THIXON™ 422 Solvent-Based Adhesive

**Description**

Thixon 422 is a one-component adhesive for bonding castable urethane to metal substrates. Thixon 422 has very good high temperature resistance.

**Typical Physical Properties**

These properties are typical but do not constitute specifications.

<table>
<thead>
<tr>
<th>Property</th>
<th>ASTM Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Amber or red</td>
</tr>
<tr>
<td>Viscosity, Brookfield #3</td>
<td>350 cps</td>
</tr>
<tr>
<td>spindle at 100 RPM</td>
<td>D-1084</td>
</tr>
<tr>
<td>Non-volatile solids by weight</td>
<td>18%</td>
</tr>
<tr>
<td>Spec. Gravity</td>
<td>0.88</td>
</tr>
<tr>
<td>Weight per gal</td>
<td>7.3 lb</td>
</tr>
<tr>
<td>Flash Point (Seta)</td>
<td>24°F</td>
</tr>
<tr>
<td>Shelf life at 78°F (unopened)</td>
<td>18 months</td>
</tr>
<tr>
<td>Cure temp range</td>
<td>190 to 220°F</td>
</tr>
</tbody>
</table>

†Modified to internal Rohm and Haas method

**Environmental Resistance**

Properly preparing the bonds will resist oil, exposure to salt fog, and water immersion.

**Preparing the Surfaces**

Properly preparing the substrates is the most important factor in obtaining consistent, high quality bonds. Gritblast ferrous metal substrates with #40 or #50 steel grit; gritblast nonferrous substrates with #40 or #50 aluminum oxide grit. Then solvent degrease the metal substrates.

**Mixing and Diluting**

Thoroughly mix Thixon 422 with a high speed propeller-type agitator before using.

Diluent - Use PM acetate, or Thixon 917 solvent blend as the diluent.

**Applying the Adhesive**

Thixon 422 can be applied by brushing, dipping, or spraying. Apply Thixon 422 heavily enough to yield a dry film thickness of .5 to 1.5 mils.

Conventional Air Spray - For spray applications, use 2 parts Thixon 422 with up to 4 parts PM acetate by volume. This will give a viscosity of 18 to 20 seconds, #2 G.E. Zahn cup. Using other solvents will cause cobwebbing.
Pressure Tanks - Pressure tanks must be equipped with an agitator and must be ASME rated for industrial use.

Flow Rate - 300 to 400 cc per minute.

Atomization Pressure - 40 to 80 psi.

To clean your equipment, use PM acetate or Thixon 917 solvent blend.

**Theoretical Coverage**

One gallon of Thixon 422 applied at a dry film thickness of .5 mil will cover approximately 448 square feet.

**Drying the Film**

Thoroughly dry the film of Thixon 422 before continuing, approximately 30 to 50 minutes at room temperature (60°-80°F).

**Dry Film Stability**

Thixon 422 has excellent dry film stability. Parts coated with Thixon 422 can be stored up to 2 weeks before use if protected from contaminants.

**Oven Prebaking**

For the best adhesion, prebake coated inserts for ½ to 3 hours at 200 to 220°F in a forced air convection oven equipped with proper ventilation. Thixon 422 can be prebaked for up to 8 hours at 220°F without adversely affecting the bond.

**Molding and Curing**

Thixon 422 can be used with all common molding and curing techniques. Use a cure temperature between 190 and 220°F.

To prepare the urethane, preheat the prepolymer and the curing agent to the recommended temperatures. Degas the prepolymer at 5mm Hg vacuum. Combine the curative and the urethane, and mix thoroughly. Then, cast the urethane.

Cure the parts in the oven according to the time and temperature cycle required for the urethane polymer.

**Toxicity and Safety Information**

**Read the Material Safety Data Sheet before using this material.** Toxicity and safety information is included on MSDS.

**Storage and Handling Information**

**Read the Material Safety Data Sheet, Section 7, for the safe handling and storage of the product.** Store in a cool, dry, well-ventilated area away from heat, ignition sources and direct sunlight. Keep containers tightly closed. Containers should be supported and grounded before opening, dispensing, mixing, pouring and emptying.
For questions regarding the handling of empty containers or dry film with respect to the hazardous waste regulations, we suggest you contact the RCRA Hotline sponsored by US EPA at 1-800-424-9346 or your local/state environmental agencies.

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