MORTARCRETE® SERIES 217

PRODUCT PROFILE

GENERIC DESCRIPTION Cementitious Repair Mortar

COMMON USAGE A single-component, rapid setting, hydraulic cementitious resurfacer used to restore deteriorated concrete surfaces.

COLORS Gray

SPECIAL QUALIFICATIONS Series 217 is acceptable for use on the interior of potable water concrete storage tanks and reservoirs when topcoated with an NSF/ANSI Std. 61 certified protective coating. Contact your Tnemec representative for approved systems and additional information.

COATING SYSTEM

PRIMERS Concrete: Series 217 Bond Coat †
† A thin bond coat (scrub coat) is required. Refer to the Series 217 MortarCrete *Surface Preparation and Application Guide* or Contact Tnemec Technical Services with questions.

TOPCOATS Series 22, FC22, 27WB, 46H-413, L69, L69F, N69, N69F, V69, V69F, 120, L140, L140F, N140, N140F, V140, V140F, 201, 215, 218, 237SC, 239SC, 434, 435, 436, 446
Note: Series 217 must be mechanically prepared in accordance with SSPC-SP13/NACE 6, ICRI-CSP4-5 surface profile prior to application of recommended topcoats. Shrinkage cracks in the Series 217 may require filling with Series 215 or Series 218 to prevent transfer or telegraphing of any cracks. Contact Tnemec Technical Services for additional information.

SURFACE PREPARATION

REINFORCING STEEL The repair of deteriorated concrete resulting from reinforcing steel corrosion should be in accordance with ICRI Technical Guideline No. 310.1R. Concrete reinforcing steel (rebar) can be primed with Tnemec Series 1 or 69.

CONCRETE Remove all loose materials, deteriorated concrete, laitance, existing coatings, and other bond-inhibiting materials from the surface in accordance with SSPC-SP13/NACE 6, minimum surface profile of ICRI-CSP6.

EDGE CONDITIONING The edges of the patch should be sawcut perpendicular to the surface to a depth of at least 1/4 inch (6 mm). Break out the complete repair area to a minimum depth of 1/4 inch (6 mm) up to the sawed edge to prevent feather edging. Avoid cutting the reinforcing steel.

ALL SURFACES Must be clean and free of oil, grease and other contaminants. Always take precautions to prohibit the surface from becoming contaminated prior to product application.

TECHNICAL DATA

RECOMMENDED DFT **Horizontal/Vertical:** 1/4 inch (6 mm) to 4 inches (102 mm)
Overhead: 1/4 inch (6 mm) to 2 inches (51 mm)

CURING TIME

Temperature	Initial Set	Final Set	To Topcoat
70°F (21°C)	60 minutes	90 minutes	12 hours

Note: Use Series 211-217 Slow Set additive to extend set times. Refer to Series 211-217 Slow Set product data sheet for information.

VOLATILE ORGANIC COMPOUNDS 0.0 lbs/gallon (0 grams/litre)

NUMBER OF COMPONENTS One: 2.4 gallons/0.3 cu ft (9.0 L) (dry volume) approximately

MIXING RATIO Add 3 to 5 quarts (2.8 to 4.7 L) potable water per 55 lb (23 kg) plant-proportioned, pre-blended unit. Do not mix partial units.

PACKAGING 5 gallon bucket

NET WEIGHT 55 lbs (23 kg)

STORAGE TEMPERATURE Condition product to 65°F-75°F (18°C-24°C) 24 hours before using. Protect from moisture; store in dry environment.

SHELF LIFE 6 months in original, unopened packaging at recommended storage conditions.

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.

MORTARCRETE® | SERIES 217

APPLICATION

SPREADING RATE

Prior to application, review the Series 217 MortarCrete *Surface Preparation and Application Guide.*
Approximate theoretical spread rate based upon 4 quarts (3.8 L) of water to yield 3.4 gal/0.45 cu ft (12.9 L) unit.

