PDS406

ELASTO-SHIELD®

SERIES 406

PRODUCT DATA SHEET

PRODUCT PROFILE

Aromatic Polyurethane Hybrid

A two-component, fast setting, monolithic coating designed to provide a durable polyurethane lining in a single-coat, multi-pass spray application with plural component equipment. This high performance coating has excellent chemical, thermal shock and abrasion resistance. It is ideal for application to steel or concrete in water and wastewater treatment, secondary containment and for tank linings and bottoms. Recommended for immersion service. Note: All orders are subject to approval based upon project scope, applicator qualification and appropriate equipment configuration.

COLORS

WH06 Off-White. Other colors may be available with minimum size orders, contact your Tnemec representative. Note: Colors will change when exposed to sunlight.

SPECIAL QUALIFICATIONS

Series 406-WH06 Off-White is certified by NSF International in accordance with NSF/ANSI/CAN Std. 61 and the extraction requirements of NSF/ANSI/CAN 600. Series 406-WH06 is qualified for use in the interior of potable water storage tanks and reservoirs of 50,000 gallons (189,270 L) capacity or greater and pipes 36 inches (91 cm) in diameter or greater. WH06 Off-White is the only color that is NSF certified in Series 406. Series 1, 91-H2O, 94-H2O, N140, N140F, V140 and V140F are the only Std. 61 certified primers for use with Series 406. Reference Tnemec’s certified product listing at www.nsfi.org for details on the maximum allowable DFT. Conforms to AWWA D 102 Inside Coating System No. 4. Contact your Tnemec representative for systems and additional information.

PERFORMANCE CRITERIA

Contact your Tnemec representative for specific test results.

COATING SYSTEM

SURFACER/FILLER/PATCHER

Concrete & CMU: Series N140, N140F, V140, V140F, 201. Note: For more extensive repairs and additional information, contact your Tnemec representative or Tnemec Technical Service.

PRIMERS

Concrete: Self-priming or Series 1, 90-97, 91-H2O, 94-H2O, N140, N140F, V140, V140F. When topcoating with Series 406, the following recoat times apply:

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Recoat Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>75°F (24°C)</td>
<td>4 hrs/30 days</td>
</tr>
<tr>
<td>90°F (32°C)</td>
<td>4 hrs/14 days</td>
</tr>
</tbody>
</table>

Steel:

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Recoat Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>75°F (24°C)</td>
<td>4 hrs/5 days</td>
</tr>
<tr>
<td>90°F (32°C)</td>
<td>7 hrs/7 days</td>
</tr>
</tbody>
</table>

TOPCOATS

Series 290, 297, 1080, 1081. Note: Not for use in immersion service. Note: When topcoating with Series 290, 297, 1080 or 1081, recoat time for Series 406 is 24 hours minimum/5 days maximum.

Note: To minimize pinhole formation in the topcoat, it is recommended that concrete and CMU substrates be fully resurfaced and/or primed prior to topcoat application.

SURFACE PREPARATION

Refer to the appropriate primer data sheet for specific recommendations.

STEEL

Non-Immersion Service: SSPC-SP6/NACE 3 Commercial Blast Cleaning.

Immersion Service: SSPC-SP10/NACE 2 Near-White Blast Cleaning.

Note: When self-priming on steel, a minimum angular anchor profile of 3.0 mils is required. For all other applications, refer to the primer data sheet for recommendations.

CONCRETE

Allow new cast-in-place concrete to cure a minimum of 28 days at 75°F (24°C). Verify concrete dryness in accordance with ASTM F 1869 "Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using "Plastic Sheet Method" (no moisture present). Prepare concrete surfaces in accordance with NACE No. 6/SSPC-SP13 Joint Surface. Preparation Standards and ICRI Technical Guidelines. Abrasive blast, shot-blast, water jet or mechanically abrade concrete surfaces to remove laitance, curing compounds, hardeners, sealers and other contaminants and to provide a minimum ICRI-CSP 5 surface profile. Large cracks, voids and other surface imperfections should be filled with a recommended filler or surfacer.

CMU

Allow new mortar to cure 28 days. Surfaces must be clean, dry, sound and free of all contaminants. Level all protrusions and mortar spatter. CMU must be filled with Series 218 or 215.

ALL SURFACES

Must be clean, dry and free of oil, grease and other contaminants.
**TECHNICAL DATA**

**VOLUME SOLIDS**

Recommended DFT: 100% (mixed)†

**RECOMMENDED DFT**

25.0 to 125.0 mils (635 to 3175 microns). Maximum of 75 mils DFT for applications in potable water.

