

# 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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topshield

### 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. Topshield is a high-performance finish. Its double UV cured double layer technology delivers extraordinary performance and clear and vibrant colors that remain over time. Topshield 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-----0.08" (2 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 v4.1 credits. For additional information, contact Forbo Flooring Systems.

### 2.3 Flexibility:

Marmoleum Composition Sheet (MCS) will not crack or break when bent around a 25mm diameter cylinder, in accordance with ASTM F 137, standard test method for Flexibility of Resilient Flooring Materials.

### 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 ISO 4918, 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%) -----	No Change
Ammonia (5%), Acetone -----	No Change
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 -----	No Change
Silver Nitrate -----	No Change
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 Sustain 1195, Forbo Sustain 100, Forbo L 885, 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 ETU 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 ETU 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 ETU 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 Forbo Sustain 1195, Forbo Sustain 100, Forbo L 885, or Forbo 660 adhesive.

**3.5 Installation Guidelines:**

Forbo does NOT recommend the application of adhesive tape on Marmoleum. Adhesive tape may cause damage to the factory coating of resilient flooring products. When using floor protection materials, tape the seams of the floor protection together and secure the floor protection by weighing down in corners and against walls. DO NOT secure floor protection materials by taping them directly to the surface of resilient floor coverings.

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.