



# MEGUM™ 3299

**Description** MEGUM™ 3299 is a one-coat adhesive for the bonding of fluorocarbon rubbers to metals and other solid materials during vulcanization. Particularly suitable for the bonding of peroxide cured fluorocarbon rubber.

**Benefits & Features** This rubber to substrate bonding system is particularly useful in bonding peroxide cured FKM, FFKM and base-resistant (BRE) FKM compounds.

Uncured Properties	Nominal Value	Unit	Test Method
Color	Clear/Yellow Tint		
Solids Content			
-- <sup>1</sup>	6.2	%	
-- <sup>2</sup>	6.5 to 8.0	%	ASTM D2369
Density	0.799 to 0.839	g/cm <sup>3</sup>	ASTM D1475
Dry Film Density	1.0	g/cm <sup>3</sup>	
VOC Content	6.10	lb/gal	
Flash Point <sup>3</sup>	13.0	°C	
Viscosity <sup>4</sup> (20°C, Brookfield RVT)	1.0E-3 to 3.0E-3	Pa·s	ASTM D1084
Theoretical Coverage <sup>5</sup>	76.0	m <sup>2</sup> /l	
Recommended Film Thickness	0.20	µm	
Recommended Film Thickness Range	0.10 to 0.30	µm	
Shelf Life <sup>6</sup> (25°C)	24	month	

**Elastomer**

FKM, FFKM, VMQ, BRE-FKM and some peroxide cured HNBR and EPDM.

**Substrate**

CRS, Phosphate pre-treated CRS, Aluminum alloys, Stainless Steel, copper alloys, and plastics like glass-filled polyamides, polyacetals and polyesters.

**Surface Prep**

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

**Mix Instructions**

Diluents - Ethanol or mixture of Ethanol and MEK

First, thoroughly mix MEGUM™ 3299-1LD with a high speed propeller-type agitator. If diluting, slowly add the diluent to the adhesive while mixing constantly. Otherwise, the polymer base may precipitate from solution.

Recommended dilution is 1 part product to 3 parts diluent; however, a dilution study using customer rubber compounds and substrate preparation will determine ultimate dilution and concentration of this bonding agent.

- 1 part adhesive: 0 part diluent - estimate 7.0% theoretical solids
- 1 part adhesive: 0.5 part diluent - estimate 4.7% theoretical solids
- 1 part adhesive: 0.75 part diluent - estimate 4.0% theoretical solids
- 1 part adhesive: 1.0 part diluent - estimate 3.5% theoretical solids
- 1 part adhesive: 1.5 part diluent - estimate 2.8% theoretical solids
- 1 part adhesive: 2.0 part diluent - estimate 2.3% theoretical solids
- 1 part adhesive: 2.5 part diluent - estimate 2.0% theoretical solids
- 1 part adhesive: 3.0 part diluent - estimate 1.75% theoretical solids

**Application Technique**

Product may be applied with reverse roll coater, spray or dip. Spray or dip coating may require dilution of the adhesive.

Brushing: dilute one part product with 0.5 - 3 parts diluent.

Spraying: dilute one part product with one to six parts diluent.

**Drying the Film**

The drying time is approximately 15 minutes at 82°C (180°F); 10 minutes at 100°C (212°F) or 5 minutes at 130°C (266°F).

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**Molding and Curing**

Can be used with all common molding and curing methods. Cure temperatures between 150°C and 210°C (300°F and 410°F) are recommended.

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**Pre-Bake Resistance**

Coated inserts can be pre-baked for up to 10 minutes at 160°C (320°F) without adversely affecting bond quality.

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**Dry Film Stability**

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

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**Clean-up**

Equipment clean up should be done using recommended dilution solvents.

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**Packaging/Sizes Available**

Drums, pails and cans.

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**Storage & Stability**

The shelf life of this material is assured for 24 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.

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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> ULA Spindle, @ 100 RPM

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<sup>5</sup> Applied at a dry film thickness of 0.04 mil

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<sup>6</sup> Unopened

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