Marmoleum Striato and Walton Sheet
by Forbo Flooring Systems

CLASSIFICATION: 09 65 00.00 Finishes: Resilient Flooring

PRODUCT DESCRIPTION: Marmoleum Striato and Walton Sheet is a homogeneous floor covering made from natural ingredients including linseed oil, rosin binders, wood flour, limestone, and dry pigments which are mixed and calendared onto a natural jute backing. Marmoleum features Topshield2, which is a high performance, double UV cured factory applied finish that makes the product “occupancy ready” after installation. The double UV cured layer technology delivers color clarity and vibrancy, along with extraordinary wear performance by providing a surface that can be repaired after accidents or restored after years of intensive use. The thickness of Marmoleum Sheet varies by collection. The standard thickness is 2.5mm (1/10”). Marmoleum Composition Sheet (MCS) is available in 2.0mm (0.08”). Marmoleum sheet is packaged on a roll that is 79” (2 meters) wide with a maximum length of 105’ (32 meters).

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

<table>
<thead>
<tr>
<th>Inventory Reporting Format</th>
<th>Threshold level</th>
<th>Residuals/Impurities</th>
<th>All Substances Above the Threshold Indicated Are:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nested Materials Method</td>
<td>100 ppm</td>
<td>Considered</td>
<td>Characterized (Yes Ex/SC) Yes No</td>
</tr>
<tr>
<td>Basic Method</td>
<td>1,000 ppm</td>
<td>Partially Considered</td>
<td>% weight and role provided for all substances.</td>
</tr>
<tr>
<td></td>
<td>Per GHS SDS</td>
<td>Not Considered</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Per OSHA MSDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Threshold Disclosed Per

Material: Yes Ex/SC Yes No
Product: Yes Ex/SC Yes No

CONTENT IN DESCENDING ORDER OF QUANTITY

Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

MATERIAL | SUBSTANCE | RESIDUAL OR IMPURITY | GREENSCREEN SCORE | HAZARD TYPE
--- | --- | --- | --- | ---
MARMOLEUM STRIATO AND WALTON SHEET | CELLULOSE PULP (CELLULOSE PULP (SC: WOOD FLOUR)) | NoGS | LINSEED OIL | NoGS
LIMESTONE, CALCIUM CARBONATE | LT-UNK TALL OIL | LT-P1 | RES | MUL
CELLULOSE, MICROCRYSTALLINE (CELLULOSE, MICROCRYSTALLINE (SC: JUTE)) | NoGS | TITANIUM DIOXIDE | LT-1 | CAN
END GUM ROSIN | LT-P1 | SKI IRON OXIDE | LT-UNK | CAN
FERRIC OXIDE | YELLOW LT-UNK | FERRIC OXIDE | BM-2 | CAN
POLYURETHANE FOAMS | LT-UNK | 2-PROPENOIC ACID, 2-METHYL-, POLYMER WITH ETHYL 2-METHYL-2-PROPENOATE | LT-UNK |

INVENTORY AND SCREENING NOTES:

(%) ranges for ingredients are used as a means of keeping the exact formulations proprietary.

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE

See Section 3 for additional listings.

VOC emissions: CDPH Standard Method V1.2 (Section 01350/CHPS) - Classroom & Office scenario

LCA: Environmental Product Declaration (EPD) by UL - Industry Generic

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Material Ingredients, Option 1
This section lists contents in a product based on specific threshold(s) and reports detailed health information including hazards. This HPD uses the inventory method indicated above, which is one of three possible methods:

- Basic Inventory method with Product-level threshold.
- Nested Material Inventory method with Product-level threshold.
- Nested Material Inventory method with individual Material-level thresholds.

Definitions and requirements for the three inventory methods and requirements for each data field can be found in the HPD Open Standard version 2.1, available on the HPDC website at: [www.hpd-collaborative.org/hpd-2-1-standard](http://www.hpd-collaborative.org/hpd-2-1-standard)

### MARMOLEUM STRIATO AND WALTON SHEET

PRODUCT THRESHOLD: **1000 ppm**

RESIDUALS AND IMPURITIES CONSIDERED: **No**

RESIDUALS AND IMPURITIES NOTES: No residuals or impurities are expected to be present in the product at or above the reporting threshold.

