VOLATILE ORGANIC COMPOUNDS TECHNICAL DATA SURFACE PREPARATION COATING SYSTEM PRODUCT PROFILE

**GENERIC DESCRIPTION**
Inorganic Hybrid Water-Based Epoxy

**COMMON USAGE**
An advanced generation, water-based epoxy coating that is low odor, low VOC, and specially formulated with corrosion-inhibitive properties for the long-term protection of steel substrates. Excellent when used as a primer or intermediate coat within a high-performance coating system. Offers excellent adhesion to metal substrates and provides exceptional corrosion protection up to 400°F (204°C). Formula protected under U.S. patent.

**COLORS**
Series 1224 at 4.0 - 6.0 mils meets AISC requirements of Class A surface with a mean slip coefficient no less than 0.30 and a tension creep not in excess of 0.015 inches (0.38 mm).

**FINISH**
Flat

**SPECIAL QUALIFICATIONS**

**SURFACE PREPARATION**

**STEEL**
SSPC-SP6/NACE 3 Commercial Blast Cleaning

**Galvanized Steel**
Surface preparation recommendations will vary depending on substrate and exposure conditions. Consult the latest version of Tnemec Technical Bulletin 10-78 or contact your Tnemec representative or Tnemec Technical Services.

**Non-Ferrous Metal**
Contact Tnemec Technical Services for more information.

**CAST/DUCTILE IRON**
All external surfaces of ductile iron pipe and fittings shall be delivered to the application facility without asphalt or any other protective lining on the exterior surface. All oils, small deposits of asphalt paint, grease, and soluble deposits should be removed and uniformly abrasive blasted using angular abrasive in accordance with NAPF 500-03-04: External Pipe Surface condition. When viewed without magnification, the exterior surfaces shall be free of all visible dirt, dust, loose annealing oxide, rust, mold coating and other foreign matter. Any area where rust reappears before application shall be reblasted. The surface shall contain a minimum angular anchor profile of 1.5 mils (38.1 microns) (Reference NACE RP0287 or ASTM D 4417, Method C).

**PAIN TCHED SURFACES**
Test patch is recommended in accordance with Technical Bulletin 98-10 latest revision. 

**PRIMED SURFACES**
Non-Immersion Service: Ask your Tnemec representative for specific recommendations.

**ALL SURFACES**
Must be clean, dry and free of oil, grease and other contaminants.

**TECHNICAL DATA**

**VOLUME SOLIDS**
65% (mixed)

**RECOMMENDED DFT**
4.0 to 8.0 mils (100 to 205 microns) per coat. 
Note: Two coats may be required for aggressive exposures.

**CURING TIME**

<table>
<thead>
<tr>
<th>Temperature</th>
<th>To Touch</th>
<th>To Handle</th>
<th>To Recoat†</th>
</tr>
</thead>
<tbody>
<tr>
<td>120°F (49°C)</td>
<td>15 minutes</td>
<td>1 hour</td>
<td>2 hours</td>
</tr>
<tr>
<td>95°F (35°C)</td>
<td>30 minutes</td>
<td>2 hours</td>
<td>5 hours</td>
</tr>
<tr>
<td>75°F (24°C)</td>
<td>1 hour</td>
<td>6 hours</td>
<td>8 hours</td>
</tr>
<tr>
<td>55°F (13°C)</td>
<td>2 hours</td>
<td>8 hours</td>
<td>16 hours</td>
</tr>
<tr>
<td>45°F (7°C)</td>
<td>3 hours</td>
<td>10 hours</td>
<td>24 hours</td>
</tr>
<tr>
<td>35°F (2°C)</td>
<td>4 hours</td>
<td>5 days</td>
<td>4 days</td>
</tr>
</tbody>
</table>

† The following minimum recoat times apply when topcoating with Series 297, 1080 or 1081: 95°F (35°C) 12 hours, 75°F (24°C) and 55°F (13°C) 24 hours, 45°F (7°C) 4 days, 35°F (2°C) 7 days. Curing time varies with surface temperature, air movement, humidity and film thickness. Substrates containing integral water repellants can prolong cure times.

**VOLATILE ORGANIC COMPOUNDS**

**HAPS**
0.00 lbs/gal solids

**THEORETICAL COVERAGE**
1,049 sq ft/gal (25.7 m²/L at 25 microns). See APPLICATION for coverage rates.

**NUMBER OF COMPONENTS**
Two: Part A and Part B

**MIXING RATIO**
Two (Part A) to One (Part B) by volume

www.tnemec.com should be referenced for the most current technical data and instructions or you may contact your Tnemec representative or Tnemec Technical Services.

