



# THIXON™ 520-EF

**Description** THIXON™ 520-EF is a general purpose cover coat adhesive used for bonding rubber compounds to metals and other rigid substrates during vulcanization. In rubber to metal bonding applications, THIXON™ 520-EF requires a MEGUM™ or THIXON™ primer. Other rigid substrates such as thermoplastics and other metal alloys may not require a primer. However, environmental resistances of the final application need to be considered.

THIXON™ 520-EF consists of reactive polymers and pigments in xylene. It is formulated without reportable levels of lead or other heavy metals.

MEGUM™ or THIXON™ primers adhere to hot and cold rolled steel, stainless steel, aluminum, brass and thermoplastics such as polyamides and polyesters.

**Benefits & Features** THIXON™ 520-EF has well-balanced performance based on standard industry test specifications (ASTM D429-WDK2000). THIXON™ 520-EF has good boiling water, heat and pre-bake resistance. THIXON™ 520-EF enables global standardization and consolidation. Based on the chemistry, THIXON™ 520-EF displays low mold fouling properties.

Uncured Properties	Nominal Value	Unit	Test Method
Color	Black		
Solids Content			
-- <sup>1</sup>	16	%	
-- <sup>2</sup>	26	%	ASTM D2369
Density	0.995	g/cm <sup>3</sup>	ASTM D1475
Dry Film Density	1.7	g/cm <sup>3</sup>	
VOC Content	6.80	lb/gal	
Flash Point <sup>3</sup>	25.0	°C	ASTM D3276
Viscosity <sup>4</sup> (20°C, Brookfield LV)	0.085 to 0.30	Pa·s	ASTM D1084
Viscosity (25°C)	13 to 31	sec	Zahn Cup 3
Theoretical Coverage <sup>5</sup>	10.3	m <sup>2</sup> /l	
Recommended Film Thickness	20	µm	
Recommended Film Thickness Range	10 to 25	µm	
Shelf Life <sup>6</sup> (25°C)	24	month	

**Elastomer**

NR,CR,SBR,IIR,AND NBR compounds

**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 - Use an aromatic solvent, such as toluene or xylene as the diluent.

First, thoroughly mix THIXON™ 520-EF with a high speed propeller-type agitator. If diluting, slowly add the diluent to the adhesive while mixing constantly. Continue to mix THIXON™ 520-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.

- 1 part adhesive: 0 part diluent- estimate 26.0% theoretical solids
- 1 part adhesive: 0.2 part diluent - estimate 21.7% theoretical solids
- 1 part adhesive: 0.5 part diluent - estimate 17.3% theoretical solids
- 1 part adhesive: 0.8 part diluent - estimate 14.4% theoretical solids
- 1 part adhesive: 1.0 part diluent - estimate 13.0% theoretical solids

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**Application Technique**

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

Dipping: use undiluted or dilute 3-4 parts product with 1 part diluent.

Spraying: for spray applications, dilute two parts product with one part diluent to obtain a viscosity of 20-30 sec. #2 Zahn cup or 195 cps.

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**Drying the Film**

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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).

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**Molding and Curing**

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Can be used with all common molding and curing methods. Cure temperatures between 121.1°C and 190°C (250°F and 375°F) are recommended.

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**Pre-Bake Resistance**

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Outstanding pre-bake resistance. Depending on the rubber formulation, coated inserts can be pre-baked for up to 5-10 minutes at 160°C (320°F) without adversely affecting bond quality.

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**Dry Film Stability**

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Excellent dry film stability. Inserts coated with product can be stored for several months in clean, dry and contaminant free environment plus protected from natural and fluorescent light.

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**Clean-up**

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Equipment clean up should be done using recommended dilution solvents.

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**Packaging/Sizes Available**

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Drums, pails and cans.

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**Storage & Stability**

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The shelf life of this material is assured for 12 months (from the date of manufacture) at temperatures below 78°F in an unopened container.

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**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.

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<sup>1</sup> By volume

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<sup>2</sup> Non-volatile solids by weight

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<sup>3</sup> Seta Closed Cup

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<sup>4</sup> Spindle #2, @ 30 RPM

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<sup>5</sup> Applied at a dry film thickness of 15 microns/0.6 mils

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<sup>6</sup> Unopened

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## Additional Information

<b>North America</b>		<b>Europe/Middle East</b>	+800-3694-6367
U.S. & Canada:	1-800-441-4369		+31-11567-2626
	1-989-832-1426	Italy:	+800-783-825
Mexico:	+1-800-441-4369		
<b>Latin America</b>		<b>South Africa</b>	+800-99-5078
Argentina:	+54-11-4319-0100		
Brazil:	+55-11-5188-9000		
Colombia:	+57-1-219-6000	<b>Asia Pacific</b>	+800-7776-7776
Mexico:	+52-55-5201-4700		+603-7965-5392

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