

**CLASSIFICATION:** 09 65 00.00 Finishes: Resilient Flooring

**PRODUCT DESCRIPTION:** Linoflex 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. Linoflex 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 Linoflex Sheet varies by collection. The standard thickness is 2.5mm (1/10”). Linoflex 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**

- Nested Materials Method
- Basic Method

**Threshold Disclosed Per**

- Material
- Product

**Threshold level**

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

**Residuals/Impurities**

- Considered
- Partially Considered
- Not Considered

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

*Are All Substances Above the Threshold Indicated:*

**Characterized**  Yes  No  
*Percent Weight and Role Provided?*

**Screened**  Yes  No  
*Using Priority Hazard Lists with Results Disclosed?*

**Identified**  Yes  No  
*Name and Identifier Provided?*

**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**

**LINOFLEX | 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 GUM ROSIN LT-P1 |**  
**SKI 2-PROPENOIC ACID, 2-METHYL-, POLYMER WITH ETHYL 2-**  
**PROPENOATE AND METHYL 2-METHYL-2-PROPENOATE LT-UNK**  
**POLYURETHANE FOAMS LT-UNK IRON OXIDE LT-UNK FERRIC OXIDE**  
**YELLOW LT-UNK FERRIC OXIDE BM-2 | CAN TITANIUM DIOXIDE LT-1 |**  
**CAN | END ]**

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.

**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

Third Party Verified?

- Yes
- No

PREPARER: Self-Prepared

VERIFIER:

VERIFICATION #:

SCREENING DATE: 2018-11-28

PUBLISHED DATE: 2018-11-28

EXPIRY DATE: 2021-11-28



# 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 2.1, available on the HPDC website at: [www.hpd-collaborative.org/hpd-2-1-standard](http://www.hpd-collaborative.org/hpd-2-1-standard)

## LINOFLEX

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

%: 22.0000 - 35.0000	GS: NoGS	RC: PreC	NANO: No	ROLE: Filler
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HAZARDS:

AGENCY(IES) WITH WARNINGS:

None Found

No warnings found on HPD Priority lists

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

%: 19.0000 - 26.0000	GS: NoGS	RC: None	NANO: No	ROLE: Binder
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HAZARDS:

AGENCY(IES) WITH WARNINGS:

None Found

No warnings found on HPD Priority lists

SUBSTANCE NOTES:

### LIMESTONE; CALCIUM CARBONATE

ID: 1317-65-3

%: 15.0000 - 20.0000	GS: LT-UNK	RC: None	NANO: No	ROLE: Filler
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HAZARDS:

AGENCY(IES) WITH WARNINGS:

None Found

No warnings found on HPD Priority lists

SUBSTANCE NOTES:

**TALL OIL**

ID: 8002-26-4

%: **9.0000 - 13.0000** GS: **LT-P1** RC: **PreC** NANO: **No** ROLE: **Binder**

HAZARDS:

AGENCY(IES) WITH WARNINGS:

**RESPIRATORY** AOEC - Asthmagens Asthmagen (Rs) - sensitizer-induced

**MULTIPLE** German FEA - Substances Hazardous to Waters Class 2 - Hazard to Waters

**SKIN SENSITIZE** MAK Sensitizing Substance Sh - Danger of skin sensitization

SUBSTANCE NOTES:

**CELLULOSE, MICROCRYSTALLINE (CELLULOSE, MICROCRYSTALLINE (SC: JUTE))**

ID: 9004-34-6

%: **9.0000 - 10.0000** GS: **NoGS** RC: **None** NANO: **No** ROLE: **Backing**

HAZARDS:

AGENCY(IES) WITH WARNINGS:

None Found No warnings found on HPD Priority 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

**GUM ROSIN**

ID: 8050-09-7

%: **1.5000 - 2.5000** GS: **LT-P1** RC: **None** NANO: **No** ROLE: **Binder**

HAZARDS:

AGENCY(IES) WITH WARNINGS:

**SKIN SENSITIZE** EU - GHS (H-Statements) H317 - May cause an allergic skin reaction

**SKIN SENSITIZE** MAK Sensitizing Substance Sh - Danger of skin sensitization

SUBSTANCE NOTES:

