



SURFACE PREPARATION AND APPLICATION GUIDE

SERIES 241 ULTRA-TREAD MVT

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Published technical data, instructions, and pricing are subject to change without notice. Contact your Tnemec technical representative for current technical data, instructions, and pricing. Warranty information: The service life of Tnemec's coatings will vary. For warranty, limitation of seller's liability, and product information, please refer to Tnemec's Product Data Sheets at www.tnemec.com or contact your Tnemec Technical Representative. 06/2021

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1.0 INTRODUCTION

The purpose of this guide is to familiarize applicators with the basic information necessary for properly bidding, ordering and installing Tnemec's Ultra-Tread MVT floor topping. Prior to starting work, please read this entire guide carefully. If you have questions, contact your Tnemec representative or call +1-816-483-3400. It is important that you obtain answers to any questions before beginning the process. Due to the complex application and potential exposure to extreme environments, only qualified applicators should install Ultra-Tread MVT. Please review all pertinent Product Data Sheets as well as Detail Drawings.

Also, reference the project specifications and compare them with this guide and the Product Data Sheets. Resolve any inconsistencies prior to starting work.

This application guide cannot cover every issue that may be encountered in the field. If issues arise that are not addressed in this guide or the Product Data Sheets, please contact your Tnemec representative or call +1-816-483-3400 for assistance.

2.0 PRECAUTIONS

- Material should be stored between 35°F (2°C) and 110°F (43°C). Material should be stored at temperatures between 70°F and 90°F (24°C and 32°C) for at least 48 hours prior to use.
- Do not install material if substrate temperatures are below 40°F (4°C) or above 85°F (29°C).
- Do not install if relative humidity is above 85%.
- Do not attempt to split kits or alter Part C aggregates.
- Do not mix material by hand.
- Due to the limited working time of the material, adequate manpower should be considered.
- Part B is moisture sensitive. Do not open until ready to mix.
- Part C is moisture sensitive and should be stored in a dry area.
- Ensure substrate is clean, dry and free of contaminants.
- Exceeding the recommended coating thickness may result in blistering of the product.

3.0 PRODUCT AND PACKAGING

3.1 SERIES 241 ULTRA-TREAD MVT

Series 241 is a low odor, slurry applied, high performance moisture control base layer designed to reduce moisture vapor emissions prior to the application of non-breathing, polymer floor topping finishes. Ultra-Tread MVT is a 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).

3.1.1 SERIES 241 PACKAGING

KIT SIZE	PART A (Partially Filled)	PART B (Partially Filled)	PART C (Aggregate)	MIXED YIELD
Extra Large	1 - 1 tote	1 - 1 tote	300 - 14.7 lb bags	706.1 gal (2672.9 L)
Medium	1 - 5 gallon pail	1 - 5 gallon pail	5 - 14.7 lb bags	11.6 gal (43.9 L)
Small	1 - 1 gallon jug	1 - 1 gallon jug	1 - 14.7 lb bag	2.3 gal (8.7 L)

Theoretical yield: 70 - 80 sq. ft. (6.50 - 7.43 m²) per mixed kit at 46 - 52 mils (1167 to 1066 microns)*
*Substrate condition, application and waste may vary and can affect coverage.

Note: Empty measuring pails are available. Reference F100-H189-UT for the 2-gallon Part A pail and F100-H190-UT for the 2-gallon Part B pail. Empty measuring pails are only needed for breaking down Series 241 part A & B components when mixing Medium and X-Large Kits. The measuring pails are not needed for Small Kits as the part A & B components are already pre-filled at the correct fill amounts.

3.2 SERIES 44-714 ULTRA-TREAD ACCELERATOR

Series 44-714 is a special additive used to increase the cure time of our four component Ultra-Tread products where faster return to service is needed. Series 44-714 has virtually no volatile organic compounds or odor. It may be used with Series 241.

