



POWER-TREAD LE SERIES 233

PRODUCT PROFILE

GENERIC DESCRIPTION Modified Polyamine Epoxy

COMMON USAGE A lower viscosity, high-solids, multi-purpose epoxy that can be used as a primer, broadcast, slurry/broadcast, mortar, grout coat, and topcoat. Especially useful when penetration is needed to sufficiently anchor epoxy flooring systems over lightly profiled concrete surfaces. Protects concrete surfaces from impact, abrasion and mild chemicals.

COLORS Clear. Can be 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 during application and initial stages of curing may cause amine blush, possibly affecting adhesion of subsequent topcoats.

FINISH Gloss

SPECIAL QUALIFICATIONS Series 233 was tested in accordance with, and passed, the California Department of Public Health CDPH/EHLB/Standard Method Version 1.1, 2010 emissions testing and meets qualifications of LEED v4, Collaborative for High Performance Schools, and Living Building Challenge.

COATING SYSTEM

SURFACER/FILLER/PATCHER Series 206, 215. **Note:** A repair kit of 201, 208 or 233 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, 237, 238 or 241

TOPCOATS Series 206, 206SC, 233, 237, 238, 247, 248, 252SC, 280, 280FC, 281, 282, 284, 285, 286, 287, 290, 291, 294, 295, 296 or 297. **Note:** If Series 233, 247 (clear), 248 (clear), 285, 294, 295 or 296 is selected for the finish coat over a decorative broadcast system, an intermediate coat of Series 233 (clear), 237 (clear), 238 (clear) or 284 is required. 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 233 (tinted) 237 or 238 (tinted), 280, 280FC or 281 is required.

SURFACE PREPARATION

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 an ICRI-CSP 1-3 surface profile when used as a primer for lightly profiled surfaces (ICRI-CSP 3 or greater when utilized as a decorative mortar system). Large cracks, voids and other surface imperfections should be filled with a recommended filler or surfacer. **Note:** Shotblasting will leave a much heavier profile than acid etching. In this case it is recommended that a higher mil primer such as 201 be applied to help fill and smooth the surface profile of the floor.

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

TECHNICAL DATA

VOLUME SOLIDS 100% (mixed)

RECOMMENDED DFT **Primer:** 3.0 to 12.0 mils (75 to 300 microns) per coat.
Broadcast: 1/16" to 1/8" (Double broadcast or slurry broadcast required to achieve 1/8"). **Mortar:** 3/16" to 1/4" thickness.
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)	6 to 8 hours	16 to 24 hours

Note: If more than 16 hours have elapsed between coats, the coated surface must be mechanically abraded before topcoating. Curing time varies with surface temperature, air movement, humidity and film thickness.

VOLATILE ORGANIC COMPOUNDS 0.00 lbs/gallon (0.0 grams/litre)

THEORETICAL COVERAGE 1,604 sq ft/gal (39.4 m²/L at 25 microns). See APPLICATION for coverage rates.

NUMBER OF COMPONENTS Two: Part A and Part B (3 Parts A to 1 Part B by volume)

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PACKAGING

	Part A	Part B	Yield (mixed)
Extra Large Kit	3-55 gallon drums	1-55 gallon drum	220 gallons (832 L)
Large Kit	3-5 gallon pails	1-5 gallon pail	20 gallons (75 L)
Small Kit	3-1 gallon cans	1-1gallon can	4 gallons (15 L)

Broadcast Application Broadcast to refusal with aggregate, colored quartz or decorative flake. 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/m²) per 1/16" broadcast application or one pound per sq ft (4.8 kg/m²) for a 1/8" double broadcast. Broadcast decorative flake at an approximate rate of 0.25 lb per sq ft or 4 to 5 sq ft per pound. Decorative flake is available from Tnemec or can be purchased from an aggregate supplier. Additional aggregate is required to accommodate for waste or loss during application or to make coving material.

Mortar Application: The Part C mortar aggregate (S237-0301C or Series 223 Part C ChromaQuartz) 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 and hiding may vary based on the color selected and amount of colorant used.

NET WEIGHT PER GALLON 9.07 +/- 0.25 lbs (4.11 +/- .11 kg) mixed

STORAGE TEMPERATURE Minimum 40°F (4°C) Maximum 90°F (32°C)

Note: 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 Part A: 230°F (110°C) Part B: 230°F (110°C)

APPLICATION

COVERAGE RATES

Primer: 3.0 to 12.0 dry mils (75 to 305 microns) 3.0 to 12.0 wet mils (75-305 microns) 134-535 sq. ft/gal (12.4-49.7 m²).

Broadcast Application: The mixed liquids (Part A and B) are spread at a rate of 80 sq ft (7.4 m²) per gallon or approximately 20 mils (510 microns) wet. The aggregate, colored quartz or decorative flake 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, colored quartz or decorative flake 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 (S237-0301C or Series 223 Part C ChromaQuartz) 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 used for 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 m²).

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 m²).

MIXING

Use a variable speed drill with a PS Jiffy blade. Slowly mix 3 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 reseal 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.

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

THINNING

Do not thin.

POT LIFE

20 to 25 minutes at 75°F (24°C)
Material temperatures above 90°F (32°C) 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 55°F (13°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

Flush and clean all equipment immediately after use with xylene or MEK.

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