<table>
<thead>
<tr>
<th>To Recoat (Maximum)</th>
<th>Return to Service WH06 (NSF/ANSI/CAN Std. 61)</th>
<th>Return to Service Non-Potable</th>
</tr>
</thead>
<tbody>
<tr>
<td>At 95°F (35°C)</td>
<td>24 hours</td>
<td>72 hours</td>
</tr>
<tr>
<td>At 75°F (24°C)</td>
<td>24 hours</td>
<td>72 hours</td>
</tr>
<tr>
<td>At 55°F (2°C)</td>
<td>24 hours</td>
<td>7 days</td>
</tr>
</tbody>
</table>

**VOLATILE ORGANIC COMPOUNDS**

No. 74 Thinner when needed to comply with VOC regulations.

**HEALTH & SAFETY**

Flush and clean all equipment immediately after use with Tnemec No. 2 or No. 42 Thinner, MEK or xylene. Use Tnemec No. 42 Thinner together with MEK or xylene to remove noxious fumes and ensure the ventilation system is capable of handling the emissions. When used in enclosed areas, provide adequate ventilation during application and cure.

**SURFACE TEMPERATURE**

The surface should be dry and at least 5°F (5°C) above the dew point. Note: Dehumidification is required if humidity is above 85%. Note: To reduce the effects of outgassing when applied to concrete/CMU, the surface temperature should be stable or descending and out of direct sunlight.

**CLEANUP**

Flush and clean all equipment immediately after use with Tnemec No. 2 or No. 42 Thinner, MEK or xylene. Use Tnemec No. 74 Thinner when needed to comply with VOC regulations.

† Values may vary with color.

**APPLICATION**

**COVERAGE RATES**

<table>
<thead>
<tr>
<th></th>
<th>Dry Mils (Microns)</th>
<th>Wet Mils (Microns)</th>
<th>Sq Ft/Gal (m²/Gal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>25.0 (635)</td>
<td>25.0 (635)</td>
<td>64 (6.0)</td>
</tr>
<tr>
<td>Maximum</td>
<td>125.0 (3175)</td>
<td>125.0 (3175)</td>
<td>13 (1.2)</td>
</tr>
</tbody>
</table>

Allow for overspray and surface irregularities. Application of coating below minimum suggested film thickness may adversely affect coating performance. Reference Tnemec’s certified product listing at www.tnemec.org for details on the maximum allowable DFT.

**PACKAGING**

55 gallon (208.2 L) drums (with 50 gallon fill) and 5 gallon (18.9 L) pails. (Order in multiples of 3)

**HEATED PLURAL COMPONENT AIRLESS EQUIPMENT ONLY.**

DO NOT AGITATE PART A. Agitate Part B making sure no pigment remains on the bottom of the can. DO NOT MIX PART A WITH PART B. Use a 1 (Iso): 2 (Resin) ratio plural component heated airless spray unit. Note: Part A must be heated to 90°F to 100°F (32°C to 38°C) prior to and during the application and the Part B heated to 110°F to 120°F (43°C to 49°C) prior to and during application. Prior to use: Keep containers tightly sealed. Components will react with moisture. For Parts A & B, attach desiccant filter through bung hole to remove moisture from air entering the drum. Cap partial drums with nitrogen gas to prevent moisture contamination.

**THEORETICAL COVERAGE**

1,600 ml sq ft/gal (39.3 m²/L at 25 microns)†

**NUMBER OF COMPONENTS**

Two: Part A (iso) and Part B (resin)

**MIXING RATIO**

One (Part A) to Two (Part B) by volume

**NET WEIGHT PER GALLON**

Part A: 10.26 ± 0.20 lbs.  Part B: 9.51 ± 0.20 lbs.†

**STORAGE TEMPERATURE**

Minimum 50°F (10°C)  Maximum 90°F (32°C)

**TEMPERATURE RESISTANCE**

(Dry) Continuous 250°F (121°C)  Intermittent 300°F (149°C)

12 months at recommended storage temperature.

**SHELF LIFE**

Part A: >350°F (177°C)  Part B: >350°F (177°C)

This product contains 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 EQUIPMENT**

HEATED PLURAL COMPONENT AIRLESS EQUIPMENT ONLY.

Contact Tnemec Technical Service for equipment recommendations.

**Surface Temperature**

Minimum 20°F (-7°C)  Maximum 120°F (49°C)

The surface should be dry and at least 5°F (5°C) above the dew point. Note: Dehumidification is required if humidity is above 85%. Note: To reduce the effects of outgassing when applied to concrete/CMB, the surface temperature should be stable or descending and out of direct sunlight.

**CLEANUP**

Flush and clean all equipment immediately after use with Tnemec No. 2 or No. 42 Thinner, MEK or xylene. Use Tnemec No. 74 Thinner when needed to comply with VOC regulations.