Thickness	0.25 in. (.635 cm)	0.50 in. (1.27 cm)	0.75 in. (1.91 cm)	1.00 in. (2.54 cm)	1.25 in. (3.18 cm)	1.50 in. (3.81 cm)	1.75 in. (4.45 cm)	2.00 in. (5.08 cm)
Coverage	21.6 (2.01 m²)	10.8 (1.00 m²)	7.2 (.67 m²)	5.4 (.50 m²)	4.32 (.40 m²)	3.6 (.33 m²)	3.0 (.28 m²)	2.7 (.25 m²)

Thickness	2.25 in. (5.72 cm)	2.50 in. (6.35 cm)	2.75 in. (6.99 cm)	3.00 in. (7.62 cm)	3.25 in. (8.26 cm)	3.50 in. (8.89 cm)	3.75 in. (9.53 cm)	4.00 in. (10.16 cm)
Coverage	2.4 (.22 m²)	2.2 (.20 m²)	2.0 (.19 m²)	1.8 (.17 m²)	1.7 (.16 m²)	1.5 (.14 m²)	1.4 (.13 m²)	1.3 (.12 m²)

Note: Application below minimum or above maximum spreading rates may adversely affect product performance.

WORKING TIME

Approximately 20-30 minutes at 75ºF (24ºC), & 50% R.H. Placement time is dependent on environmental conditions and mixing water/set control amounts. Do not retemper the mortar with additional water. **Note:** Do not wait for bleed water. Finish surface as soon as material condition allows.

MIXING

Remove Series 217 from the 5-gallon plastic pail. Add 3-5 quarts (2.8 to 4.7 L) of potable water to a clean bucket. **Note:** Elevated water temperature can significantly reduce working time. **Note:** For repair of large bugholes, honeycomb and other cavities deeper than the recommended maximum thickness, 15-20 lbs of locally purchased pea gravel (coarse aggregate) can be post-added with 3.0 to 3.5 quarts of water to Series 217, 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.
Optional: Depending on the ambient temperature and desired consistency, add up to 3 packets of Series 211-217 Slow Set additive into the mixing water (refer to the Series 211-217 product data sheet). Under mechanical agitation with a slow-speed drill (400-600 rpm) and H-Style (box blade) mixing paddle, slowly sift powder into mixing bucket. Mix 1-4 minutes until fully blended. Avoid extended over-mixing.

APPLICATION

Substrate: Concrete substrate shall be "pre-wet" or dampened with potable water to a Saturated Surface Dry (SSD) condition prior to Series 217 application; the concrete substrate is darkened by water but there is no pooling of water on the concrete.
Bond Coat: Using a masons brush or rubber sponge, work a thin bond coat (scrub coat) of Series 217 into the SSD substrate to ensure intimate contact and to help prevent sloughing or sagging of repair materials on vertical and overhead surfaces.
Mortar: Apply the Series 217 with adequate pressure before the scrub coat dries. Thoroughly consolidate the repair material into the corners of patch and around any exposed reinforcement steel in the repair zone. Full encapsulation of the reinforcement and intimate contact with substrate is important for long-term durability.
Finishing: Do not wait for bleed water. Finish Series 217 by striking off with a straight edge and close with the recommended concrete finishing tools, as conditions allow, to create a smooth, even surface.

CURING

Begin water curing as soon as the surface has lost its moist sheen. Keep exposed surfaces wet for a minimum of 2 hours. The objective of water curing shall be to maintain a continuously wet surface until the product has achieved sufficient strength. When experiencing extended setting times, due to cold temperature or the use of Series 211-217, longer cure times may be required. Contact Tnemec Technical Services for additional information.

APPLICATION EQUIPMENT

Hand troweling can be accomplished using steel concrete finishing trowels, broad knives, rubber floats, wooden floats or plastic floats. Material may be spray transferred using low-pressure grout pumps or high-pressure wet-mix shotcrete equipment. Contact Tnemec Technical Services for additional information.

Spray Application Equipment

Pump	Fluid Line	Spray Gun	Fluid Tips	Fluid Pressure	Atomizing Pressure	Hopper
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

Refer to the operation manual for application instructions. **Atomization air must be dry, the use of an after cooler is recommended.**

TEMPERATURE REQUIREMENT

Minimum substrate and ambient application temperature 45°F (7°C) and rising. Do not apply if expected to fall below this temperature within 24 hours of application.

CLEANUP

Uncured material can be removed with water. Cured material can only be removed mechanically.