



THIXON™ P-11-EF

Description THIXON™ P-11-EF is a vulcanizing adhesive primer used with all MEGUM™ or THIXON™ cover coat adhesives for bonding most elastomers to various substrates. Can also be used as a one coat for bonding polar elastomers and will bond metal substrates including hot and cold rolled steel, stainless steel alloys, brass, aluminum and zinc plated metals.

Benefits & Features This is a very mature product being part of the product line for 4-5 decades. It is a very good general use primer coat for rubber to metal applications. Providing excellent boiling water and salt spray resistance.

Uncured Properties	Nominal Value	Unit	Test Method
Color	Grey		
Solids Content			
-- 1	12	%	
-- 2	22 to 26	%	ASTM D2369
Density	0.911 to 0.959	g/cm ³	ASTM D1475
Dry Film Density	2.1	g/cm ³	
VOC Content	5.90	lb/gal	
Flash Point	13.9	°C	DIN 53213
Viscosity ³ (25°C, Brookfield LV)	0.080 to 0.18	Pa·s	ASTM D1084
Viscosity (25°C)	26 to 47	sec	Zahn Cup 2
Theoretical Coverage ⁴	16.5	m ² /l	
Recommended Film Thickness	7.5	µm	
Recommended Film Thickness Range	5.0 to 10	µm	
Shelf Life ⁵ (25°C)	12	month	

Elastomer

This material is typically a primer coat for good environmental resistance under THIXON™ and MEGUM™ Cover and OSN-2 type coats. It can be used as a 1-coat bonding system for polar rubber compounds based on NBR, ACM, CR and AEM.

Substrate

Will bond various metals including hot and cold rolled steel, stainless steel alloys, brass, aluminum and zinc plated metals. Along with metals pre-treated with zinc, manganese and iron phosphate.

Surface Prep

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

Mix Instructions

Diluents - MEK or MIBK

First, thoroughly mix THIXON™ P-21 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™ P-21 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.

- 1 part adhesive: 0 part diluent - estimate 24.5% theoretical solids
- 1 part adhesive: 0.25 part diluent - estimate 19.6% theoretical solids
- 1 part adhesive: 0.5 part diluent - estimate 16.3% theoretical solids
- 1 part adhesive: 0.75 part diluent - estimate 14.0% theoretical solids
- 1 part adhesive: 1.0 part diluent - estimate 12.3% theoretical solids
- 1 part adhesive: 1.25 part diluent - estimate 10.9% theoretical solids

Application Technique

Brushing: apply product undiluted. To obtain the required film thickness, brush on a heavy wet film without brushing excessively.

Dipping: use undiluted, or dilute 10 parts product with 1 part MEK or MIBK.

Spraying: dilute 2 parts product with one part diluents.

Drying the Film

The drying time is approximately 60 minutes at 60°-80°F. At lower temperatures, dry longer. The drying time can be shortened by force drying 5 minutes at 82°C (180°F). Do not dry at temperatures above 120°C (250°F).

Molding and Curing

Can be used with all common molding and curing methods. Cure temperatures between 100°C and 205°C (250 and 400°F) are recommended.

Pre-Bake Resistance

Coated inserts can be pre-baked for up to 5 minutes at 163°C (325°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, 2 g/130°C/1 hour

³ Spindle #2, @ 30 RPM

⁴ Applied at a dry film thickness of 0.3 mil

⁵ Unopened

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