TNEMEC

PRODUCT DATA SHEET

ELASTO-SHIELD® SERIES 406

PRODUCT PROFILE

GENERIC DESCRIPTION Aromatic Polyurethane Hybrid

COMMON USAGE A two-component, fast setting, monolithic coating designed to provide a durable polyurethane lining in a single-coat, multi-pass spray application applied 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 Std.61.** Series 406-WH06 is qualified for use on the interior of potable water storage tanks and reservoirs of 50,000 gallons capacity or greater and pipes 36 inches in diameter or greater. **WH06 Off-White is the only color that is NSF certified in Series 406.** Series 1, 91-H_2O, 94-H_2O, N140, N140F, V140 and V140F are the only Std. 61 certified primers for use with Series 406. Reference the "Search Listings" section of the NSF website at www.nsf.org for details on the maximum allowable DFT. Conforms to **AWWA C 222.** Contact your Tnemec representative for systems and additional information.

PERFORMANCE CRITERIA Contact your Tnemec representative for specific test results.

COATING SYSTEM

SURFACER/FILLER/PATCHER Series 63-1500, 215, 218. **Note:** Contact Tnemec Technical Service for application of Series 406 direct to 218. For more extensive repairs and additional information, contact your Tnemec representative or Tnemec Technical Service.

PRIMERS **Concrete:** Series L69F, N69F, V69F, N140, N140F, V140, V140F, 201. **Note:** Contact Tnemec Technical Service for applications to Series 218.
Steel: Self-priming or Series 1, 90-97, 91-H_2O, 94-H_2O.
When topcoating with Series 406, the following recoat times apply:

	90-97/91-H_2O/94-H_2O (Min/Max)	201 (Min/Max)	69F/140F (Min/Max)	1 (Min/Max)
At 90°F (32°C)	4 hrs/14 days	4 hrs/3 days	4 hrs/7 days	4 hrs/30 days
At 75°F (24°C)	4 hrs/30 days	6 hrs/5 days	6 hrs/14 days	4 hrs/30 days
At 55°F (13°C)	4 hrs/30 days	8 hrs/7 days	24 hrs/30 days	4 hrs/30 days
At 35°F (2°C)	4 hrs/30 days	N/A	24 hrs/30 days	4 hrs/30 days

TOPCOATS Series 290 **Note:** Not for use in immersion service.

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 and prepare concrete surfaces in accordance with NACE No. 6/SSPC-SP13 Joint Surface Preparation Standards and ICRI Technical Guidelines. Moisture vapor transmission should not exceed three lbs per 1,000 sq ft in a 24 hour period (Reference ASTM F 1869 "Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride"). Relative humidity should not exceed 80% (Reference ASTM F 2170 "Standard Test Method for Determining Relative Humidity in Concrete using in situ Probes"). No moisture present when using a "plastic sheet test" (Reference ASTM D 4263 "Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method"). Abrasive blast, waterjet or mechanically abrade concrete surfaces to remove laitance, curing compounds, hardeners, sealers and other contaminants and to provide a minimum ICRI-CSP 5 or greater 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 MortarClad.

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

TECHNICAL DATA

VOLUME SOLIDS 100% (mixed) †

RECOMMENDED DFT 25.0 to 120.0 mils (635 to 3050 microns). Maximum of 75 mils DFT for NSF applications.

ELASTO-SHIELD® | SERIES 406

CURING TIME

	To Recoat (Maximum)	Return to Service WH06 (NSF/ANSI Std. 61)	Return to Service Non-Potable
At 90°F (32°C)	8 hours	72 hours	36 hours
At 75°F (24°C)	24 hours	72 hours	36 hours
At 35°F (2°C)	24 hours	7 days	7 days

Note: There is a seven day return to service time if N140, N140F, V140 or V140F is used as a primer. This does not apply if Series 406 is applied direct or Series 1 is the primer.
Note: If the maximum recoat window has been exceeded, the Series 406 coated surface must be mechanically abraded and wiped with MEK prior to topcoating. Curing time varies with surface temperature, air movement, humidity and film thickness. **Ventilation:** When used in enclosed areas, provide adequate ventilation during application and cure.

VOLATILE ORGANIC COMPOUNDS EPA Method 24: 0 lbs/gallon (0 grams/litre) †

HAPS 0 lbs/gal solids

THEORETICAL COVERAGE 1,600 mil 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

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

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)

SHELF LIFE 12 months at recommended storage temperature.

FLASH POINT - SETA Part A: >350°F (177°C) Part B: >350°F (177°C)

HEALTH & SAFETY 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

COVERAGE RATES To reduce the effects of outgassing when applied to concrete/CMU, the surface temperature should be stable or descending and out of direct sunlight.

	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m²/Gal)
Minimum	25.0 (635)	25.0 (635)	64 (6.0)
Maximum	120.0 (3050)	120.0 (3050)	13 (1.2)

Allow for overspray and surface irregularities. Application of coating below minimum suggested film thickness may adversely affect coating performance. Reference the "Search Listings" section of the NSF website at www.nsf.org for details on the maximum allowable DFT. †

MIXING 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 1A:2B mix ratio plural component heated airless spray unit. **Note:** Product must be 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 container through bung hole to remove moisture from air entering the drum. Cap partial drums with nitrogen gas to prevent moisture contamination.

THINNING **DO NOT THIN.** Thinning will adversely affect performance properties and negate **NSF/ANSI Std. 61 Certification** for potable water contact applications.

APPLICATION EQUIPMENT **HEATED PLURAL COMPONENT AIRLESS EQUIPMENT ONLY. Please refer to the Series 406 Plural Component Equipment Recommendations Guide for complete instructions on equipment.**
Contact Tnemec Technical Service for equipment recommendations.
Brush: Recommended for small areas, repairs and weld seams.

SURFACE TEMPERATURE Minimum 20°F (-7°C) Maximum 120°F (49°C)
The surface should be dry and at least 5°F (3°C) above the dew point. **Note:** Dehumidification is required if humidity is above 85%.

CLEANUP Flush and clean all equipment immediately after use with Tnemec No. 2 or No. 42 Thinner, MEK or xylene.

† Values may vary with color.