ULTRA-TREAD® M
SERIES 244

PRODUCT PROFILE

GENERIC DESCRIPTION
Polyurethane Modified Concrete

COMMON USAGE
Ultra-Tread M is a low odor, mortar applied floor topping designed for monolithic applications in abusive service areas. It provides superior performance to other flooring systems such as acid brick, quarry tile and most polymer flooring systems. Designed for use in food and beverage facilities, pharmaceutical and processing areas, commercial and restaurant kitchens or anywhere a durable floor topping is required. Provides excellent chemical resistance and withstands thermal shock due to hot liquids and aggressive cleaning procedures. Areas may be quickly returned to service within hours of installation, depending on temperature and humidity. Ultra-Tread M is a self-priming mortar 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).

COLORS
Gray and Red. Note: Additional lead times may apply when ordering Beige, Black, Blue, Green, Off White and Yellow.

Aromatic urethanes chalk and yellow with age, extended exposure to UV and artificial lighting.

FINISH
Matte

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

Suggested 1/4" to 3/8" (6mm to 9 mm).

Theoretical coverage

COATING SYSTEM

SURFACER/FILLER/PATCHER
Series 243, 244, 245 (extended with aggregate). Patching should be allowed to cure a minimum of six hours prior to placement of Series 244 to avoid blistering or doming of the Series 244. Series 215, or 201 mixed with fumed silica, may be used for small patches or crack repairs. Certain high-early strength, cementious repair mortars are also acceptable. Contact Tnemec for further qualifications.

PRIMERS
Self-priming

TOPOATS
Series 244 is typically left as a stand-alone mortar without topcoating. If needed, use Series 222, 233, 237, 238, 239, 246, 252SC, 256, 257, 280, 280FC, 282. Note: These topcoats may only be used when recommended aggregate has been broadcast to refusal into the wet Series 244.

SURFACE PREPARATION

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 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 5 or greater 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. Note: Substrate conditions which can adversely affect the adhesion of Series 244 Ultra-Tread M 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)

Suggested 1/4" to 3/8" (6mm to 9 mm).

RECOMMENDED DFT

Place in Service †

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Min. Recoat</th>
<th>Light Traffic</th>
<th>Place in Service †</th>
</tr>
</thead>
<tbody>
<tr>
<td>75°F (24°C)</td>
<td>6 hours</td>
<td>8 hours</td>
<td>12 hours</td>
</tr>
</tbody>
</table>

† For full resistance to chemicals and steam cleaning, 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: 0.2 lbs/gallon (23 grams/litre)

Parts A, B & C: 0.05 lbs/gallon (6 grams/litre)

THEORETICAL COVERAGE

21.0 - 17.0 sq ft per small kit

NUMBER OF COMPONENTS

## Packaging

<table>
<thead>
<tr>
<th></th>
<th>Part A</th>
<th>Part B</th>
<th>Part C (Aggregate)</th>
<th>Mixed Yield</th>
<th>Small Kit Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium Kit</td>
<td>1-5 gallon pail</td>
<td>1-5 gallon pail</td>
<td>10-50 lb. bag</td>
<td>32.4 gallons (122.6 L)</td>
<td>10</td>
</tr>
<tr>
<td>Small Kit</td>
<td>1-1 gallon jug (partially filled)</td>
<td>1- 1/2 gallon can</td>
<td>1-50 lb. bag</td>
<td>3.24 gallons (12.3 L)</td>
<td>1</td>
</tr>
</tbody>
</table>

**Net Weight Per Gallon**

18.39 ± 0.25 lbs (8.34 ± 0.11 kg) (mixed)

**Storage Temperature**

Minimum 35°F (2°C)  Maximum 110°F (43°C)

**Temperature Resistance**

(Dry) Continuous 235°F (112°C). At thicknesses of ¼” or greater, resistant to aggressive chemical cleaning, thermal shock from steam or hot water, and occasional high temperature liquid spills or discharge at temperatures from -40°F (-40°C) to 250°F (121°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 StrataShield Application Guide for Polyurethane Modified Concrete.

**GUIDE:**

<table>
<thead>
<tr>
<th></th>
<th>Small Kit Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>At 1/4” (6.4 mm)</td>
<td>21 sq ft (1.9 m²)</td>
</tr>
<tr>
<td>At 3/8” (9.5 mm)</td>
<td>14 sq ft (1.3 m²)</td>
</tr>
</tbody>
</table>

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.

**Mixing**

When mixing Small Kits use a mortar mixer or 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.

When mixing Medium kits, mix one half gallon (0.500 gallons) of Part A component with one half gallon (0.500 gallons) of Part B component. 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 ten (10) Small Kits or units. Single batch mixes equal to one (1) Small Kit or unit are frequently mixed in mortar mixers or pails. Multiple batch mixes can be mixed in an appropriate size mortar mixer or pail.

**Accelerator:** For accelerated cure on low temperature applications add Series 44-714 Ultra-Tread Accelerator to the Series 244 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. **Note:** Material will set up quickly if not applied immediately after mixing.

**Thinning**

**DO NOT THIN.**

**Pot Life**

Without 44-714: 15 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**

This unique mortar system is often applied as a stand-alone mortar. It is typically spread using a trowel, screed rake, cam rake or screed box followed by closing and finishing with a trowel. A loop roller or short nap roller cover if often used to help eliminate trowel marks and draw resin to the surface and seal. Aggregate can be broadcast into the wet surface within 10 to 15 minutes of application if additional non-skid texture is desired. If topcoating the mortar, aggregate must be broadcast to refuss into the wet mortar within 10 to 15 minutes of application.

**Application Equipment**

**Mortar:** Screed rake, cam rake, screed box or trowel.

**Finish:** Trowel, loop or short nap roller.

**Note:** For detailed instructions, refer to the StrataShield Application Guide for Polyurethane Modified Concrete.

**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 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.
WARRANTY & LIMITATION OF SELLER'S LIABILITY: Tnemec Company, Inc. warrants only that its coatings represented herein meet the formulation standards of Tnemec Company, Inc. THE WARRANTY DESCRIBED IN THE ABOVE PARAGRAPH SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. The buyer's sole and exclusive remedy against Tnemec Company, Inc. shall be for replacement of the product in the event a defective condition of the product should be found to exist and the exclusive remedy shall not have failed its essential purpose as long as Tnemec is willing to provide comparable replacement product to the buyer. NO OTHER REMEDY (INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR LOST PROFITS, LOST SALES, INJURY TO PERSON OR PROPERTY, ENVIRONMENTAL INJURIES OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE TO THE BUYER. Technical and application information herein is provided for the purpose of establishing a general profile of the coating and proper coating application procedures. Test performance results were obtained in a controlled environment and Tnemec Company makes no claim that these tests or any other tests, accurately represent all environments. As application, environmental and design factors can vary significantly, due care should be exercised in the selection and use of the coating.