TNEMEC

MORTARCLAD™ 218-1000

PRODUCT DATA SHEET

PRODUCT PROFILE

GENERIC DESCRIPTION Epoxy Modified Cementitious Mortar

COMMON USAGE A high-performance, aggregate reinforced material for surfacing, patching and filling voids and bugholes in concrete substrates. Generally topcoated with a variety of high-performance epoxies and polyurethanes for use in mild to aggressive exposures.

COLORS Greenish Gray

COATING SYSTEM

SURFACER/FILLER/PATCHER Series 217

PRIMERS **Concrete:** Self-priming
CMU: Self-priming

TOPCOATS Series 20, 20HS, FC20HS, 22, FC22, 27WB, 30, 46H-413, 61, 66, 66HS, 161HS, L69, N69, 104, 120, L140, N140, V140, 161, 201, 205, 237SC, 239SC, 251SC, 252, 262 †, 264 †, 270, 280, 282, 406 †, 434, 435, 436, 446. **Note:** Refer to the applicable topcoat data sheet for additional information regarding color availability.
† See the corresponding PDS for the recommended intermediate coat.

SURFACE PREPARATION

Prepare surfaces by method suitable for exposure and service. Refer to the appropriate topcoat product data sheet for specific surface preparation 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 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 5 surface profile. Large cracks, voids and other surface imperfections should be filled with a recommended filler or surfacer.

CMU Allow mortar to cure for 28 days. Level protrusions and mortar spatter.

PAINTED SURFACES Not recommended.

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

TECHNICAL DATA

VOLUME SOLIDS 100% (mixed)

RECOMMENDED DFT **Parge Coat:** 1/16"-1/4" per lift; maximum 1/2" thickness
Feather-edge Capable: 1/32"

CURING TIME

Temperature	To Touch	To Recoat with Itself	To Topcoat
75°F (24°C) & 50% R.H.	3-4 hours	unlimited	15 hours minimum

VOLATILE ORGANIC COMPOUNDS **Unthinned:** .013 lbs/gallon (1.6 grams/litre)

HAPS 0.00 lbs/gal solids

NUMBER OF COMPONENTS Three—Liquid: Part A and Part B Powder: Part C

PACKAGING KITS CONSIST OF:

	PART A (Liquid)	PART B (Liquid)	PART C (Cement-Sand)	When Mixed
Large Kit	1 gal plastic jug	1 gal can	42.77 lb bag	3.0 gallons (11.4 L)
Small Kit	1 qt plastic jug	1 pt can	10.7 lb bag	0.80 gallons (3.0 L)

NET WEIGHT Large Kit: 53.54 lbs (24.26 kg) Small Kit: 13.38 lbs (6.07 kg)

STORAGE TEMPERATURE Minimum 40°F (4°C) Maximum 110°F (43°C)
For optimum handling and application characteristics, all material components should be stored or conditioned between 70°F to 90°F (21°C to 32°C) 48 hours prior to use. Protect Parts A & B from freezing; discard if frozen. Protect Part C from moisture; store in dry environment off ground.

TEMPERATURE RESISTANCE (Dry) Continuous 170°F (77°C) Intermittent 200°F (93°C)

SHELF LIFE 12 months at recommended storage temperature.

FLASH POINT - SETA N/A

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

Before commencing, obtain and thoroughly read the Application Guide for Series 218-1000 MortarClad.

Thickness	Large Kit	Small Kit
1/16" (1.6 mm)	77 sq ft (7.2 m²) theoretical	21 sq ft (2.0 m²) theoretical
1/8" (3.1 mm)	38 sq ft (3.5 m²) theoretical	10 sq ft (0.9 m²) theoretical
1/4" (6.4 mm)	19 sq ft (1.8 m²) theoretical	5 sq ft (0.5 m²) theoretical

Allow for application losses due to surface irregularities and substrate porosity.

WORKING TIME

45 Minutes at 75°F (24°C).

MIXING

Pour liquid Part B into a container large enough to hold all components. Under agitation slowly add liquid Part A. When blended, slowly sift powder, Part C, while continuing agitation. Do not dump all of the Part C into the liquids at one time. Mix for two minutes or until the cement-sand is thoroughly wetted and a smooth consistency is obtained. **Important: Do not add additional Part C.**
Note: For repair of large bugholes, honeycomb and other cavities deeper than the recommended maximum thickness, 20-25 lbs of multi-purpose clean sand (conforming to ASTM C 33) or 15-18 lbs of locally purchased pea gravel (coarse aggregate) can be post-added to a large kit of Series 218-1000, to create "dry-pack" mortar. One half inch to No. 8 size (12.5 mm to 2.36 mm) pea gravel conforming to ASTM C 33 is recommended. Contact your Tnemec representative or Tnemec Technical Services for additional information.

THINNING

Large Kit: For trowel applications, thin with 5 to 10 ounces of water. For spray transfer applications, thin with up to 20 ounces of water.
Small Kit: Thin with 3 to 5 ounces of water.
Note: For best results, use clean cool tap water not exceeding 80°F (27°C). Thinning with warm water will significantly reduce working time.

SUBSTRATE CONDITIONING

The concrete substrate surface shall be "pre-wet" or dampened with potable water to a Saturated Surface Dry (SSD) condition; the concrete is darkened by water but there is no pooling of water on the concrete. This can be done by using a Hudson pump-up sprayer or heavy nap roller cover dampened with potable water. **Note:** Do not over saturate the surface.

APPLICATION EQUIPMENT

Hand troweling can be accomplished using a mortar hawk, steel concrete finishing trowels, broad knives and rubber floats. For troweling inside and outside corners, the use of a radius or margin trowel is recommended. Material can be transferred to the surface by utilizing hydraulic spray equipment followed by troweling to seal the material. No special ACI 308 curing requirements - ambient cure only. For a smoother finished appearance, trowel licks may be reduced by using a 1/4" nap roller cover lightly dampened with water over the sealed Series 218-1000 material.

Spray Application Equipment

Pump †	Fluid Line	Spray Gun	Fluid Tips	Fluid Pressure ‡	Atomizing Pressure	Hopper
WIWA 410 (9:1 Ratio) or 600 (12:1 Ratio)	25' 1" Diameter 10' 3/4" Diameter	WIWA Pole Gun	1/4" to 3/8"	180 to 360 psi (Adjust as necessary)	Adjust at gun for proper atomization	6.5 Gallon Stainless Steel
Graco M680 10:1 Ratio	25' 1" Diameter 10' 3/4" Diameter	Flex Hose	No. 5 Nozzle	300 psi (Adjust as necessary)	Adjust at gun for proper atomization	10 Gallons Stainless Steel

† Pump must have a minimum of 2 gpm delivery.
‡ Listed pressure is at gun.

SURFACE TEMPERATURE

Minimum of 45°F (7°C), optimum 65°F to 80°F (18°C to 27°C), maximum of 90°F (32°C). The substrate temperature should be at least 5°F (3°C) above the dew point.

MATERIAL TEMPERATURE

For optimum application, handling and performance, the material temperature during application should be between 70°F and 80°F (21°C and 27°C). Temperature will affect the workability. Cool temperatures increase viscosity and decrease workability. Warm temperatures will decrease viscosity and shorten pot life.

CLEANUP

Flush and clean all equipment immediately after use with warm water.