LORD® HRC Heat-Reflective Coating

Description

LORD® HRC heat-reflective coating is a two-component fluoroelastomer coating which features heat reflectiveness, robust adhesion and exceptional mechanical properties. This coating greatly enhances fuel and fluid resistance for a wide variety of elastomeric substrates.

Application of LORD HRC coating on the surface of an elastomeric part allows the bulk of the component to be made of less expensive, less fluid resistant material.

Features and Benefits

Heat Reflective – reflects radiant heat away from the coated parts, enabling parts to operate at cooler temperatures; UL 94 V-0 certified.

Easy to Use – prepackaged kit includes coating and curative in the proper mix ratio; cures at room temperature.

Cost Effective – eliminates the need to design parts using expensive elastomers (i.e., silicone); reduces or eliminates the need for heat shields. Resultant system allows engineers to design smaller engine compartments by removing existing heat shields, enabling improved CAFE (Corporate Average Fuel Economy) performance.

Fluid Resistant – provides high temperature, fuel and fluid resistant barrier to external surface of elastomeric part, providing longer life and higher reliability.

Noise Reduction – eliminates rattle produced by loose heat shields.

Application

Surface Preparation – Clean elastomer surface with warm alkaline cleaners and high agitation or aggressive xylene wipe. If necessary, prime or treat elastomer surface with appropriate primer as noted in the table below. Contact your LORD representative if assistance is needed on surface preparation for a specific elastomer.

	Approved Primer		
Elastomer Substrate	**North & South America**	**Europe**	**Asia**
EPDM	Chemlok® 459X primer	Chemlok 459X primer or Cuvertin® X 8536 primer	Chemlok 459X primer, RC1036 or RC1000
Natural Rubber	Chemlok 290** surface treatment	Chemlok 290** surface treatment	RC1040**

*** If adhesion is not acceptable with Chemlok 290 surface treatment or RC1040, use Chemlok 7701 surface treatment.*

Typical Properties*

	HRC A Coating	HRC B Curative	Mixed
Appearance	Dark Gray Liquid	Clear Liquid	Silver Liquid
Viscosity @ 25°C (77°F)			
cps Brookfield LVT, Spindle 1, 60 rpm	–	75-300	–
seconds, Zahn Cup #3	20-30	–	20-30
seconds, Zahn Cup #2	74-112	–	74-112
Density			
kg/m^3	892.5-928.5	947.8	892.5-928.5
(lb/gal)	(7.45-7.75)	(7.91)	(7.45-7.75)
Solids Content by Weight, %	19.97-22.97	99.5	19.97-22.97
Flash Point (Seta), °C (°F)	15 (60)	92.8 (199)	15 (60)
Solvents	Methyl Isobutyl Ketone (MIBK)		

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

Mixing – Mix LORD HRC coating components using the following mix ratio:

	by Weight	by Volume
HRC A coating	100.0	1 gal
HRC B curative	2.5	3 fl oz

Transfer LORD HRC A coating into a clean mixing container and stir with round mixer (e.g., Jiffy mixer). Do not use a shear-type dispersion mixing blade. While stirring, add LORD HRC B curative and mix until uniform in color and consistency. If using a pressure pot, install a clean pot liner and mix components in the lined pot.

Dilute coating with MIBK to a Zahn Cup #2 viscosity of 29-39 seconds (Zahn Cup #3, 11-15 seconds). Stir coating until uniform. If applying LORD HRC coating from a pressure pot, use an air agitator mixer lid to prevent product from settling.

Usable working life and resultant adhesion may vary depending on handling and exposure to moisture. Suggested working life of mixed LORD HRC coating is 72 hours maximum, unless testing indicates otherwise.

Applying – Apply coating by HVLP spray equipment to a suggested dry film thickness of 0.75-1.0 mil (19.0-25.4 micron). Two coating applications may be necessary to build film thickness. Allow coating to dry between coats for 2 minutes at 50-65°C (130-150°F).

Drying/Curing – Dry coating in oven for 1-3 minutes at 50-65°C (130-150°F). Coated parts can be handled after removal from oven. The coating develops full cure and optimum adhesion properties at room temperature after 72 hours.

If bulk packaging the coated parts, it is recommended to spray parts with anti-blocking material, such as talc, prior to placing parts into a bin to prevent parts from sticking together.

Cleanup

- Within 15 minutes after application
  To remove uncured LORD HRC coating, use a lint-free cloth, Scotchbrite pad or non-metallic brush soaked with acetone or MIBK.
- Greater than 15 minutes after application
  Cured LORD HRC coating is most easily removed from metallic surfaces by mechanical means. Acetone or MIBK may be used to soften the coating and assist in removal.

CAUTION: Do not allow ketones to come in contact with bonded rubber surfaces or uncured LORD HRC coating. Use caution to ensure cleanup procedures do not damage surfaces where the LORD HRC coating is intended to remain on the final part.

Shelf Life/Storage

Shelf life of each component is six months from date of shipment when stored at 21-27°C (70-80°F) in original, unopened container. Do not store or use near heat, sparks or open flame.

Keep the container tightly capped when not in use to prevent solvent evaporation and moisture contamination.

Cautionary Information

LORD HRC coating must be applied under/in an operating ventilating exhaust booth. Wear chemical resistant gloves and chemical splash goggles when handling this coating. Avoid contact with skin and eyes. In case of accidental contact, wash skin thoroughly with soap and water; for eyes, flush with water and obtain medical help at once. Do not smoke or eat in application/handling area.

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.

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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