OTHER PRODUCT NOTES:

#### CELLULOSE PULP (CELLULOSE PULP (SC: WOOD FLOUR))

ID: **65996-61-4**

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: **2019-01-02**

<table>
<thead>
<tr>
<th>%</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>31.0000</td>
<td>NoGS</td>
<td>PreC</td>
<td>No</td>
<td>Filler</td>
</tr>
</tbody>
</table>

No hazards found

SUBSTANCE NOTES: Category = Tree-based materials – wood planks/strips/pieces, bark, wood chips, and other wood products. This disclosure does not provide information on allergens, hyper-accumulation of metals, production of any toxic substances during normal metabolistic activities, pesticides, and other potential hazards or sources of hazards which may be found in certain biological materials. Cellulose is mix of different species of wood. The specific brand name that Forbo Flooring Systems uses in Marmoleum is Lignocel C 120. LIGNOCEL® C 120 is not classified as dangerous according to directive 67/548/EEC, directive 1999/45/EC and regulation 1272/2008 (CLP). Information pertaining to special dangers for human and environment: Adverse physiochemical effects: Capable of causing dust explosions. Adverse human health effects and symptoms: N/A Adverse environmental effects: N/A Other adverse hazards: Substance is combustible. Substance related information: EC-No: N/A INDEX-NO: N/A REACH Registration No: N/A Purity: 100 % Synonyms: N/A Stabilizers: N/A Hazardous Impurities: N/A

#### LINSEED OIL

ID: **8001-26-1**

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: **2019-01-02**

<table>
<thead>
<tr>
<th>%</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>24.0000</td>
<td>NoGS</td>
<td>None</td>
<td>No</td>
<td>Binder</td>
</tr>
</tbody>
</table>

No hazards found

SUBSTANCE NOTES:

#### LIMESTONE, CALCIUM CARBONATE

ID: **1317-65-3**
### Tall Oil

- **HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library
- **HAZARD SCREENING DATE:** 2019-01-02
- **%:** 12.0000
- **GS:** LT-P1
- **RC:** PreC
- **GS:** LT-P1
- **NANO:** No
- **ROLE:** Binder

<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESPIRATORY</td>
<td>AOEC - Asthmagens</td>
<td>Asthmagen (Rs) - sensitizer-induced</td>
</tr>
<tr>
<td>MULTIPLE</td>
<td>German FEA - Substances Hazardous to Waters</td>
<td>Class 2 - Hazard to Waters</td>
</tr>
<tr>
<td>SKIN SENSITIZE</td>
<td>MAK</td>
<td>Sensitizing Substance Sh - Danger of skin sensitization</td>
</tr>
</tbody>
</table>

### Cellulose, Microcrystalline (Cellulose, Microcrystalline (SC: Jute))

- **HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library
- **HAZARD SCREENING DATE:** 2019-01-02
- **%:** 9.0000
- **GS:** NoGS
- **RC:** None
- **GS:** NoGS
- **NANO:** No
- **ROLE:** Backing

<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>No hazards found</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Category = Plant-based materials – plant based fibers such as cotton, hemp, ramie, rice husks, and coconut fiber. This disclosure does not provide information on allergens, hyper-accumulation of metals, production of any toxic substances during normal metabolic activities, pesticides, and other potential hazards or sources of hazards which may be found in certain biological materials. Cellulose is mix of different species of wood. The specific brand name that Forbo Flooring Systems uses in Marmoleum is Lignocel C120. LIGNOCEL® C 120 is not classified as dangerous according to directive 67/548/EEC, directive 1999/45/EC and regulation 1272/2008 (CLP). Information pertaining to special dangers for human and environment: Adverse physiochemical effects: Capable of causing dust explosions. Adverse human health effects and symptoms: N/A. Adverse environmental effects: N/A. Other adverse hazards: Substance is combustible. Substance related information: EC-No: N/A. INDEX-NO: N/A. REACH Registration No: N/A. Purity: 100 % Syonyms: N/A. Stabilizers: N/A. Hazardous Impurities: N/A

