



THIXON™ 405 (Clear/Black)

Description THIXON™ 405 (Clear/Black) is a one-coat adhesive for bonding castable polyurethane compounds and bonds thermoplastic polyurethanes to metal and other substrates. .

Benefits & Features Good one-coat system for Thermoplastic Urethane to metal bonding.

Uncured Properties	Nominal Value	Unit	Test Method
Color		Black	
		Blue	
		Clear/Transparent	
		Yellow	
Solids Content			
-- 1	20	%	
-- 2	22 to 27	%	ASTM D2369
Density	0.947 to 0.971	g/cm ³	ASTM D1475
Dry Film Density	0.95	g/cm ³	
VOC Content	6.00	lb/gal	
Flash Point ³	4.40	°C	
Viscosity ⁴ (25°C, Brookfield RVT)	0.10 to 0.50	Pa·s	ASTM D1084
Viscosity (25°C)	14 to 50	sec	Zahn Cup 3
Theoretical Coverage ⁵	10.4	m ² /l	
Recommended Film Thickness	20	µm	
Recommended Film Thickness Range	15 to 50	µm	
Shelf Life ⁶ (25°C)	24	month	

Elastomer

Castable Polyurethanes and thermoplastic urethanes.

Substrate

CRS, Phosphate or grit blast pre-treated CRS, Aluminum, Stainless Steel, fiberglass, polyester, nylon, rayon fibers, etc.

Surface Prep

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

Mix Instructions

Diluent - Use THIXON™ 907 as the diluent or a blend of 5 parts glycol ether acetate, 4 parts MEK, and 1 part toluene.

First, thoroughly mix THIXON™ 405 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™ 405 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. Brush on a heavy wet film without excessively brushing. For most industrial applications, apply two coats.

Dipping: dilute 3 parts product with 1 part diluent, by volume. This will give a viscosity of 28 to 32 sec. #2 G.E. Zahn cup.

Spraying: dilute 3 parts product with 2 parts diluent, by volume. This will give a viscosity of 22 to 26 seconds #2 G.E. Zahn cup.

Drying the Film

The drying time is 30-50 minutes at room temperature.

Molding and Curing

Most molding and curing methods. Use a cure temperature between 190 to 350°F.

Pre-Bake Resistance

For the best results, prebake the coated metals for ½ to 3 hours at 200 to 300°F, depending on the weight of the metal. This product can withstand prebaking in forced air convection ovens, with proper ventilation, for up to 16 hours at 250°F.

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 Spindle #1, @ 20 RPM

⁵ Applied at a dry film thickness of 0.4 mil

⁶ Unopened

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Additional Information

North America		Europe/Middle East	+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		
Latin America		South Africa	+800-99-5078
Argentina:	+54-11-4319-0100		
Brazil:	+55-11-5188-9000		
Colombia:	+57-1-219-6000	Asia Pacific	+800-7776-7776
Mexico:	+52-55-5201-4700		+603-7965-5392

www.dowautomotive.com

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