TNEMEC

PRODUCT DATA SHEET

DECO-TROWEL SERIES N223

PRODUCT PROFILE

GENERIC DESCRIPTION Colored Quartz-Filled Modified Polyamine Epoxy

COMMON USAGE A low ambering, multi-purpose epoxy coating with enhanced UV stability and resistance to yellowing. Series N223 is a decorative mortar floor-topping system installed at 3/16" to 1/4" thickness. It protects concrete surfaces from impact and abrasion and has excellent chemical resistance with an aesthetically pleasing appearance.

COLORS Available in 12 standard colors. Refer to StrataShield Decorative Quartz color card. Custom colors also available. **Note:** Series N223 aggregate is larger than that used in Series N222.
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.

FINISH Gloss. Decorative quartz—multi-colored appearance. The finished appearance and texture depend on the type, film thickness, and the number of clear finish coats selected.

SPECIAL QUALIFICATIONS Series N223 meets the requirements of LEED-Low-Emitting Materials, Collaborative for High-Performance Schools-Paints & Coatings, WELL Building Standard-VOC Restrictions, and Living Building Challenge–Healthy Interior Performance. Contact your Tnemec representative for more information.

COATING SYSTEM

SURFACER/FILLER/PATCHER Series 206, 215. **Note:** A repair kit of 201, with Part C fumed silica or Series N223 with 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 **Concrete:** Self-priming or Series 201, 208, 233, 237, 238, 241.

TOPCOATS Series 247, 248, N284, N285, 296. **Note:** If Series 247, 248, N285, or 296 is selected for the finish coat, an intermediate coat of Series N284 is required (may require two coats).

SURFACE PREPARATION

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

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 Suggested 3/16" to 1/4"

CURING TIME

Temperature	To Topcoat	To Place in Service
75°F (24°C)	12 to 72 hours	24 hours

Note: If more than 72 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 **Unthinned:** 0.13 lbs/gallon (15 grams/litre)

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

NUMBER OF COMPONENTS Two Liquids: Part A and Part B (2 Parts A to 1 Part B by volume).
Colored Quartz: Series 223 Part C colored quartz (ChromaQuartz) is available from Tnemec or can be purchased from a different supplier.

PACKAGING

	Part A	Part B	Yield (mixed)
Extra Large Kit	2-55 gallon drums	1-55 gallon drum	165 gallons (624.5 L)
Large Kit	2-5 gallon pails	1-5 gallon pail	15 gallons (56.7 L)
Small Kit	2-1 gallon cans	1-1 gallon can	3 gallons (11.3 L)

The Part C mortar quartz aggregate 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.

NET WEIGHT PER GALLON 9.18 ± 0.25 lbs (4.16 ± 0.11 kg) mixed

STORAGE TEMPERATURE	Minimum 40°F (4°C) Maximum 90°F (32°C) Prior to application, the material temperature should be between 70°F and 90°F (21°C and 32°C).
TEMPERATURE RESISTANCE	(Dry) Continuous 250°F (121°C) Intermittent 275°F (135°C)
SHELF LIFE	12 months at recommended storage temperature.
FLASH POINT - SETA	>230°F (110°C)
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	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 3/16" to 1/4" based on a 6.5 to 1 – 9.0 to 1 rock to resin ratio by weight. Allow for surface irregularities. Application of coating below the minimum or above maximum recommended dry film thicknesses may adversely affect coating performance.
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 reseal mixed material. An explosion hazard may be created.** **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 colored quartz aggregate is based on a nominal amount calculated at 60 to 80 lbs per gallon when mixed or a 6.5 to 1 – 9.0 to 1 (rock to resin) ratio by weight.
THINNING	Do not thin.
POT LIFE	25 to 30 minutes at 75°F (24°C) Material temperatures above 90°F (32°C) will significantly reduce the pot life.
APPLICATION EQUIPMENT	Screed and hand trowel.
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. 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.