



# POWER-TREAD<sup>®</sup> FC SERIES 238

## PRODUCT PROFILE

**GENERIC DESCRIPTION** Modified Polyamine Fast-Cure Epoxy

**COMMON USAGE** A multi-purpose epoxy coating that can be used as a primer, broadcast, slurry/broadcast, mortar, grout coat, and topcoat. Excellent application properties with good flow and self-leveling characteristics. Protects concrete surfaces from impact, abrasion and mild chemicals.

**COLORS** Clear or pigmented. Can be factory or field-tinted (Series 820 Field Tint) in 16 StrataShield colors and certain custom colors. Contact your Tnemec representative for additional information. **Note:** Epoxies chalk and yellow with age, extended exposure to UV and artificial lighting. Lack of ventilation, incomplete mixing, miscatalyzation or the use of heaters that emit carbon dioxide and carbon monoxide during application and initial stages of curing may cause amine blush, possibly affecting adhesion of subsequent topcoats.

## COATING SYSTEM

**SURFACER/FILLER/PATCHER** Series 206, 215. **Note:** A repair kit of 201, with Part C fumed silica, is available for small patching/surfacing repairs. For more extensive repairs and additional information, contact your Tnemec representative or Tnemec Technical Services.

**PRIMERS** Self-priming or Series 201, 208, 241

**TOPCOATS** Series 237, 238, 247, 248, 252SC, 256, 280, 281, 282, 284, 285, 286, 287, 290, 291, 294, 295, 296, 297. **Note:** If Series 247 (tinted), 248 (tinted), 290, 291 or 297 is selected for the finish coat over a broadcast system, a grout coat of Series 237 or 238 (tinted), 256 (tinted), 280 or 281 is required. If Series 247 (clear), 248 (clear), 285, 294, 295 or 296 is selected for the finish coat over a broadcast system, a grout coat of Series 237 or 238 (clear), 256 (clear) or 284 is required.

## SURFACE PREPARATION

Prepare surfaces by method suitable for exposure and service. Refer to the appropriate primer data sheet for specific recommendations. When self priming:

**CONCRETE** Allow new poured-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). **Note:** The testing listed above cannot guarantee avoidance of future moisture related problems particularly with existing concrete slabs. This is especially true if the use of an under slab moisture vapor barrier cannot be confirmed or concrete contamination from oils, chemical spills, unreacted silicates, chlorides or Alkali Silica Reaction (ASR) is suspected.

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 or greater surface profile. Large cracks, voids and other surface imperfections should be filled with a recommended filler or surfacer. **Note:** For moisture content exceeding 3 lbs per 1,000 sq ft or relative humidity in excess of 80%, Series 208 or 241 may be substituted for the primer. Refer to the Series 208 or 241 product data sheet for more information.

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

## TECHNICAL DATA

**VOLUME SOLIDS** 100% (mixed)

**RECOMMENDED DFT** **Primer:** 6.0 to 12.0 (150-305 microns) per coat.  
**Broadcast:** 1/16" to 1/8" (Double broadcast or slurry broadcast required to achieve 1/8")  
**Mortar:** Suggested 1/4" (Minimum of 1/8", Maximum of 1")  
**Grout coat:** 8.0 to 16.0 mils (203 to 406 microns)  
**Intermediate or Topcoat:** 8.0 to 16.0 mils (203 to 406 microns)

CURING TIME	Temperature	To Topcoat/Broadcast	To Place in Service
	75°F (24°C)	4 to 8 hours	16 hours

**Note:** If more than 8 hours have elapsed between coats, the coated surface must be mechanically abraded before topcoating. **Note:** There is no maximum recoat time if aggregate has been broadcast to refusal into the preceding coat. Curing time varies with surface temperature, air movement, humidity and film thickness.

**VOLATILE ORGANIC COMPOUNDS** **Unthinned:** 0.26 lbs/gallon (31 grams/litre)  
**Thinned 5% (No. 2 Thinner):** 0.59 lbs/gallon (71 grams/litre)

**HAPS** **Unthinned:** 0.0 lbs/gal solids  
**Thinned 5% (No. 2 Thinner):** 0.37 lbs/gal solids

**THEORETICAL COVERAGE** 1,604 mil sq ft/gal (39.4 m<sup>2</sup>/L at 25 microns). See APPLICATION for coverage rates.

**NUMBER OF COMPONENTS** Liquids—Two: Part A and Part B (2 parts A to 1 part B by volume)  
 Field Colorant—One (optional) (Series 820)  
**Note:** Aggregate for mortar applications (S238-0301C) is available from Tnemec or can be purchased from an approved supplier.

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**PACKAGING**

	<b>PART A</b>	<b>PART B</b>	<b>Yield (mixed)</b>
Extra Large Kit	2-55 gallon drums	1-55 gallon drum	165 gallons
Large Kit	2-5 gallon pails	1-5 gallon pail	15 gallons
Small Kit	2-1 gallon cans	1-1 gallon can	3 gallons

**Broadcast Application:** For broadcast or slurry/broadcast applications purchase clean, dry, bagged 4.0 (30/50 mesh) Flint Shot, silica sand or approved equal. Tnemec ChromaQuartz or approved equal can be substituted for decorative quartz applications. The aggregate is calculated at one-half pound per sq ft (2.4 kg/m<sup>2</sup>) per 1/16" broadcast application or one pound per sq ft (4.8 kg/m<sup>2</sup>) for a 1/8" double broadcast. Additional aggregate is required to accommodate for waste or loss during application or to make coving material.

