

# FORBO MARMOLEUM® COMPOSITION SHEET (MCS) TECHNICAL DATA

## 1. PRODUCT NAME & MANUFACTURER

### 1.1 Product:

Forbo Marmoleum® Composition Sheet (MCS) linoleum sheet resilient floor covering

### 1.2 Manufacturer:

Forbo Flooring Systems  
Humboldt Industrial Park  
Hazleton, PA 18202

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### 1.3 Product Description:

Construction: Marmoleum® Composition Sheet (MCS) is a homogeneous floor covering made from natural ingredients including flax seed 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® Composition Sheet (MCS) 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 yards<sup>2</sup> (64 meters<sup>2</sup>)

## 2. PRODUCT PERFORMANCE & 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 CDPH 01350 requirements for VOC emissions and indoor air quality.  
Forbo Marmoleum® Composition Sheet (MCS) contributes to LEED® v4 credits. For additional information, contact Forbo Flooring Systems.

### 2.3 Flexibility:

Marmoleum® Composition Sheet (MCS) 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 Castor 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 and Clostridium difficile.

### 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.  
FSR – 165; SDC – 145 when tested in accordance to CAN/ULC S102, Standard Test Method for Flame Spread Rating and Smoke Development of Wall Materials.

### 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 – 1h)\***

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

Tested in accordance with ASTM F 925, Standard Test Method Resistance to Chemicals of Resilient Flooring.  
 \*Marmoleum® Composition Sheet (MCS) is NOT resistant to prolonged exposure to high alkalis.

**3. INSTALLATION**

**3.1 Adhesive:**

Use Forbo L 885, Forbo Sustain 1195, Forbo Sustain 1299, Forbo Sustain 100 or Forbo 660 adhesive.

**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 Heat Welding Is Not Required:**

Forbo Marmoweld... EZ to use is a color-matched sealant used to complete the installation of Forbo Marmoleum® Composition Sheet (MCS) in place of heat welding. To use, sparingly apply Forbo Marmoweld... EZ to use to all seams on the floor with a 1" (2.54cm) putty knife or plastic applicator. Ensure there are no sharp or damaged edges on the applicator that might scratch or damage the Forbo Marmoleum® Composition Sheet (MCS). Wipe all excess Forbo Marmoweld... EZ to use off the surface of the Forbo Marmoleum® Composition Sheet (MCS) with a clean, damp white cloth.

**3.4 Flash Coving (OPTIONAL):**

Flash cove up walls to the desired height. Use L 885, Forbo Sustain 1195, Forbo Sustain 1299, Forbo Sustain 100 or Forbo 660 adhesive.

**3.5 Installation Guidelines:**

Refer to Forbo’s Installation Guidelines for complete installation recommendations.

**4. WARRANTY**

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

**5. CARE & CLEANING**

Refer to Forbo’s Floor Care Guidelines for complete care recommendations.