### Titanium Dioxide

- **HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library
- **HAZARD SCREENING DATE:** 2019-01-02
- **%:** 3.0000
- **GS:** LT-1
- **RC:** None
- **GS:** LT-1
- **NANO:** No
- **ROLE:** Pigment

<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CANCER</td>
<td>US CDC - Occupational Carcinogens</td>
<td>Occupational Carcinogen</td>
</tr>
</tbody>
</table>
### GUM ROSIN

**ID:** 8050-09-7

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-01-02

<table>
<thead>
<tr>
<th>%:</th>
<th>2.0000</th>
<th><strong>GS:</strong> LT-P1</th>
<th><strong>RC:</strong> None</th>
<th><strong>NANO:</strong> No</th>
<th><strong>ROLE:</strong> Binder</th>
</tr>
</thead>
</table>

**HAZARD TYPE**  
**AGENCY AND LIST TITLES**  
**WARNINGS**  
**SKIN SENSITIZE**  
**EU - GHS (H-Statements)**  
**H317 - May cause an allergic skin reaction**

**SUBSTANCE NOTES:**

### IRON OXIDE

**ID:** 1317-61-9

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-01-02

<table>
<thead>
<tr>
<th>%:</th>
<th>0.1000 - 1.0000</th>
<th><strong>GS:</strong> LT-UNK</th>
<th><strong>RC:</strong> None</th>
<th><strong>NANO:</strong> No</th>
<th><strong>ROLE:</strong> Pigment</th>
</tr>
</thead>
</table>

**HAZARD TYPE**  
**AGENCY AND LIST TITLES**  
**WARNINGS**  
**CANCER**  
**MAK**  
**Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification**

**SUBSTANCE NOTES:**

### FERRIC OXIDE YELLOW

**ID:** 51274-00-1

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2019-01-02

<table>
<thead>
<tr>
<th>%:</th>
<th>0.1000 - 1.0000</th>
<th><strong>GS:</strong> LT-UNK</th>
<th><strong>RC:</strong> None</th>
<th><strong>NANO:</strong> No</th>
<th><strong>ROLE:</strong> Pigment</th>
</tr>
</thead>
</table>

**HAZARD TYPE**  
**AGENCY AND LIST TITLES**  
**WARNINGS**  
**CANCER**  
**MAK**  
**Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels**

**SUBSTANCE NOTES:**

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SUBSTANCE NOTES: The titanium dioxide (TiO2) is bound within the product, requiring no further labeling. Identified on the US EPA Safer Chemical Ingredient List. Form-specific hazards: airborne particles of respirable size – occupational setting. Specific guidelines are being created to address known issues related to transparency and disclosure for several materials ("Special Conditions"), including those with Form-Specific Hazards such as Titanium Dioxide. This HPD will be updated as appropriate when these guidelines become available. The Material Health Harmonization Task Group convened by the USGBC states that pigmented titanium dioxide was "determined to be Benchmark 2 using the full GS (GreenScreen) method" hpdrepository.hpd-collaborative.org HPD v2.1 created via HPDC Builder Page 2 of 12 (http://ow.ly/Z5ken).
<table>
<thead>
<tr>
<th>Substance Notes:</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>FERRIC OXIDE</td>
<td>ID: 1309-37-1</td>
</tr>
<tr>
<td>HAZARD SCREENING METHOD: Pharos Chemical and Materials Library</td>
<td>HAZARD SCREENING DATE: 2019-01-02</td>
</tr>
<tr>
<td>%: 0.1000 - 1.0000</td>
<td>GS: BM-2</td>
</tr>
<tr>
<td>HAZARD TYPE</td>
<td>AGENCY AND LIST TITLES</td>
</tr>
<tr>
<td>CANCER</td>
<td>MAK</td>
</tr>
<tr>
<td>Substance Notes:</td>
<td></td>
</tr>
<tr>
<td>POLYURETHANE FOAMS</td>
<td>ID: 9009-54-5</td>
</tr>
<tr>
<td>HAZARD SCREENING METHOD: Pharos Chemical and Materials Library</td>
<td>HAZARD SCREENING DATE: 2019-01-02</td>
</tr>
<tr>
<td>%: 0.1000 - 1.0000</td>
<td>GS: LT-UNK</td>
</tr>
<tr>
<td>HAZARD TYPE</td>
<td>AGENCY AND LIST TITLES</td>
</tr>
<tr>
<td>No hazards found</td>
<td></td>
</tr>
<tr>
<td>Substance Notes: Finish contains no isocyanates.</td>
<td></td>
</tr>
<tr>
<td>2-PROPENOIC ACID, 2-METHYL-, POLYMER WITH ETHYL 2-PROPENOATE AND METHYL 2-METHYL-2-PROPENOATE</td>
<td>ID: 25133-97-5</td>
</tr>
<tr>
<td>HAZARD SCREENING METHOD: Pharos Chemical and Materials Library</td>
<td>HAZARD SCREENING DATE: 2019-01-02</td>
</tr>
<tr>
<td>%: 0.1000 - 1.0000</td>
<td>GS: LT-UNK</td>
</tr>
<tr>
<td>HAZARD TYPE</td>
<td>AGENCY AND LIST TITLES</td>
</tr>
<tr>
<td>No hazards found</td>
<td></td>
</tr>
<tr>
<td>Substance Notes: Finish contains no isocyanates.</td>
<td></td>
</tr>
</tbody>
</table>
Section 3: Certifications and Compliance

