Marmoleum Striato and Walton Sheet by Forbo Flooring Systems

Health Product Declaration v2.1.1

created via: HPDC Online Builder

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

- **Inventory Reporting Format**
- C Nested Materials Method
- Basic Method
- **Threshold Disclosed Per**
- C Material
- Product

- Threshold level C 100 ppm O 1,000 ppm O Per GHS SDS
- C Per OSHA MSDS C Other

Residuals/Impurities

C Considered C Partially Considered O Not Considered

Explanation(s) provided for Residuals/Impurities? • Yes O No All Substances Above the Threshold Indicated Are:

Characterized C Yes Ex/SC • Yes C No % weight and role provided for all substances.

Screened

C Yes Ex/SC C Yes C No

All substances screened using Priority Hazard Lists with results disclosed.

Identified

All substances disclosed by Name (Specific or Generic) and Identifier.

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 | SKI 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-PROPENOATE AND METHYL 2-METHYL-2-PROPENOATE LT-UNK]

VOLATILE ORGANIC COMPOUND (VOC) CONTENT

VOC Content data is not applicable for this product category.

Number of Greenscreen BM-4/BM3 contents ... 0

Contents highest concern GreenScreen Benchmark or List translator Score ... LT-1

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

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

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

Third Party Verified?

SCREENING DATE: 2019-01-02

C Yes No VERIFIER: VERIFICATION #: PUBLISHED DATE: 2019-01-04 EXPIRY DATE: 2022-01-02 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

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			-02	
%: 31.0000	GS: NoGS	RC: PreC	NANO: NO	ROLE: Filler
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
	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 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 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 SCREENI	NG DATE: 2019-01	-02
%: 24.0000	GS: NoGS	RC: None	NANO: NO	ROLE: Binder
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
	No hazards found			
SUBSTANCE NOTES:				
LIMESTONE, CALCIUM CARBON	NATE			ID: 1317-65-3

HAZARD SCREENING METHOD: Phare	s Chemical and Materials Library	HAZARD SCREEN	IING DATE: 2019-01-0	2
%: 17.0000	GS: LT-UNK	RC: None	NANO: NO	ROLE: Filler
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
	No hazards found			
SUBSTANCE NOTES:				
-				
TALL OIL				ID: 8002-26-4
HAZARD SCREENING METHOD: Phare	s Chemical and Materials Library	HAZARD SCREENING	a date: 2019-01-02	

%: 12.0000	GS: LT-P1	RC: PreC	NANO: NO	ROLE: Binder
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
RESPIRATORY	AOEC - Asthmagens	Asthmagen (Rs) -	sensitizer-induced	
MULTIPLE	German FEA - Substances Hazardous to Waters	Class 2 - Hazard	to Waters	
SKIN SENSITIZE	МАК	Sensitizing Subst	ance Sh - Danger o	f skin sensitization

SUBSTANCE NOTES:

CELLULOSE, MICROCRYSTALLINE (SE: JUTE)) ID: 9004-34-6 HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2019-01-02 %: 9.0000 GS: NOGS RC: None NANO: No ROLE: Backing HAZARD TYPE AGENCY AND LIST TITLES WARNINGS VARNINGS No hazards found VARNINGS VARNINGS VARNINGS

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 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

TITANIUM DIOXIDE				ID: 13463-67-7
HAZARD SCREENING METHOD:	Pharos Chemical and Materials Library	HAZARD SCREENING	DATE: 2019-01	1-02
%: 3.0000	GS: LT-1	RC: None	NANO: No	ROLE: Pigment

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CANCER	US CDC - Occupational Carcinogens	Occupational Carcinogen
CANCER	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CANCER	IARC	Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources
ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
CANCER	МАК	Carcinogen Group 3A - Evidence of carcinogenic effects but not sufficient to establish MAK/BAT value
CANCER	МАК	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels

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 pigmentary 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).

GUM ROSIN				ID: 8050-09-7
HAZARD SCREENING METHOD: Pharos Chemical and Materials Library		HAZARD SCREENI	NG DATE: 2019-01-	02
%: 2.0000	GS: LT-P1	RC: None	NANO: NO	ROLE: Binder
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
SKIN SENSITIZE	EU - GHS (H-Statements)	H317 - May cause	an allergic skin rea	action
SKIN SENSITIZE	МАК	Sensitizing Substa	unce Sh - Danger of	f skin sensitization
SUBSTANCE NOTES:				
				ID: 1317-61-9
HAZARD SCREENING METHOD: Pharos C	hemical and Materials Library	HAZARD SCREENING D	DATE: 2019-01-02	
%: 0.1000 - 1.0000	GS: LT-UNK	RC: None	NANO: NO	ROLE: Pigment
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
CANCER	МАК	Carcinogen Group but not sufficient f		arcinogenic effects
SUBSTANCE NOTES:				