**Mortar Application:** The Part C mortar aggregate (S238-0301C) is based on a nominal amount calculated at 60-80 lbs. per gallon when mixed or a 6.5 to 1 – 9.0 to 1 (rock to resin) ratio by weight. Part C mortar aggregate purchased from Tnemec is packaged in 50 lb. bags.

**Colorant:** Series 820 field applied colorants are available in quart and gallon containers from Tnemec in 16 StrataShield colors and certain custom colors. Colorants should be added at 4 oz. to 8 oz. per gallon of mixed clear liquids for intermediate or base coats and up to 8 oz. per gallon for finish coats. **Note:** Color consistency may vary based on amount of colorant used.

**NET WEIGHT PER GALLON**

9.07 ± 0.25 lbs (4.11 ± .11 kg) mixed

**STORAGE TEMPERATURE**

Minimum 50°F (10°C) Maximum 90°F (32°C)  
Material should be stored at temperatures between 70°F and 90°F (21°C and 32°C) for at least 48 hours prior to use.

**TEMPERATURE RESISTANCE**

(Dry) Continuous 250°F (121°C) Intermittent 275°F (135°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 StrataShield Installation and Application Guide for floors.

**Primer:** 6.0-12.0 dry mils (150-305 microns) 6.0-12.0 wet mils (150-305 microns) 134-267 sq ft/gal (12.2-24.3 m<sup>2</sup>)

**Broadcast Application:** The mixed liquids (Part A and B) are spread at a rate of 80 sq ft (7.4 m<sup>2</sup>) per gallon or approximately 20 mils (510 microns) wet. The aggregate is then broadcast into the liquid until a uniformly dry appearance is obtained. Each broadcast layer will result in a thickness of approximately 1/16" (1.6 mm). After the first broadcast layer cures, the excess aggregate must be removed and a second application repeated to obtain an approximate thickness of 1/8" (3.2 mm).

**Mortar Application:** The mixed liquids (Part A and B) and aggregate (Part C) are spread at a rate of approximately 25 to 35 sq ft per gallon at a thickness of 1/4" based on a 6.5 to 1 – 9.0 to 1 rock to resin ratio by weight. **Note:** Drier mixes typically used for power trowel application should be grouted prior to finish coating. Allow for surface irregularities. Film thickness is rounded to the nearest 0.5 mil or 5 microns. Application of coating below minimum or above maximum recommended dry film thicknesses may adversely affect coating performance.

**Grout coat:** 8.0 to 16.0 dry mils (203 to 406 microns) 8.0 to 16.0 wet mils (203 to 406 microns) 100-201 sq. ft/gal (9.3-18.6 m<sup>2</sup>).

**Intermediate or Topcoat:** 8.0 to 16.0 dry mils (203 to 406 microns) 8.0 to 16.0 wet mils (203 to 406 microns) 100-201 sq. ft/gal (9.3-18.6 m<sup>2</sup>).

**MIXING**

Use a variable speed drill with a PS Jiffy blade. Slowly mix 2 parts A component, and while under agitation add 1 part B component and mix for a minimum of two minutes. Ensure that all Part B is blended with Part A by scraping the pail walls with a flexible spatula.

**Note:** A large volume of material will set up quickly if not applied or reduced in volume.

**Caution: Do not reseat mixed material. An explosion hazard may be created.**

**Field Colorant:** Mix thoroughly using a variable speed drill with a PS Jiffy blade at a rate of 4 oz. to 8 oz. per gallon of mixed liquids.

**Aggregate:** Use an appropriate type mortar mixer and slowly blend Part C aggregate thoroughly with properly proportioned Part A and Part B mixed liquids. The Part C aggregate is based on a nominal amount calculated at 60 to 80 lbs per gallon mixed or a 6.5 to 1 – 9.0 to 1 (rock to resin) ratio by weight.

**THINNING**

Normally not required. May thin up to 5% with No. 2 Thinner as needed.

**POT LIFE**

15 to 20 minutes at 75°F (24°C)  
Increased material temperatures will significantly reduce the pot life.

**APPLICATION EQUIPMENT**

**Primer, Grout, Intermediate or Topcoat:** Brush, roller, squeegee, trowel. Brush small areas only.

**Broadcast, slurry broadcast:** Roller, squeegee, trowel.

**Mortar:** Screed, hand or power trowel.

**Note:** For detailed instructions, refer to the StrataShield Installation and Application Guide for floors.

**SURFACE TEMPERATURE**

Minimum of 50°F (10°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. Coating will not cure below minimum surface temperature. To avoid outgassing, concrete temperature should be stabilized or in a descending temperature mode. Material should not be applied in direct sunlight.

**MATERIAL TEMPERATURE**

For optimum application, handling and performance, the material temperature during application should be between 70°F and 90°F (21°C and 32°C). Temperature will affect the workability. Cool temperatures increase viscosity and decrease workability. Warm temperatures will decrease viscosity and shorten pot life.

**CLEANUP**

Clean all equipment immediately after use with xylene or MEK.

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