Published technical data and instructions are subject to change without notice. The online catalog at www.tnemec.com should be referenced for the most current technical data and instructions or you may contact your Tnemec representative for current technical data and instructions.

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PAINTING

KIT CONSISTS OF:

<table>
<thead>
<tr>
<th>PART A (Partially Filled)</th>
<th>PART B (Partially Filled)</th>
<th>Yield (mixed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Kit</td>
<td>3.5 gal pail</td>
<td>5 gallons (18.9 L)</td>
</tr>
<tr>
<td>Small Kit</td>
<td>2 gal pail</td>
<td>2 gallons (7.5 L)</td>
</tr>
</tbody>
</table>

14.71 ± 0.25 lbs (6.67 ± 0.11 kg)

Minimum 35°F (2°C), Maximum 110°F (43°C)

(Dry) Continuous 375°F (190°C) Intermittent 400°F (204°C)

12 months at recommended storage temperature.

Part A: ≥250°F (110°C) Part B: ≥290°F (110°C)

Paint products contain chemical ingredients which are considered hazardous. Read container label warning and Material Safety Data Sheet for important health and safety information prior to the use of this product.

Keep out of the reach of children.

APPLICATION

<table>
<thead>
<tr>
<th>COVERAGE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suggested</td>
</tr>
<tr>
<td>Minimum</td>
</tr>
<tr>
<td>Maximum</td>
</tr>
</tbody>
</table>

(1) Note for Steel: Roller or brush application requires two or more coats to obtain recommended film thickness. Allow for overspray and surface irregularities. Wet film thickness is rounded to the nearest 0.5 mil or 5 microns. Application of coating below minimum or above maximum recommended dry film thickness may adversely affect coating performance.

MIXING

Power mix contents of each container, making sure no pigment remains on the bottom. Add the contents of the can marked Part A to Part B while under mechanical agitation. During mixing, scrape the container wall to aid in complete blending of the two components. Continue agitation until the two components are thoroughly mixed. Thin by volume and thoroughly mix. Do not use mixed material beyond pot life limits. Note: Both components should be above 50°F (10°C) prior to mixing. Note: If using Series 44-715 High Temperature Additive, reference the Series 44-715 product data sheet for mixing instructions.

THINNING

Use cool, clean tap water. For airless spray, roller or brush applications, thin 15% or 19.2 ounces per gallon. Caution: Thinning with high temperature water will significantly reduce the pot life. For best results, water temperature should not exceed 80°F (27°C).

Pot Life

2 hours at 70°F (21°C) 1 hour at 95°F (35°C)

For best results when applying to surfaces exceeding 150°F (66°C), Series 1224 should be spray applied in mist coats. Reference Surface Temperature for additional information.

APPLICATION EQUIPMENT

Airless Spray

<table>
<thead>
<tr>
<th>Tip Orifice</th>
<th>Atomizing Pressure</th>
<th>Mat'l Hose ID</th>
<th>Manifold Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.019-0.020&quot; (0.485-0.584 microns)</td>
<td>3000-4500 psi (207-310 bar)</td>
<td>1/4&quot; or 3/8&quot;</td>
<td>60 mesh (250 microns)</td>
</tr>
</tbody>
</table>

Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions. Roller: Use a synthetic woven nap cover. For smooth surfaces use 3/8" to 1/2" (9.5 mm to 12.7 mm). To obtain proper penetration for rough or porous surfaces, use a longer nap cover. Smooth out build-up at laps. Brush: Use a stiff nylon brush. Work material into voids and avoid brushing out too thin.

Surface Temperature

Minimum 35°F (2°C), optimum 65°F to 80°F (18°C to 27°C), maximum of 200°F (93°C). The substrate temperature should be at least 5°F (3°C) above the dew point. Coating will not cure below minimum surface temperature. Note: When surface temperatures exceed 150°F (66°C), Series 44-715 High Temperature Additive must be used. Reference the Series 44-715 product data sheet for additional information.

Material Temperature

For optimum application and handling, the material temperature during application should be between 65°F and 85°F (18°C and 29°C). Temperature will affect the workability. Cool temperatures increase viscosity and decrease workability. Warm temperatures will decrease viscosity and shorten pot life.

Clean-Up

Flush out and clean all equipment immediately after use with water, followed by a final flush with MEK or Methyl Acetate.

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