This section lists applicable certification and standards compliance information for VOC emissions and VOC content. Other types of health or environmental performance testing or certifications completed for the product may be provided.

### VOC EMISSIONS

**CDPH Standard Method V1.2 (Section 01350/CHPS) - Classroom & Office scenario**

- **CERTIFYING PARTY:** Third Party
- **APPLICABLE FACILITIES:** All
- **CERTIFICATE URL:**
- **ISSUE DATE:** 2014-11-17
- **EXPIRY DATE:**
- **CERTIFIER OR LAB:** Berkeley Analytical

**CERTIFICATION AND COMPLIANCE NOTES:**

### LCA

**Environmental Product Declaration (EPD) by UL - Industry Generic**

- **CERTIFYING PARTY:** Third Party
- **APPLICABLE FACILITIES:** The Green Standard
- **CERTIFICATE URL:** https://www.forbo.com/flooring/en-us/environment/pmwz1i
- **ISSUE DATE:** 2018-01-05
- **EXPIRY DATE:**
- **CERTIFIER OR LAB:** UL Environment

**CERTIFICATION AND COMPLIANCE NOTES:**

Section 4: Accessories

This section lists related products or materials that the manufacturer requires or recommends for installation (such as adhesives or fasteners), maintenance, cleaning, or operations. For information relating to the contents of these related products, refer to their applicable Health Product Declarations, if available.

**FORBO L 885 ADHESIVE (VOC 0.00 G/L)**

- **HPD URL:** No HPD available
  
  **CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:**
  Standard recommended adhesive used for installation.

**FORBO SUSTAIN 885M ADHESIVE (VOC 0.00 G/L)**

- **HPD URL:** No HPD available
  
  **CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:**
  Alternative adhesive that can be used for installation.

**FORBO SUSTAIN 1195 ADHESIVE (VOC 0.00 G/L)**

- **HPD URL:** No HPD available
  
  **CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:**
  Alternative adhesive that can be used with installation.

**FORBO SUSTAIN 1299 ADHESIVE (VOC 0.00 G/L)**

- **HPD URL:** No HPD available
  
  **CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:**
  Alternative adhesive that can be used with installation.
FORBO 660 ADHESIVE (VOC 12.00 G/L)

 CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:
Alternative adhesive that can be used with installation.

FORBO ADHESIVE REMOVER

 CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:
Can be used for adhesive residue removal post installation.

NEUTRAL PH CLEANER

 CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:
Can be used for routine cleaning.

READY TO USE NEUTRAL PH CLEANER

 CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:
Can be used for routine cleaning.