Due to shortened working time, Series 44-714 is not recommended for use if the substrate is 70°F (21°C) or greater. Do not exceed recommended dosage, reference mixing for more information.

3.2.1 SERIES 44-714 PACKAGING

Series 44-714 is available in quarts (0.95 L) or gallon (3.79 L) sizes.

4.0 SURFACE PREPARATION

4.1 PREPARATION OF CONCRETE

Allow new poured-in-place concrete to cure a minimum of 10 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 twenty 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, or mechanically abrade concrete surfaces to remove laitance, curing compounds, hardeners, sealers and other contaminants and to provide a minimum ICRI-CSP 4 or greater surface profile. Existing concrete should be sound and free of all contaminants. Removal of weak or contaminated concrete prior to installation is

required to ensure a strong bond between the concrete and Ultra-Tread floor topping system. Large cracks, voids and other surface imperfections should be filled with a recommended filler or surfacer.

4.2 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 include: concrete that is structurally unsound, wet, damp, contaminated, or inadequately profiled at the time of application, absent or inadequate under slab moisture barrier, hydrostatic pressure, Alkali Silica Reaction (ASR), and migration of oils, chemicals, and other contaminants.

4.3 PATCHING

All surface imperfections such as spalls, large cracks and areas requiring keyways, such as drains and terminations, should be detailed prior to the installation of the Series 241 Ultra-Tread MVT topping. Reference the Series 241 product data sheet for additional information.

4.4 CRACKS AND SURFACE IMPERFECTIONS

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.

4.5 CONTROL/CONSTRUCTION JOINTS, CRACKS AND IMPERFECTIONS

Should be pre-filled and/or patched with 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 extended Series 241 or Series 243 patching material. Series 215, or Series 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.

4.6 EXPANSION JOINTS

Expansion joints can be considered moving joints and should be honored and filled with the appropriate caulking/sealant. Sealant should be selected based on the intended use of the area. Reference the latest StrataShield Standard Detail Drawings.

5.0 MIXING

5.1 SERIES 241 ULTRA-TREAD MVT

To mix Series 241 small kits, use 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.

When mixing Medium and Extra-Large kits, mix 0.9117 gallons of Part A component with 0.7993 gallons of Part B component. **Note:** Empty mixing pails are available for measuring these kit sizes. Reference F100-H189-UT for the 2-gallon Part A pail and F100-H190-UT for Part B pail. Slowly mix the measured amount of both the part A and B components for a minimum of one minute. Continue agitation and slowly add one 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.

The Medium Kits break down to equal five (5) Small Kits or units and the Extra-Large Kits break down to equal three hundred (300) Small Kits or units. Single batch mixes equal to one (1) Small Kit or unit are frequently mixed in five-gallon pails. Multiple batch mixes are frequently mixed in larger portable, Hippo style mixers and used for larger pours.

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 70°F (21°C) with 50% relative humidity 1 oz per small kit will result in a 9 hour maximum cure time, 2 oz per small kit will result in a 7.5 hour maximum cure time, 3 oz per small kit will result in a 6.5 hour maximum cure time. **Note:** Material will set up quickly if not applied immediately after mixing.

6.0 APPLICATION

6.1 SERIES 241 ULTRA-TREAD MVT

Once the surface has been properly prepared, Series 241 self-leveling, slurry system may be mixed and 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. 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 4-5 sq ft per lb.

7.0 CURING

Series 241 should be ready to return to light duty service within 10 to 12 hours dependent upon temperatures and humidity. The material should be allowed to cure 24 hours before being returned to full service.

8.0 CLEANUP

Clean all tools and equipment immediately with Xylene or MEK.

9.0 HEALTH & SAFETY

These products may contain solvents and/or other chemical ingredients. Adequate health and safety precautions should be observed during storage, handling, application and curing. For information regarding these potential hazards associated with these products please refer to the container label or request a Safety Data Sheet from Tnemec Company Inc.. Please direct your inquiries to the attention of our Safety Director.