



PRODUCT PROFILE

GENERIC DESCRIPTION High Temperature Novolac Vinyl Ester

COMMON USAGE Resistant to very high temperature service and extremely corrosive environments, this coating is used as the base product for many reinforced applications due to the versatility provided from the product being supplied as "neat" or non-pigmented. Series 1418 is the recommended selection for use in the most chemically demanding environments, such as, wet or dry FGD scrubbers, ductwork and slurry tanks operating in elevated temperature conditions. Use with specialty mortar powders, to embed glass mats, as a saturant coat or as a pigmented self-leveling finish coat. Series 1418 was formally ProPolymer 4847HT.

COLORS 900 Clear **Note:** Supplied clear. Can be field-tinted (Series 1400 Color Packs) in 5 Vinester colors. Contact your Tnemec representative for additional information.

FINISH Semi-gloss

COATING SYSTEM

PRIMERS **Steel:** Self priming or Series 1402
Concrete: Series 1402

TOPCOATS Series 1418 or 1438

SURFACE PREPARATION

STEEL **Immersion Service/Severe Exposure/Elevated Temperatures:** SSPC SP5/ NACE No.1 White Metal Blast Cleaning or ISO Sa3 Blast Cleaning to Visually Clean with a minimum angular anchor profile of 3.0 mils (75 microns) is required. **Non-Immersion Service:** SSPC SP10/NACE No. 2 Near White Metal Blast Cleaning or ISO Sa 2 ½ Very Thorough Blast Cleaning with a minimum angular anchor profile of 3.0 mils (75 microns) is required.

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 Anhydrous Calcium Chloride" (moisture vapor transmission should not exceed three pounds per 1,000 square feet in a 24 hour period), F 2170 "Standard Test Method for Determining Relative Humidity in Concrete using in situ Probes" (relative humidity should not exceed 80%), or D 4263 "Standard Test Method for Indicating Moisture in Concrete by the 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 3 surface profile. Large cracks, voids and other surface imperfections should be filled with a recommended filler or surfacer

TECHNICAL DATA

VOLUME SOLIDS 85% (mixed). Series 1418 contains a reactive monomer and some loss will occur during application and cure. Actual solids by volume will vary depending upon temperature and air movement.

RECOMMENDED DFT **Topcoat Application:** 30.0 mils (75 microns)
Mortar Applications: +50.0 mils (+1270 microns)
Abrasion Resistant Applications: +50.0 mils (+1270 microns)

CURING TIME

Temperature	To Recoat	Immersion	Maximum Recoat
90°F (32°C)	3 hours	20 hours	3 days
75°F (24°C)	4 hours	24 hours	4 days
60 °F (16°C)	12 hours	4 days	5 days

Note: Certain service applications may require elevated temperature and/or longer cure times for placing in service.

VOLATILE ORGANIC COMPOUNDS EPA Method 24
0.83 lbs/gallon (99 grams/litre)

NUMBER OF COMPONENTS Two: Part A (base) and Part B (catalyst)

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PACKAGING

	Part A (Partially filled)	Part B (Partially filled)	Yield (mixed)
Medium Kit	5 gallon pail	Pint bottle	4.76 gallons (18.0 L)
Small Kit	1 gallon	4 oz bottle	0.95 gallons (3.59 L)

Note: Color packs, mats and bulking additives are ordered separately, please reference the table below for additional product information.

Product Number	Description	Size
Series 1400	Color Packs (available in 5 colors)	QT, HP
Series 211-9111-UT	Bulking Additive	50 lb bag
Series 211-9215-UT	Abrasion Resistant Powder	50 lb bag
Series 211-9106-UT	Silica-Free Bulking Powder	50 lb bag
Series 211-0225-UT	Carbon Mat †	50" W x 300' L
Series 211-0226-UT	1.5 oz Fiberglass Mat †	6" W x 268' L
Series 211-0227-UT	1.5 oz Fiberglass Mat †	38" W x 268' L
Series 211-0228-UT	Woven Roving †	38" W x 312' L

† Available in full rolls only.

**STORAGE TEMPERATURE
TEMPERATURE RESISTANCE**

Minimum 35°F (2°C) Maximum 75°F (24°C)

(Dry) Continuous: Neat Resin 360°F (182°C) Filled 400°F (204°C)
(Wet) Contact Tnemec Technical Service

SHELF LIFE

Part A: 3 months at 35°F to 49°F (2°C to 9°C), 2 months at 50°F to 79°F (10°C to 26°C), 1 month at 80°F to 90°F (27°C to 32°C). Do not store at temperature below 35°F (2°C) or above 90°F (32°C).
DUE TO THE REACTIVE NATURE OF THE VINYL ESTER RESINS AND THE CORRESPONDING LIMITED SHELF LIFE, EXPEDITIOUS USE OF THIS PRODUCT IS SUGGESTED, SINCE JOBSITE STORAGE CONDITIONS ARE BEYOND TNE MEC'S CONTROL, THIS PRODUCT IS NON-RETURNABLE.
Part B: 12 months at recommended storage temperature.

