



ULTRA-TREAD® MVT SERIES 241

PRODUCT PROFILE

GENERIC DESCRIPTION Polyurethane Modified Concrete

COMMON USAGE Ultra-Tread MVT is a high performance moisture control system designed to reduce moisture vapor emissions prior to the application of non-breathing, polymer floor topping finishes. Ultra-Tread MVT is a low odor, self-priming, base coat that can be applied to 10 day old concrete. It can withstand moisture vapor transmission up to 20 lbs (per ASTM F 1869) and relative humidity up to 99% (per ASTM F 2170). This unique, self-leveling slurry system is typically applied by V-notch trowel or squeegee, backrolled with a loop roller and broadcast to refusal with 30/50 mesh aggregate, colored quartz or decorative flake yielding an approximate 1/8" thick base layer.

COLORS Neutral/Tan as supplied. **Note:** Series 244 Part D field colorants are available in 00GR Gray and 00RD Red. Black, blue, beige and green are also available with additional lead time. Series 244 Part D field colorants are ordered separately. When tinting Series 241, add one colorant pack per kit.

SPECIAL QUALIFICATIONS Formulated with antimicrobial properties. Does not support bacteria or fungal growth. Contact your Tnemec representative for specific test results.

Series 241 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 241 (extended with aggregate) or Series 243. Patching should be allowed to cure a minimum of six hours prior to placement of the Series 241 to avoid blistering or doming of the Series 241. Series 215, or 201 or 208 mixed with fumed silica, may be used for small patches or crack repairs. Certain high-early strength, cementitious repair mortars are also acceptable. Contact Tnemec for further qualifications.

PRIMERS Self-priming

INTERMEDIATE Series 222, 223, 224, 233, 237, 238, 239, 252SC, 256. **Note:** Series 241 must be broadcast to refusal with aggregate, colored quartz or decorative flake if topcoating. Broadcast aggregate or colored quartz at an approximate rate of 0.8 lb per sq ft and decorative flake at an approximate rate of 0.25 lb per sq ft or 4 to 5 sq ft per pound. The Series 241 base coat will account for approximately 1/8"-3/16" of the desired system thickness.

TOPCOATS Series 233, 237, 238, 239, 246, 247, 248, 252SC, 256, 280, 281, 282, 284, 285, 286, 290, 291, 294, 295, 296, 297. **Note:** These topcoats may only be used when recommended aggregate has been broadcast to refusal into the wet Series 241. **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 237 or 238 (clear), 256 (clear) or 284 is required.

SURFACE PREPARATION

CONCRETE Prepare surfaces by method suitable for exposure and service.

Allow new poured-in-place concrete to cure a minimum of 10 days at 75°F (24°C). Ultra-Tread MVT may be installed in areas where high rates of moisture vapor transmission would prevent the use of non-breathing flooring systems. 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 20 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 99%), 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 4-5 surface profile. Large cracks, voids and other surface imperfections should be filled with a recommended filler or surfacer.

ALL SURFACES Must be clean, dry and free of oil, grease and other contaminants. Do not apply over existing coatings. **Note:** Substrate conditions which can adversely affect the adhesion of Series 241 Ultra-Tread MVT include: concrete that is structurally unsound, wet, damp, contaminated, or inadequately profiled at the time of application, absent or inadequate under slab moisture vapor barrier, hydrostatic pressure, Alkali Silica Reaction (ASR), and migration of oils, chemicals, and other contaminants.

TECHNICAL DATA

VOLUME SOLIDS 100% (mixed)

RECOMMENDED DFT 46.0 to 52.0 mils (1168 to 1320 microns) applied neat. Film thickness, after broadcasting with aggregate, is approximately 1/8". Refer to coverage rates table for more information. **Note:** Exceeding the recommended coating thickness may result in blistering of the product. Avoid excessive coating thickness by thoroughly filling voids, depressions and cracks with recommended filler or surfacer prior to Series 241 application.

CURING TIME

Temperature	Min. Recoat	Light Traffic	Place in Service
75°F (24°C)	6 hours	8 hours	12 hours

For full resistance to chemicals and heavy traffic, 24 hour cure is needed. Curing time varies with surface temperature, air movement, humidity and film thickness. **Note:** For faster curing and low temperature applications, add No. 44-714 Ultra-Tread Accelerator, see separate product data sheet for cure information.

VOLATILE ORGANIC COMPOUNDS

Parts A & B: 0.05 lbs/gallon (5.6 grams/litre)
 Parts A, B & C: 0.03 lbs/gallon (3.9 grams/litre)

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THEORETICAL COVERAGE 70-80 sq ft (6.50-7.43 m²) per small kit
NUMBER OF COMPONENTS Liquids - Two: Part A & Part B
 Aggregate - One: Part C
 Field Colorant - One: (Optional) If tinting Series 241, order Series 244 Part D color packs, available in 00GR Gray and 00RD Red. Must be ordered separately.

