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

<table>
<thead>
<tr>
<th>Nominal Value</th>
<th>Unit</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Black</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Blue</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Clear/Transparent</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Yellow</td>
<td></td>
</tr>
<tr>
<td>Solids Content</td>
<td>20 %</td>
<td>ASTM D2369</td>
</tr>
<tr>
<td>Density</td>
<td>0.947 to 0.971 g/cm³</td>
<td>ASTM D1475</td>
</tr>
<tr>
<td>Dry Film Density</td>
<td>0.95 g/cm³</td>
<td></td>
</tr>
<tr>
<td>VOC Content</td>
<td>6.00 lb/gal</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>4.40 °C</td>
<td>ASTM D1084</td>
</tr>
<tr>
<td>Viscosity (25°C, Brookfield RVT)</td>
<td>0.10 to 0.50 Pa·s</td>
<td>ASTM D1084</td>
</tr>
<tr>
<td>Viscosity (25°C)</td>
<td>14 to 50 sec</td>
<td>Zahn Cup 3</td>
</tr>
<tr>
<td>Theoretical Coverage</td>
<td>10.4 m²/l</td>
<td></td>
</tr>
<tr>
<td>Recommended Film Thickness</td>
<td>20 µm</td>
<td></td>
</tr>
<tr>
<td>Recommended Film Thickness Range</td>
<td>15 to 50 µm</td>
<td></td>
</tr>
<tr>
<td>Shelf Life (25°C)</td>
<td>24 month</td>
<td></td>
</tr>
</tbody>
</table>

**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
U.S. & Canada: 1-800-441-4369
1-989-832-1426
Mexico: 1-800-441-4369

Europe/Middle East
U.K.: +44-1628-432333
France: +33-1-45-68-45-68
Italy: +39-0839-240-240

Latin America
Argentina: +54-11-4319-0100
Brazil: +55-11-5188-9000
Colombia: +57-1-219-6000
Mexico: +52-55-5201-4700

South Africa
+800-99-5078

Asia Pacific
+800-7776-7776
+603-7965-5392

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