B 45° angle

Bond Performance of Castable Polyurethane

	Cast Urethane to Natural	Cast Urethane to SBR	Cast Urethane to Nitrile	Cast Urethane to Polychloroprene
LORD 7701 Adhesion Enhancer/ Surface Modifier	105-120 pli 100 % R	75-85 pli 100 % R, SB	70-80 pli 100% R	40-50 pli 100% R
No Treatment	10-15 pli 0% R	0 pli 0% R	40-45 pli 0% R	30-40 pli 0% R

R = Rubber Failure; SB = Stock Break
 1/10" x 6" x 1" (0.3 cm x 15 cm x 2 cm) rubber part bonded to grit-blasted steel; cure 48 hours @ room temperature
 ASTM D429-B 45° angle

LORD TECHNICAL DATA

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.

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.

Information provided herein is based upon tests believed to be reliable. In as much as LORD Corporation has no control over the manner in which others may use this information, it does not guarantee the results to be obtained. In addition, LORD Corporation does not guarantee the performance of the product or the results obtained from the use of the product or this information where the product has been repackaged by any third party, including but not limited to any product end-user. Nor does the company make any express or implied warranty of merchantability or fitness for a particular purpose concerning the effects or results of such use.

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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.

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