

HPD UNIQUE IDENTIFIER: 21990

CLASSIFICATION: 12 00 00 Furnishings

PRODUCT DESCRIPTION: Forbo Furniture Linoleum is made from natural ingredients including flax seed oil, rosin binders, wood flour, limestone and dry pigments which are mixed and then calendared onto an impregnated paper backing. It is finished with a water-based cross-linked acrylic finish that protects the surface while maintaining its flexibility.

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format

- Nested Materials Method
- Basic Method

Threshold Disclosed Per

- Material
- Product

Threshold level

- 100 ppm
- 1,000 ppm
- Per GHS SDS
- Other

Residuals/Impurities

- Considered
- Partially Considered
- Not Considered

Explanation(s) provided for Residuals/Impurities?
 Yes No

All Substances Above the Threshold Indicated Are:

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

Screened Yes Ex/SC Yes No
All substances screened using Priority Hazard Lists with results disclosed.

Identified Yes Ex/SC Yes No
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

FURNITURE LINOLEUM [PULP, CELLULOSE NoGS LINSEED OIL NoGS CELLULOSE, MICROCRYSTALLINE LT-UNK | RES LIMESTONE LT-UNK NAPHTHA (PETROLEUM), LIGHT STEAM-CRACKED, DEBENZENIZED, POLYMERS LT-UNK ROSIN LT-P1 | SKI POLYURETHANE FOAMS LT-UNK TITANIUM DIOXIDE LT-1 | CAN | END FERRIC OXIDE BM-1 | CAN FERRIC OXIDE, YELLOW LT-UNK FERROSOFERRIC OXIDE BM-1 | CAN]

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

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

Nanomaterial ... No

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 V1.1 (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?

- Yes
- No

PREPARER: Self-Prepared

VERIFIER:

VERIFICATION #:

SCREENING DATE: 2020-09-29

PUBLISHED DATE: 2020-09-29

EXPIRY DATE: 2023-09-29

Section 2: Content in Descending Order of Quantity

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 2.2, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-2-standard

FURNITURE LINOLEUM

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:

PULP, CELLULOSE

ID: 65996-61-4

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2020-09-29

#: 28.0000 GS: NoGS RC: PreC NANO: No SUBSTANCE ROLE: Filler

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

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

LINSEED OIL

ID: 8001-26-1

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2020-09-29

#: 24.0000 GS: NoGS RC: None NANO: No SUBSTANCE ROLE: Binder

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES:

CELLULOSE, MICROCRYSTALLINE

ID: 9004-34-6

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library

HAZARD SCREENING DATE: 2020-09-29

#: 24.0000 GS: LT-UNK RC: None NANO: No SUBSTANCE ROLE: Structure component

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
RESPIRATORY	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced

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

LIMESTONE

ID: 1317-65-3

%: 14.0000	GS: LT-UNK	RC: None	NANO: No	SUBSTANCE ROLE: Filler
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HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
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None found	No warnings found on HPD Priority Hazard Lists
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SUBSTANCE NOTES:

NAPHTHA (PETROLEUM), LIGHT STEAM-CRACKED, DEBENZENIZED, POLYMERSID: **68131-99-7**

%: 5.0000	GS: LT-UNK	RC: None	NANO: No	SUBSTANCE ROLE: Binder
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HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
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None found	No warnings found on HPD Priority Hazard Lists
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SUBSTANCE NOTES:

ROSINID: **8050-09-7**

%: 1.0000	GS: LT-P1	RC: None	NANO: No	SUBSTANCE ROLE: Binder
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HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
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SKIN SENSITIZE	EU - GHS (H-Statements)	H317 - May cause an allergic skin reaction
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SKIN SENSITIZE	MAK	Sensitizing Substance Sh - Danger of skin sensitization
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SUBSTANCE NOTES:

POLYURETHANE FOAMSID: **9009-54-5**

%: 0.3000	GS: LT-UNK	RC: None	NANO: No	SUBSTANCE ROLE: Coating
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HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
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None found	No warnings found on HPD Priority Hazard Lists
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SUBSTANCE NOTES: **Finish contains no Isocyanates.****TITANIUM DIOXIDE**ID: **13463-67-7**

%: 0.1000 - 4.0000	GS: LT-1	RC: None	NANO: No	SUBSTANCE ROLE: Pigment
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HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
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CANCER	US CDC - Occupational Carcinogens	Occupational Carcinogen
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CANCER	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
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CANCER	IARC	Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources
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ENDOCRINE	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
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CANCER	MAK	Carcinogen Group 3A - Evidence of carcinogenic effects but not sufficient to establish MAK/BAT value
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CANCER	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels
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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 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>).

FERRIC OXIDE

ID: 1309-37-1

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2020-09-29**

%: **0.1000 - 4.0000**

GS: **BM-1**

RC: **None**

NANO: **No**

SUBSTANCE ROLE: **Pigment**

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: **2020-09-29**

%: **0.1000 - 4.0000**

GS: **LT-UNK**

RC: **None**

NANO: **No**

SUBSTANCE ROLE: **Pigment**

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

None found

No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES:

FERROSFERRIC OXIDE

ID: 1317-61-9

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library**

HAZARD SCREENING DATE: **2020-09-29**

%: **0.1000 - 4.0000**

GS: **BM-1**

RC: **None**

NANO: **No**

SUBSTANCE ROLE: **Pigment**

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

CANCER

MAK

Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification

SUBSTANCE NOTES:

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 V1.1 (Section 01350/CHPS) - Classroom & Office scenario

CERTIFYING PARTY: **Third Party**

ISSUE DATE: **2016-09-07**

EXPIRY DATE:

CERTIFIER OR LAB: **Berkeley Analytics**

APPLICABLE FACILITIES: **All**

CERTIFICATE URL:

CERTIFICATION AND COMPLIANCE NOTES:

LCA

Environmental Product Declaration (EPD) by UL - Industry Generic

CERTIFYING PARTY: **Self-declared**

ISSUE DATE: **2016-09-16**

EXPIRY DATE: **2021-09-16**

CERTIFIER OR LAB: **UL Environment**

APPLICABLE FACILITIES: **All**

CERTIFICATE URL:

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 910W 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.

Section 5: General Notes

Products that fall under the category of Furniture Linoleum: Desktop. Furniture Linoleum 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 & Education Services Administrator**
 PHONE: **5704500319**
 EMAIL: **shannon.wolski@forbo.com**

The listed contact is responsible for the validity of this HPD and attests that it is accurate and complete to the best of his or her knowledge.

KEY

Hazard Types

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

GreenScreen (GS)

BM-4 Benchmark 4 (prefer-safer chemical)	LT-1 List Translator 1 (Likely Benchmark-1)
BM-3 Benchmark 3 (use but still opportunity for improvement)	LT-UNK List Translator Benchmark Unknown (the chemical is present on at least one GreenScreen Specified List, but the information contained within the list did not result in a clear mapping to a LT-1 or LTP1 score.)
BM-2 Benchmark 2 (use but search for safer substitutes)	NoGS No GreenScreen.
BM-1 Benchmark 1 (avoid - chemical of high concern)	
BM-U Benchmark Unspecified (due to insufficient data)	
LT-P1 List Translator Possible 1 (Possible Benchmark-1)	

Recycled Types

PreC Pre-consumer recycled content
PostC Post-consumer recycled content
UNK Inclusion of recycled content is unknown
None Does not include recycled content

Other Terms:

GHS SDS Globally Harmonized System of Classification and Labeling of Chemicals Safety Data Sheet

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.