



T N E M E C

VINESTER®

PRODUCT DATA SHEET

SERIES 1439

PRODUCT PROFILE

**GENERIC DESCRIPTION** Abrasion Resistant Novolac Vinyl Ester

**COMMON USAGE** An elevated temperature service, high-build novolac vinyl ester, with a proprietary blend of abrasion resistant powders and ceramics. Series 1439 is ideal for use in high wear, high air velocity with heavy particulate suspension and on impingement areas. Series 1439 is an outstanding selection for use in abrasive slurry lining services. Formerly ProPolymer 4844SAR.

**COLORS** 901 White, 908 Lavender

**FINISH** Semi-gloss

COATING SYSTEM

**PRIMERS** Self-priming on steel or Series 1402

**INTERMEDIATE** Series 1428, 1436, 1438

**TOPCOATS** Series 1439

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. **Note:** This product is most commonly used on metallic substrates, contact Tnemec Technical Services to confirm an appropriate lining selection or an alternate lining.

TECHNICAL DATA

**VOLUME SOLIDS** 85% (mixed). Series 1439 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** 12.0 to 50.0 mils (305-1270 microns)

CURING TIME

Temperature	To Recoat	Immersion Service	Maximum Recoat
90°F (32°C)	3 hours	20 hours	3 days
75°F (24°C)	4 hours	24 hours	4 days
50°F (10°C)	12 hours	4 days	5 days

Note: **Certain service applications may require elevated temperature cure for maximum performance.**

VOLATILE ORGANIC COMPOUNDS

EPA Method 24  
1.58 lbs/gallon (190 grams/litre)

NUMBER OF COMPONENTS

Two: Part A (base) and Part B (catalyst)

PACKAGING

	Part A (Partially filled)	Part B (Partially filled)	Yield (mixed)
Medium kit	5 gallon pail	Pint bottle	5.0 gallons (18.9L)

STORAGE TEMPERATURE

Minimum 50°F (10°C) Maximum 75°F (24°C)

TEMPERATURE RESISTANCE

(Dry) Continuous 360°F (182°C) Intermittent 400°F (204°C)

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 TNEMEC'S CONTROL, THIS PRODUCT IS NON-RETURNABLE.  
Part B: 12 months at recommended storage temperature.

FLASH POINT - SETA

Part A: 93°F (33°C) Part B: 133°F (56°C)

HEALTH & SAFETY

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.**

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**APPLICATION**

**COVERAGE RATES**

	Dry Mils (microns)	Wet Mils (microns)	Sq Ft/Gal (m <sup>2</sup> /Gal)
Minimum	12.0 (305)	14.0 (356)	114 (10.6)
Maximum	50.0 (1270)	59.0 (1499)	27 (2.5)

Actual spreading rates will vary with surface profile, amount of overspray and surface irregularities. Application of coating below minimum or above maximum recommended dry film thicknesses may adversely affect coating performance. THIS PRODUCT SHOULD NOT BE APPLIED BELOW 60°F (16°C) MATERIAL TEMPERATURE.

**MIXING**

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 over mix, caution should be taken to avoid shearing the glass flake. Do not use mixed material beyond pot life limits.

**THINNING**

Do not thin.

**POT LIFE**

45 minutes at 75°F (24°C)

**APPLICATION EQUIPMENT**

**Airless Spray**

Spray Gun	Pump Size	Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
Graco XHF, XTR-7 Gun or WIWA 500F	70:1 or 68:1	0.025" -0.039" (635-990 microns)	3000-4000 psi (206-275 bar)	See below	n/a

Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions.

**Material Hose ID:** Attach (1) 15-25' x 1/2" hose to the pump. Attach (1) 15-25' x 3/8" hose to 1/2" line. Attach (1) 3-6' x 1/3" hose to 1/2" line and gun.

**Brush:** Recommended for small areas only. use high quality natural or synthetic bristle brushes.

**Roller:** Roller application acceptable, may require multiple coats to achieve specified thickness. use a solvent resistant, phenolic core roller with a minimum 1/2" nap.

**SURFACE TEMPERATURE**

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 the surface temperatures below 60°F (16°C), Series 1439 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.

**MATERIAL TEMPERATURE**

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.

**CLEANUP**

Clean and purge lines immediately after use with MEK.

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