HEAVY DUTY CLEANER

 CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:
Can be used for interim maintenance.

FORBO MOP ON RESTORER

 CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:
Can be used for interim maintenance.

FORBO SPRAY BUFF

 CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:
Can be used for interim maintenance.

FORBO MATTE FINISH

 CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:
Can be used for interim maintenance.

FORBO GLOSS FINISH

 CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:
Can be used for interim maintenance.

FORBO WALL BASE

 CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:
http://www.forboflooringna.com
Section 5: General Notes

Products lines that fall under the category of Marmoleum Striato and Walton Sheet are the following: Striato, Striato Color, Striato Textura, Walton Uni, and Walton Cirrus, Marmoleum Striato and Walton Sheet contains no Isocyanates.
MANUFACTURER INFORMATION

MANUFACTURER: Forbo Flooring Systems
ADDRESS: 8 Maplewood Drive
Hazle Township PA 18202, United States
WEBSITE: www.forboflooringna.com

CONTACT NAME: Shannon Wolski-Konecnik
TITLE: Product Support and Education Services Administrator
PHONE: 570-450-0319
EMAIL: shannon.wolski@forbo.com

KEY

OSHA MSDS Occupational Safety and Health Administration Material Safety Data Sheet
GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

Hazard Types

AQU Aquatic toxicity
CAN Cancer
DEV Developmental toxicity
END Endocrine activity
EYE Eye irritation/corrosivity
GEN Gene mutation
GLO Global warming
MAM Mammalian/systemic/organ toxicity
MUL Multiple hazards
NEU Neurotoxicity
OZO Ozone depletion
PBT Persistent Bioaccumulative Toxic
PHY Physical Hazard (reactive)
REP Reproductive toxicity
RES Respiratory sensitization
SKI Skin sensitization/irritation/corrosivity
LAN Land Toxicity
NF Not found on Priority Hazard Lists

GreenScreen (GS)

BM-4 Benchmark 4 (prefer-safer chemical)
BM-3 Benchmark 3 (use but still opportunity for improvement)
BM-2 Benchmark 2 (use but search for safer substitutes)
BM-1 Benchmark 1 (avoid - chemical of high concern)
BM-U Benchmark Unspecified (insufficient data to benchmark)

LT-P1 List Translator Possible Benchmark 1
LT-1 List Translator Likely Benchmark 1
LT-UNK List Translator Benchmark Unknown (insufficient information from List Translator lists to benchmark)
NoGS Unknown (no data on List Translator Lists)

Recycled Types

PreC Preconsumer (Post-Industrial)
PostC Postconsumer
Both Both Preconsumer and Postconsumer
Unk Inclusion of recycled content is unknown
None Does not include recycled content

Other Terms

Inventory Methods:

Nested Method / Material Threshold Substances listed within each material per threshold indicated per material
Nested Method / Product Threshold Substances listed within each material per threshold indicated per product
Basic Method / Product Threshold Substances listed individually per threshold indicated per product

Nano Composed of nano scale particles or nanotechnology
Third Party Verified Verification by independent certifier approved by HPDC
Preparer Third party preparer, if not self-prepared by manufacturer
Applicable facilities Manufacturing sites to which testing applies

The Health Product Declaration (HPD) Open Standard provides for the disclosure of product contents and potential associated human and environmental health hazards. Hazard associations are based on the HPD Priority Hazard Lists, the GreenScreen List Translator™, and when available, full GreenScreen® assessments. The HPD Open Standard v2.1 is not:

- a method for the assessment of exposure or risk associated with product handling or use,
- a method for assessing potential health impacts of: (i) substances used or created during the manufacturing process or (ii) substances created after the product is delivered for end use.

Information about life cycle, exposure and/or risk assessments performed on the product may be reported by the manufacturer in appropriate Notes sections, and/or, where applicable, in the Certifications section.

The HPD Open Standard was created and is supported by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry that is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain.

The product manufacturer and any applicable independent verifier are solely responsible for the accuracy of statements and claims made in this HPD and for compliance with the HPD standard noted.