**FLASH POINT - SETA
HEALTH & SAFETY**

Part A: 90°F (32°C) Part B: 133°F (56°C)

Paint products contain chemical ingredients which are considered hazardous. Read container label warning and 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

The coverage rates and yields listed in the tables below can be used as a guide. It is recommended to contact your Tnemec representatives to assist with calculating resins, powders and other additives, as yield and coverage rates will change based upon system and product recommendations.

Saturant

	DFT Mils (microns)	Series 1400 Colorants	Bulking Additives Series 211-9106, 211-9111 or 211-9215	Sq Ft (m²)/Kit
Medium Kit	20.0 (510)	n/a	n/a	340 (31.6)
Small Kit	20.0 (510)	n/a	n/a	68 (6.3)

Pigmented

	DFT Mils (microns)	Series 1400 Colorants	Bulking Additives 211-9106, 211-9111 or 211-9215	Sq Ft (m²)/Kit
Medium Kit	20.0 (510)	Quart	See Note	340 (31.6)
Small Kit	20.0 (510)	Half Pint	See Note	68 (6.3)

Note: For vertical applications as a finish coat up to 10 mils, add 8 to 10 pounds of 211-9111 (if needed S211-0211 fumed silica may also be added).

Mortar

	DFT Mils (microns)	Series 1400 Colorants (optional)	Bulking Additives Series 211-9106, 211-9111 or 211-9215	Sq Ft (m²)/Kit
Medium Kit	50.0 (1270)	Quart	2 bags or 95 pounds	250 (23.2)
Small Kit	50.0 (1270)	Half Pint	20 pounds (reduce 1 bag by 30 pounds)	49 (4.6)

Spread rates are theoretical and at a specific mil thickness. Actual spread rates will vary with surface profile and irregularities as well as accurate mixing of additives, waste in containers and applicator proficiency.

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MIXING	<p>Power mix contents of Part A (base) thoroughly, making sure no pigment remains on the bottom of the can. Add the Part B (catalyst) slowly to the Part A while under agitation. Ensure that all Part B is blended with Part A by scraping the pail walls with a flexible spatula. Continue to agitate until thoroughly mixed. Note: Do not use mixed material beyond pot life limits.</p> <p>Field Colorant: If adding Series 1400 color packs, add the color pack to the Part A and thoroughly mix using a variable speed drill with a PS Jiffy blade until a uniform color is achieved, prior to adding Part B. Add one quart of Series 1400 per medium kit or one half pint per small kit of Series 1418 Part A and B liquids.</p> <p>Bulking Additive: Use an appropriate type of mortar mixer and slowly blend recommended amounts of bulking additive with properly proportioned Part A and B mixed liquids. Note: Bulking additives are normally added at a rate of 20 pounds per mixed gallon of liquids but may be adjusted as needed for certain applications. Adjustments are usually no more than 5-pounds, plus or minus, the recommended 20 pounds.</p>
THINNING	N/A
POT LIFE	<p>45 minutes at 75°F (24°C)</p> <p>Note: At higher temperatures pot life will decrease (use caution in spray equipment).</p>
APPLICATION EQUIPMENT	<p>Troweled: Use a high grade metal trowel with rounded corners in addition to if needed, a mortar hawk to assist in transfer of mixed materials.</p> <p>Finish Roll: Use a high quality 1/4" nap, shed resistant, woven fabric roller, lightly dampened with Series 44-809 Smoothing Agent over the surface while Series 1418 is still in a semi-fluid condition.</p>
SURFACE TEMPERATURE	<p>Minimum 60°F (16°C), optimum 70°F (21°C), maximum 90°F (32°C). The surface should be dry and at least 5°F (3°C) above the dew point. At surface temperatures below 60°F (16°C), Series 1420 will not cure properly or obtain maximum chemical resistance. At relative humidities above 75%, the cure of this coating may be retarded. It is also recommended that all precautions be taken to insure that adequate forced-air ventilation exists. Note: Do not apply in direct sunlight.</p>
MATERIAL TEMPERATURE	<p>For optimum application, handling and performance, the material temperature during application should be between 60°F and 90°F (16°C and 32°C). Temperature will affect the workability. Cool temperatures increase viscosity and lengthen pot life. Warm temperatures will decrease viscosity and shorten pot life.</p>
CLEANUP	Clean all tools and equipment immediately after use with MEK.

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