

# 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 US  
8 Maplewood Drive  
Hazleton, PA 18202  
1-800-842-7839

Forbo Flooring Systems Canada  
3983 Nashua Drive, Unit 1  
Mississauga, ON L4V 1P3  
1-800-268-8108 (English)  
1-800-567-9268 (French)

[www.forboflooringNA.com](http://www.forboflooringNA.com)

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 – 100 when tested in accordance with CAN/ULC S102.2, Standard Test Method for Flame Spread Rating and Smoke Development of Flooring Materials.  
Class C when tested in accordance with ASTM E 84/ NFPA 255, Standard Test Method for Surface Burning Characteristics.  
FSR – 165, SDC – 145 when tested in accordance with 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)\*

Acetic Acid (5%)-----	No Effect
Acetone-----	No Effect
Ammonia (5%)-----	No Effect
Betadine-----	No Effect
Bleach-----	No Effect
Brown or Black Hair Dye-----	No Effect
Brown or Black Shoe Polish-----	No Effect
Gasoline-----	No Effect
Gel Hand Sanitizer-----	No Effect
Hot Chili Paste-----	No Effect
Hydrochloric Acid (5%)-----	No Effect
Iodine-----	Slight Color Change
Isopropyl Alcohol (70%)-----	No Effect
Kerosene-----	No Effect
Methylene Blue-----	No Effect
Mineral Oil-----	No Effect
Olive Oil-----	No Effect
Phenol (5%)-----	No Effect
Sodium Hydroxide (5%)-----	No Effect
Sodium Hypochlorite (5%)-----	No Effect
Sulfuric Acid (5%)-----	No Effect

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 SEAMING:

#### 3.2.1 Conventional Fit Seams:

All Marmoleum sheet products should be installed utilizing conventional fit seams.

#### 3.2.2 Welding for Monolithic or Seamless Flooring Installation:

Forbo's preferred seaming method for Marmoleum in surgical or procedure areas and those areas required by code is using Forbo Marmoweld ETU. Marmoweld ETU is a color-matched paste weld used to complete the installation of Forbo Marmoleum in place of heat welding.

#### 3.2.3 Optional Welding Method:

Heat weld with Forbo Marmoweld welding rod.

Welding Rod Dimensions:

- 4.0 mm
- 164 linear ft per spool

### 3.3 Flash Coving (OPTIONAL):

**Forbo recommends using ArmorCove**, Forbo's fully integrated coving system that is comprised of a 1-piece aluminum cove-former, full vertical backing and cap in [4.25:] [6.25"] height, with Marmoleum as the finished surface. It is puncture-proof and water resistant. Use Forbo ArmorFix Adhesive for ArmorCove installations.

**For traditional flash coving:** Flash cove up walls to the desired height. Use Forbo Sustain 1195, Forbo Sustain 100, or Forbo L 885 adhesive.

### 3.4 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.