**2-PROPENOIC ACID, 2-METHYL-, POLYMER WITH ETHYL 2-PROPENOATE AND METHYL 2-METHYL-2-PROPENOATE**

ID: 25133-97-5

#: **0.3000**

GS: **LT-UNK**

RC: **None**

NANO: **No**

ROLE: **Finish**

HAZARDS:

AGENCY(IES) WITH WARNINGS:

**None Found**

**No warnings found on HPD Priority lists**

SUBSTANCE NOTES: **Finish contains no Isocyanates.**

**POLYURETHANE FOAMS**

ID: **9009-54-5**

#: **0.1000 - 0.3000**

GS: **LT-UNK**

RC: **None**

NANO: **No**

ROLE: **Finish**

HAZARDS:

AGENCY(IES) WITH WARNINGS:

**None Found**

**No warnings found on HPD Priority lists**

SUBSTANCE NOTES: **Finish contains no Isocyanates.**

**IRON OXIDE**

ID: **1332-37-2**

#: **0.1000 - 4.0000**

GS: **LT-UNK**

RC: **None**

NANO: **No**

ROLE: **Pigment**

HAZARDS:

AGENCY(IES) WITH WARNINGS:

**None Found**

**No warnings found on HPD Priority lists**

SUBSTANCE NOTES:

**FERRIC OXIDE YELLOW**

ID: **51274-00-1**

#: **0.1000 - 4.0000**

GS: **LT-UNK**

RC: **None**

NANO: **No**

ROLE: **Pigment**

HAZARDS:

AGENCY(IES) WITH WARNINGS:

**None Found**

**No warnings found on HPD Priority lists**

SUBSTANCE NOTES:

**FERRIC OXIDE**

ID: **1309-37-1**

#: **0.1000 - 4.0000**

GS: **BM-2**

RC: **None**

NANO: **No**

ROLE: **Pigment**

HAZARDS:

AGENCY(IES) WITH WARNINGS:

**CANCER**

**MAK**

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

SUBSTANCE NOTES:

%: <b>0.1000 - 4.0000</b>	GS: <b>LT-1</b>	RC: <b>None</b>	NANO: <b>No</b>	ROLE: <b>Pigment</b>
HAZARDS:	AGENCY(IES) WITH 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	MAK	Carcinogen Group 3A - Evidence of carcinogenic effects but not sufficient to establish MAK/BAT value		
CANCER	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels		

SUBSTANCE NOTES: The titanium dioxide (TiO<sub>2</sub>) 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](http://hpdrepository.hpd-collaborative.org) HPD v2.1 created via HPDC Builder Page 2 of 12 (<http://ow.ly/Z5ken>).

## 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**

ISSUE DATE: **2014-**

EXPIRY DATE:

CERTIFIER OR LAB: **Berkeley**

APPLICABLE FACILITIES: **All**

**11-17**

**Analytical**

CERTIFICATE URL:

CERTIFICATION AND COMPLIANCE NOTES:

### LCA

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

CERTIFYING PARTY: **Self-declared**

ISSUE DATE: **2018-**

EXPIRY DATE:

CERTIFIER OR LAB: **UL**

APPLICABLE FACILITIES: **The Green Standard**

**01-05**

**Environment**

CERTIFICATE URL:

<https://www.forbo.com/flooring/en-us/environment/pm wz1i>

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)**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:

**Can be used for interim maintenance.****FORBO WALL BASE**HPD URL: <https://www.forbo.com/flooring/en-ca/>

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

## Section 5: General Notes

Linoflex contains no Isocyanates.





## MANUFACTURER INFORMATION

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

CONTACT NAME: **Shannon Wolski**  
 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

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

### GreenScreen (GS)

<b>BM-4</b> Benchmark 4 (prefer-safer chemical)	<b>LT-P1</b> List Translator Possible Benchmark 1
<b>BM-3</b> Benchmark 3 (use but still opportunity for improvement)	<b>LT-1</b> List Translator Likely Benchmark 1
<b>BM-2</b> Benchmark 2 (use but search for safer substitutes)	<b>LT-UNK</b> List Translator Benchmark Unknown (insufficient information from List Translator lists to benchmark)
<b>BM-1</b> Benchmark 1 (avoid - chemical of high concern)	<b>NoGS</b> Unknown (no data on List Translator Lists)
<b>BM-U</b> Benchmark Unspecified (insufficient data to benchmark)	

### 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.*