PACKAGING	PART A	PART B	PART C (Aggregate)	Mixed Yield
Small Kit	1-1 gallon jug (partially filled)	1-1 gallon jug (partially filled)	1-14.7 lb bag	2.3 gal

NET WEIGHT PER GALLON 13.06 ± 0.25 lbs (5.92 ± .11 kg) (mixed)
STORAGE TEMPERATURE Minimum 35°F (2°C) Maximum 110°F (43°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 Continuous 180°F (82°C)
SHELF LIFE Part A: 12 months Part B: 12 months Part C: 12 months
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 Series 241 Installation and Application Guide.

Applied Neat	Broadcast to Refusal	Small Kit Coverage
46 mils (1168 microns)	1/8" (3.0 mm)	80 sq ft (7.43 m ²)
52 mils (1321 microns)	1/8" (3.0 mm)	70 sq ft (6.50 m ²)

Application below minimum or above maximum recommended thicknesses may adversely affect performance. Above rates are based on theoretical coverage. Actual coverage will vary based on condition of substrate.
Broadcast (1/8" System): Series 241 **must** be broadcast to refusal with aggregate, colored quartz or decorative flake. This is typically completed within 10 to 15 minutes of application. **Note:** To reduce the potential for pinholes in the grout or lock coat a lower viscosity product such as Series 222, 237, 238, 239, 252SC, 256 or 281 should be used over the seeded Series 241 when building a 1/8" thick system. **Important:** When broadcasting into Series 241 at 1/8" thickness, it is critical that a rounded, less angular, uniform size silica sand or colored quartz be used. This will reduce the potential for pinholes in the grout or lock coat.
Broadcast (3/16" System): Colored quartz and/or decorative flake systems will require an additional broadcast layer using Series 222, 224, 237, 238 or 256 clear to obtain a uniform appearance and texture before applying the desired clear finish coats. This will typically result in a total system thickness closer to 3/16".

MIXING Using a variable speed 850-RPM drill and four inch (4") dispersion blade, slowly mix the entire contents of both the A and B components for a minimum of one minute. Continue agitation and slowly add the Part C aggregate and mix until material is uniform and no dry aggregate is present. The entire mixing procedure should take approximately three minutes. **Note:** Part B is moisture sensitive. Do not open until ready to mix. **Caution: Do not attempt to split kits and do not reseal mixed material.**

Colorant: If tinting Series 241 with Series 244 Part D colorant, add one color pack to each kit of Series 241. Start by mixing Part A liquid and Part C aggregate, while under agitation, slowly add Part D colorant, continue to mix material one to two minutes before adding Part B liquid. Mix until material is uniform and no dry aggregate is present.

Accelerator: For accelerated cure on low temperature applications, add Series 44-714 Ultra-Tread Accelerator to the Series 241 Part A prior to mixing. The proper amount of Series 44-714 is based upon ambient temperature; At 68°F (20°C) with 40% relative humidity 1 oz per kit will result in an 8 hour maximum cure time, 2 oz per kit will result in a 6 hour maximum cure time, 3 oz per kit will result in a 4 hour maximum cure time. **Note:** Material will set up quickly if not applied immediately after mixing.

THINNING **DO NOT THIN.**

POT LIFE Without 44-714: 10 minutes at 75°F (24°C)
 Higher material temperatures will significantly reduce the pot life and working time.

With 44-714 when using maximum amount (3 oz): 15 minutes at 60°F (16°C) 10 minutes at 70°F (21°C)

APPLICATION EQUIPMENT Spread using a 3/8" to 1/2" V-notch squeegee or trowel. Immediately backroll with a loop roller to level and work out any trowel marks or waves. Immediately follow by broadcasting to refusal with 30/50 mesh aggregate colored quartz or decorative flake. **Note:** Series 241 **must** be broadcast to refusal with aggregate, colored quartz or decorative flake. Broadcast 30/50 aggregate or colored quartz at a rate of 0.8 lbs per sq ft and decorative flake at a rate of 0.25 lbs or 1/4 lb per sq ft.

SURFACE TEMPERATURE Minimum of 40°F (4°C), optimum 65°F to 80°F (18°C to 27°C), maximum of 85°F (29°C). The substrate temperature should be at least 5°F (3°C) above the dew point. Coating will not cure below minimum surface temperature.

MATERIAL TEMPERATURE For optimum application, handling and performance, the material temperature during application should be between 60°F and 80°F (16°C and 27°C). Temperature will affect the workability. Cool temperatures increase viscosity and decrease workability. Warm temperatures will decrease viscosity and significantly shorten pot life and working time.

AMBIENT HUMIDITY Humidity must be below 85%.

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

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