



THIXON™ 511-EF

Description THIXON™ 511-EF is a vulcanizing cover coat adhesive used with THIXON™ or MEGUM™ adhesive primers for bonding natural rubber, SBR, EPDM, chloroprene, chlorosulfonated-polyethylene, butyl, and nitrile rubbers. Formulated without reportable levels of lead (or other heavy metals), chlorinated solvents and ozone depleting chemicals.

Can also be used as a splice adhesive for bonding uncured rubber compounds to previously cured rubbers, and as an intermediate adhesive with a tie coat adhesive for open steam or autoclave curing tank linings.

Benefits & Features Good long standing cover coat adhesive that has been used in very demanding application in building, automotive and industrial applications. Along with the appropriate THIXON™ OR MEGUM™ Primers, this system will provide robust performance on an economical basis.

Uncured Properties	Nominal Value	Unit	Test Method
Color	Black		
Solids Content			
-- ¹	14	%	
-- ²	20 to 23	%	ASTM D2369
Density	0.947 to 0.971	g/cm ³	ASTM D1475
Dry Film Density	1.6	g/cm ³	
VOC Content	6.30	lb/gal	
Flash Point ³	27.0	°C	
Viscosity			
25°C	21 to 43	sec	Zahn Cup 3
25°C ⁴	190 to 450	sec	ASTM D1084
Theoretical Coverage ⁵	9.30	m ² /l	
Recommended Film Thickness	20	µm	
Recommended Film Thickness Range	13 to 38	µm	
Shelf Life ⁶ (25°C)	18	month	

Elastomer

Vulcanizing cover coat adhesive used with THIXON™ or MEGUM™ adhesive primers for bonding natural rubber, SBR, EPDM, chloroprene, chlorosulfonated-polyethylene, butyl, and nitrile rubbers.

Substrate

CRS, SS, Cu, Brass, Zn and Mg Alloys with a THIXON™, MEGUM™ or ROBOND™ Primer.

Surface Prep

Review Dow 's rubber-to-substrate bonding agent application guide or contact your account manager.

Mix Instructions

Diluents - Toluene or xylene

First, thoroughly mix THIXON™ 511-EF with a high speed propeller-type agitator. If diluting, slowly add the diluents to the adhesive while mixing constantly. Otherwise, the polymer base may precipitate from solution.

Continue to mix THIXON™ 511-EF while spraying or dipping to keep the dispersed solids from settling to the bottom. This will assure that a homogenous mixture of the adhesive is applied.

Application Technique

Brushing: use undiluted. To obtain the required film thickness, flow on a heavy wet film without brushing excessively.

Dipping: dilute 3 parts product with 1 part diluent to obtain a viscosity of 25 seconds, #2 G.E. Zahn cup to obtain a film thickness of 0.5 to 0.7 mil.

Spraying: dilute 2 parts product with 1 part diluent to obtain a viscosity of 20 seconds, #2 G.E. Zahn cup.

Drying the Film

The drying time is approximately 30 minutes at 16°-27°C (60°-80°F). At lower temperatures, dry longer. The drying time can be shortened by force drying five minutes at 82°C (180°F). Do not dry at temperatures above 121°C (250°F).

Molding and Curing

Can be used with all common molding and curing methods. Cure temperatures between 100°C and 173°C (212 and 345°F) are recommended.

Pre-Bake Resistance

Coated inserts can be pre-baked for up to 5 minutes at 160°C (320°F) without adversely affecting bond quality.

Dry Film Stability

Excellent dry film stability. Inserts coated with product can be stored for several weeks if protected from contaminants.

Clean-up

Equipment clean up should be done using recommended dilution solvents.

Packaging/Sizes Available

Drums, pails and cans.

Storage & Stability

The shelf life of this material is assured for 6 months (from the date of manufacture) at temperatures below 78°F in an unopened container.

Toxicity and Safety Information

Read the Safety Data Sheet before using this material. Toxicity and safety information is included in the SDS.

Food Contact Applications

Dow Automotive products are not approved for direct or indirect food contact or drinking water applications. If your applications include food contact or drinking water requirements, please contact your Dow representative. For more information on the regulatory status of this product, please refer to the SDS for this product.

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ By volume

² Non-volatile solids by weight

³ SetaFlash Closed Cup

⁴ Brookfield RV#3 spindle @ 100 RPM

⁵ Applied at a dry film thickness of 0.6 mil

⁶ Unopened

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