ERRIC OXIDE YELLOW				
AZARD SCREENING METHOD: P	haros Chemical and Materials Library	HAZARD SCREENI	NG DATE: 2019-0	1-02
6: 0.1000 - 1.0000	GS: LT-UNK	RC: None	NANO: NO	ROLE: Pigment
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
	No hazards found			
SUBSTANCE NOTES:				
				id: 1309-37
IAZARD SCREENING METHOD: P	haros Chemical and Materials Library	HAZARD SCREENIN	IG DATE: 2019-01	-02
6: 0.1000 - 1.0000	GS: BM-2	RC: None	NANO: NO	ROLE: Pigment
HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS		
CANCER				e of carcinogenic effects
SUBSTANCE NOTES:	MAK		oup 3B - Evidenc	
SUBSTANCE NOTES: POLYURETHANE FOAMS		but not sufficie		on ID: 9009-5 4
SUBSTANCE NOTES: POLYURETHANE FOAMS	;	but not sufficie	ent for classification	on ID: 9009-5 4
SUBSTANCE NOTES: POLYURETHANE FOAMS	haros Chemical and Materials Library	but not sufficie	NING DATE: 2019-	on ID: 9009-54 01-02
SUBSTANCE NOTES: POLYURETHANE FOAMS MAZARD SCREENING METHOD: P 6: 0.1000 - 1.0000	haros Chemical and Materials Library	but not sufficie HAZARD SCREE RC: None	NING DATE: 2019-	on ID: 9009-54 01-02
SUBSTANCE NOTES: POLYURETHANE FOAMS MAZARD SCREENING METHOD: P 6: 0.1000 - 1.0000	Pharos Chemical and Materials Library GS: LT-UNK AGENCY AND LIST TITLES No hazards found	but not sufficie HAZARD SCREE RC: None	NING DATE: 2019-	on ID: 9009-54 01-02
SUBSTANCE NOTES: POLYURETHANE FOAMS IAZARD SCREENING METHOD: P 6: 0.1000 - 1.0000 HAZARD TYPE SUBSTANCE NOTES: Finish co	Pharos Chemical and Materials Library GS: LT-UNK AGENCY AND LIST TITLES No hazards found ontains no Isocyanates.	HAZARD SCREE RC: None WARNINGS	NING DATE: 2019-	on ID: 9009-54 01-02
SUBSTANCE NOTES: POLYURETHANE FOAMS IAZARD SCREENING METHOD: P 6: 0.1000 - 1.0000 HAZARD TYPE SUBSTANCE NOTES: Finish cc PROPENOIC ACID, 2-M P-METHYL-2-PROPENOA	Pharos Chemical and Materials Library GS: LT-UNK AGENCY AND LIST TITLES No hazards found ontains no Isocyanates.	HAZARD SCREE RC: None WARNINGS	NING DATE: 2019- NANO: NO	on ID: 9009-54 01-02 ROLE: Finish
SUBSTANCE NOTES: POLYURETHANE FOAMS IAZARD SCREENING METHOD: P 6: 0.1000 - 1.0000 HAZARD TYPE SUBSTANCE NOTES: Finish cc PROPENOIC ACID, 2-M P-METHYL-2-PROPENOA	haros Chemical and Materials Library GS: LT-UNK AGENCY AND LIST TITLES No hazards found ontains no Isocyanates.	HAZARD SCREE RC: None WARNINGS	NING DATE: 2019- NANO: NO	on ID: 9009-54 01-02 ROLE: Finish
SUBSTANCE NOTES: POLYURETHANE FOAMS IAZARD SCREENING METHOD: P 6: 0.1000 - 1.0000 HAZARD TYPE SUBSTANCE NOTES: Finish co P-PROPENOIC ACID, 2-M P-METHYL-2-PROPENOA IAZARD SCREENING METHOD: P	Tharos Chemical and Materials Library GS: LT-UNK AGENCY AND LIST TITLES No hazards found ontains no Isocyanates. ETHYL-, POLYMER WITH ETHYL 2-PROPEN TE Tharos Chemical and Materials Library	HAZARD SCREE RC: None WARNINGS	NING DATE: 2019- NANO: NO HAZARD SCREEN	ON ID: 9009-54 01-02 ROLE: Finish ID: 25133-97 VING DATE: 2019-01-02

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 N Office scenario	lethod V1.2 (Sectio	on 01350/CHPS) - Classroom &
CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: All CERTIFICATE URL: CERTIFICATION AND COMPLIANCE NOTES:	ISSUE DATE: 2014- 11-17	EXPIRY DATE:	CERTIFIER OR LAB: Berkeley Analytical
LCA	Environmental Pro	oduct 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 CERTIFICATION AND COMPLIANCE NOTES:	ISSUE DATE: 2018- 01-05	EXPIRY DATE:	CERTIFIER OR LAB: UL Environment

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)	HPD URL: No HPD available
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: Alternative adhesive that can be used with installation.	
FORBO ADHESIVE REMOVER	HPD URL: No HPD available
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: Can be used for adhesive residue removal post installation.	
NEUTRAL PH CLEANER	HPD URL: No HPD available
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: Can be used for routine cleaning.	
READY TO USE NEUTRAL PH CLEANER	HPD URL: No HPD available
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: Can be used for routine cleaning.	
HEAVY DUTY CLEANER	HPD URL: No HPD available
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: Can be used for interim maintenance.	
FORBO MOP ON RESTORER	HPD URL: No HPD available
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: Can be used for interim maintenance.	
FORBO SPRAY BUFF	HPD URL: No HPD available
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: Can be used for interim maintenance.	
FORBO MATTE FINISH	HPD URL: No HPD available
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES: Can be used for interim maintenance.	
FORBO GLOSS FINISH	HPD URL: No HPD available
CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:	

HPD v2.1.1 created via HPDC Builder Page 8 of 10

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

Can be used with Marmoleum Striato and Walton Sheet installation using the recommended adhesive.

Section 5: General Notes

Products lines that fall under the category of Marmoleum Striato and Walton Sheet are the following: Original Striato, Striato Color, Striato Textura, and Walton Uni. 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

GLO Global warming

MUL Multiple hazards

OZO Ozone depletion

NEU Neurotoxicity

MAM Mammalian/systemic/organ toxicity

PBT Persistent Bioaccumulative Toxic

Hazard Types

AQU Aquatic toxicity CAN Cancer DEV Developmental toxicity END Endocrine activity EYE Eye irritation/corrosivity GEN Gene mutation

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 (insuficient data to benchmark)

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

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.

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