1. PRODUCT NAME & MANUFACTURER

1.1 Product:
Marmoleum® Composition Tile (MCT) linoleum tile resilient floor covering

1.2 Manufacturer:
Forbo Flooring Systems
Humboldt Industrial Park
Hazleton, PA 18202
www.forboflooringna.com
Phone: +800 842 7839
Fax: +570 450 0258

1.3 Product Description:
Construction: Marmoleum® Composition Tile (MCT) is a homogeneous floor covering made from natural ingredients including linseed oil, rosin binders, wood flour, limestone and dry pigments which are mixed and then calendared onto a polyester backing to ensure optimum dimensional stability. Topshield2™ is a high performance finish. Its double UV cured double layer technology delivers extraordinary performance and clear and vibrant colors that remain over time. Topshield2™ creates a ‘ready to use’ Marmoleum® that requires no initial maintenance or polymer application. The surface can be repaired or refreshed in cases of accidents or after years of intensive use.

1.4 Physical Characteristics: (dimensions are approximate)
Size -------------- Approx. 13.11” x 13.11” (33.3 cm x 33.3 cm)
Gauge ----------- 0.080” (2.0 mm)
Backing ----------- Polyester
Packaging ------- 45 tiles (53.82 feet², 5 meters²)

2. PRODUCT PERFORMANCE & TECHNICAL DATA

2.1 Reference Specification:
Meets or exceeds all technical requirements as set forth in ASTM F 2195 Standard Specification for Linoleum Tile Flooring Type I

2.2 Environmental:
100% USDA Certified BioBased Product.
Compliant with CHPS 01350 requirements for VOC emissions and indoor air quality.
Contributes to the following LEED® v4 credits:
Materials & Resources
Credit 4, Option 1: See Forbo’s LEED v4 sheet for additional information.
Credit 4, Option 2: Recycled Content (60% Pre-Consumer)
Prerequisite 2: 100% Recyclable Packaging
Indoor Environmental Quality
Credit 2: Low-Emitting Materials (www.chps.net)
Credit 2: Low-Emitting Materials (Adhesives comply with SCAQMD Rule #1168)

2.3 Static Load Limit:
1,500 pounds per square inch when tested in accordance with ASTM F 970-00, Standard Test Method for Static Load Limit.

2.4 Slip Resistance:
Meets or exceeds the industry recommendation of >0.5 for flat surfaces when tested in accordance with ASTM D 2047, Standard Test Method for Static Coefficient of Friction.

2.5 Castor Resistance:
Suitable for office chairs with castors when tested in accordance with EN 425, Castor Chair Test.

2.6 Impact Sound Reduction:
6db when tested in accordance with ISO 717-2, Impact Sound Insulation Test.

2.7 Resistance to Bacteria:
Provides a self-sanitizing quality in the form of a bacteriostatic effect. Independent testing has shown that a sterile zone around the material inhibits the growth of organisms such as staphylococcus aureus (Staph Infection), Clostridium Difficile (C. difficile) and Carbapenem-Resistant Enterobacteriaceae (CRE).

2.8 Anti-Static Properties:
Naturally anti-static. This property makes cleaning easier because dirt and dust does not cling to the surface as it may with other materials.

2.9 Dimensional Stability:
Due to the polyester back, providing a strong durable foundation, the product is dimensionally stable in all directions when properly installed. It resists cracking, drying, and peeling.

2.10 Fire Testing:
Class 1 when tested in accordance with ASTM E 648/NFPA 253, Standard Test Method for Critical Radiant Flux.
Meets 450 or less when tested in accordance with ASTM E 662/ NFPA 258, Standard Test Method for Smoke Density.

2.11 Cigarette Resistance:
Resists cigarette burns. Burning cigarettes will leave only a brown mark, which can be rubbed out using steel wool or a scouring pad.

2.12 Chemical Resistance: (Exposure Time One Hour)*

<table>
<thead>
<tr>
<th>Material</th>
<th>Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diluted Acids – Sulfuric, Nitric, Hydrochloric, Acetic, Lactic, Citric</td>
<td>No Change</td>
</tr>
<tr>
<td>Isopropyl Alcohol (70%)</td>
<td>No Change</td>
</tr>
<tr>
<td>Sodium Hydroxide (5%)</td>
<td>Softening</td>
</tr>
<tr>
<td>Ammonia (5%), Acetone</td>
<td>Possible Softening/Staining</td>
</tr>
<tr>
<td>Phenol (5%)</td>
<td>No Change</td>
</tr>
<tr>
<td>Soda Solution, Soap Solution (Slightly Alkaline)</td>
<td>No Change</td>
</tr>
<tr>
<td>Gasoline, Kerosene, White Spirit, Paraffin</td>
<td>No Change</td>
</tr>
<tr>
<td>Benzene, Toluene, Methyl Alcohol, Ethyl Acetate</td>
<td>No Change</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone, Ether</td>
<td>No Change</td>
</tr>
<tr>
<td>Mineral Oil, Olive Oil, Vegetable Oil, Animal Fat</td>
<td>No Change</td>
</tr>
<tr>
<td>Blood, Urine, Excrement</td>
<td>No Change</td>
</tr>
<tr>
<td>Lipstick</td>
<td>No Change</td>
</tr>
<tr>
<td>Formaldehyde, Hydrogen Peroxide 3%</td>
<td>No Change</td>
</tr>
<tr>
<td>Hot Chili Paste, Iodine, Betadine, Hair Dye</td>
<td>No Change</td>
</tr>
<tr>
<td>Shoe Polish</td>
<td>Staining</td>
</tr>
<tr>
<td>Silver Nitrate</td>
<td>Staining/Possible Softening</td>
</tr>
<tr>
<td>Bitumen, Salt Water</td>
<td>No Change</td>
</tr>
<tr>
<td>Methylene Blue</td>
<td>Staining</td>
</tr>
<tr>
<td>Gel-Based Hand Sanitizer, Bleach</td>
<td>No Change</td>
</tr>
</tbody>
</table>

*Marmoleum® Composition Tile (MCT) is NOT resistant to prolonged exposure to high alkalis.
3. **Adhesive:**
   Use Forbo T 940, Forbo Sustain 885m, Forbo Sustain 1195 or Forbo Sustain 1299 adhesives.
   Use a 1/16” x 1/16” x 1/16” square notch trowel.
   Spread Rate: Approximately 125 square feet/gallon.

3.1 **Installation Guidelines:**
   Refer to Forbo Flooring’s Installation Guide for complete installation guidelines.

4. **WARRANTY**
   Limited 30-year warranty. For complete details, contact Forbo Flooring.

5. **CARE & CLEANING**
   After installation is completed, allow a minimum of 5 days for the adhesive to properly bond and cure before conducting wet cleaning procedures. See Forbo Flooring’s Floor Care Guide for additional information.