**MARMOLEUM® SHEET TECHNICAL DATA**

(Concrete, Fresco, Piano, Real, Splash, Striato, Terra, Vivace)

1. **PRODUCT NAME / MANUFACTURER**

1.1 **Product:**
Marmoleum® linoleum sheet 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® 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 natural jute backing. 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)**
- **Gauge:** 1/10” (2.5 mm)
- **Backing:** Jute
- **Width:** 79” (2 meters)
- **Length:** 105’ (32 meters)
- **Roll Size:** 77 yards² (64 meters²)

2. **PRODUCT PERFORMANCE AND TECHNICAL DATA**

2.1 **Reference Specification:**
Meets or exceeds all technical requirements as set forth in ASTM F 2034 Standard Specification for Linoleum Sheet 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 LEED® v4 credits. For additional information, contact Forbo Flooring Systems.

2.3 **Flexibility:**
Marmoleum will not crack or break when bent around a 1.4” (3.5mm) diameter cylinder.

2.4 **Static Load Limit:**
Residual compression of 0.002” with 250 pounds per square inch when tested in accordance with ASTM F 970-17, Standard Test Method for Static Load Limit.

2.5 **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.

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

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

2.8 **Resistance to Bacteria:**
Provides a self-sanitizing quality in the form of a bactericidal effect. Independent testing has shown that a sterile zone around the material inhibits the growth of organisms such as staphylococcus aureus, Clostridium difficile, and Klebsiella pneumonia (CRE).

2.9 **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.

2.10 **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.**
- **FSR – 150; SDC – 145 when tested in accordance to CAN/ULC S102.2, Standard Test Method for Flame Spread Rating and Smoke Development of Flooring Materials.**
- **Class C** when tested in accordance to ASTM E 84/NFPA 255, Standard Test Method for Surface Burning Characteristics.

2.11 **Chemical Resistance: (Exposure Time: One Hour)*

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diluted Acids – Sulfuric, Nitric, Hydrochloric, Acetic</td>
<td>No Change</td>
</tr>
<tr>
<td>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>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, Phenol (5%)</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>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, Lipstick</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>

2.12 **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.
3. INSTALLATION

3.1 Adhesive:
Use Forbo L 885, Forbo Sustain 885m, Forbo Sustain 1195 or Sustain 1299 adhesive.
Use a 1/16” x 1/16” x 1/16” square notch trowel.
Spread Rate: Approximately 125 square feet/gallon.

3.2 Heat Welding:
Heat welding is not necessary for all installations, however it is optional. For seamless, hygienic watertight installation requirements, use Forbo Marmoweld welding rod.
Welding rod dimensions: 4 mm; 165 linear feet per spool.

3.3 Flash Coving (OPTIONAL):
Flash cove up walls to the desired height. Use Forbo L 885 adhesive, Forbo Sustain 885m adhesive or Forbo Sustain 1195 adhesive.

3.4 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 AND 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.