



SURFACE PREPARATION AND APPLICATION GUIDE

SERIES 241 ULTRA-TREAD MVT

TNEMEC COMPANY INC.

6800 Corporate Drive, Kansas City, MO 64120
1-800-TNEMEC1 www.tnemec.com

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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 1-800-TNEMEC1. 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 1-800-TNEMEC1 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 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).

3.1.1 SERIES 241 PACKAGING

PART A (Partially Filled)	PART B (Partially Filled)	PART C (Aggregate)	MIXED YIELD
1 - 1 gallon jug	1 - 1 gallon jug	1 - 14.7 lb. bag	2.3 gal.

Theoretical yield: 70 - 80 sq. ft. per mixed kit at 46 - 52 mils (1167 to 1066 microns)*

*Substrate condition, application and waste may vary and can affect coverage.

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. **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 prefilled 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, 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. 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. Never mix more material than can be applied within 15 minutes of initial mixing.

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.

Note: The entire kit, using all components must be mixed. Mixing less than a full kit can result in miscatalization.

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.

6.0 APPLICATION

6.1 SERIES 241 ULTRA-TREAD MVT

Once the surface has been properly prepared, Series 241 may be mixed and applied 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 into the wet Series 241 to refusal with 30/50 mesh aggregate colored quartz or decorative flake. It is critical a uniform size, rounded and less angular silica sand or colored quartz be broadcast to reduce the potential for pinholes in the grout or lock coat when intending to build a 1/8" thick system. 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. Excess aggregate, decorative quartz or flake can either be vacuumed or swept off once the material has cured a minimum of 6 hours. Optional topcoats may then be applied to lock in the aggregate. To reduce the potential for pinholes in the grout or lock coat, it is important that a lower viscosity product such as Series 222, 233, 237, 238, 239, 252SC, 256 or 281 be used as the grout or lock coat over the seeded 241 when intending to build a 1/8" thick system. Reference product data sheet for topcoat options.

Color quartz or decorative flake systems will require an additional broadcast layer to obtain a uniform appearance and texture before applying the desired clear finish coats. This will typically result in a total system thickness of 3/16".

9.0 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.

10.0 CLEANUP

Clean all tools and equipment immediately with Xylene or MEK.

11.0 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.