



HPD UNIQUE IDENTIFIER: 623142912
CLASSIFICATION: 09 65 19.23 Vinyl Tile Flooring
PRODUCT DESCRIPTION: Luxury Vinyl Tile is flooring made by combining several sheets of processed PVC sheet and printing film with a PVC wear layer to improve durability. With a thickened wear layer, the Luxury Vinyl Tile is good for use in high traffic shopping malls, schools, and business buildings. using heat and pressure to make a sheet with a natural material pattern (wood pattern, stone pattern, etc.).

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format ☐ Nested Materials Method ☒ Basic Method	Threshold Level ☐ 100 ppm ☒ 1,000 ppm ☐ Per GHS SDS ☐ Other	Residuals/Impurities Evaluation ☒ Completed ☐ Partially Completed ☐ Not Completed Explanation(s) provided : ☒ Yes ☐ No	<i>For all contents above the threshold, the manufacturer has:</i> Characterized ☒ Yes ☐ No <i>Provided weight and role.</i> Screened ☒ Yes ☐ No <i>Provided screening results using HPDC-approved methods.</i> Identified ☒ Yes ☐ No <i>Provided name and CAS RN or other identifier.</i>
Threshold Disclosed Per ☐ Material ☒ Product			

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.

PRODUCT | MATERIAL OR SUBSTANCE | RESIDUAL OR IMPURITY
GREENSCREEN SCORE | HAZARD TYPE
LUXURY VINYL TILE [POLYVINYL CHLORIDE LT-P1] MAM
LIMESTONE BM-3dg BIS(2-ETHYLHEXYL) TEREPHTHALATE BM-3dg
CARBON BLACK BM-1 CAN | EYE | MAM | PHY C13-14
ISOPARAFFIN BM-2 CAN | MAM | AQU TRIISOTRIDECYL
PHOSPHITE LT-P1 MUL OLEIC ACID LT-P1 END | SKI | EYE]

Number of Greenscreen BM-4/BM3 contents ... 2
Contents highest-concern GreenScreen score(s) (BM-1, LT-1, LT-P1) ... LT-P1, BM-1
Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

Seohae Tech Co., Ltd. worked with the HPDC Approved Preparer to confirm that all intentionally added ingredients, residuals and impurities were considered under the preparation of this HPD. This was accomplished by obtaining full formulation disclosure, including residuals and impurities, down to the 1,000 ppm threshold.

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: RFCI FloorScore
Management: ISO 9001:2015 Quality management systems
Management: ISO 14001:2004 Environmental management systems
LCA: Environmental Product Declaration (EPD) by SCS

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Option 1.
Pre-checked for LEED v4.1 Option 1.

Third Party Verified? ☒ Yes ☐ No	PREPARER: ToxServices LLC VERIFIER: SCS Global Services VERIFICATION #: qGE-18437	SCREENING DATE: 2024-03-31 PUBLISHED DATE: 2025-09-04 EXPIRY DATE: 2027-03-31
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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 2.3, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-3-standard

LUXURY VINYL TILE

PRODUCT THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES EVALUATION COMPLETED: Yes

RESIDUALS AND IMPURITIES NOTES: Seohae Tech Co., Ltd. worked with the HPDC Approved Preparer to confirm that all residuals and impurities were considered under the preparation of this HPD. This was accomplished by obtaining full formulation disclosure, including residuals and impurities, down to the 1,000 ppm threshold.

OTHER PRODUCT NOTES:

POLYVINYL CHLORIDE

ID: 9002-86-2

HAZARD DATA SOURCE: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2024-03-31 14:29:11

%: 75.4697 - 75.5000 GreenScreen: LT-P1 RC: None NANO: No SUBSTANCE ROLE: Structure component

HAZARD TYPE LIST NAME AND SOURCE WARNINGS

MAM GHS - Japan H335 - May cause respiratory irritation [Specific target organ toxicity - Single exposure - Category 3]

MAM GHS - Japan H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]

ADDITIONAL LISTINGS LIST NAME AND SOURCE NOTIFICATION

RESTRICTED LIST Perkins+Will (P+W) P&W - Precautionary List

Precautionary list of substances recommended for avoidance

RESTRICTED LIST Cradle to Cradle Products Innovation Institute (C2CP II) C2C Certified v4 Product Standard Restricted Substances List (RSL) - Effective July 1, 2022

Core Restrictions

RESTRICTED LIST International Living Future Institute (ILFI) Living Building Challenge 4.0 - Red List of Materials & Chemicals - Effective April 1, 2023

Red List substances to avoid in Living Building Challenge V4.0 projects

SUBSTANCE NOTES:

LIMESTONE

ID: 1317-65-3

HAZARD DATA SOURCE: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2024-03-31 14:29:11

%: 20.3000 - 20.3000 GreenScreen: BM-3dg RC: None NANO: No SUBSTANCE ROLE: Structure component

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
None found		No warnings found on HPD Priority Hazard Lists
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists
SUBSTANCE NOTES: The GreenScreen® Benchmark assessment score of BM-3dg was provided through the HPD 2.3 Builder Tool.		

BIS(2-ETHYLHEXYL) TEREPHTHALATE

ID: **6422-86-2**

HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2024-03-31 14:29:12		
%: 3.3990 - 3.3990	GreenScreen: BM-3dg	RC: None	NANO: No	SUBSTANCE ROLE: Plasticizer
HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS		
None found		No warnings found on HPD Priority Hazard Lists		
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION		
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List		
		Some Solvents		
SUBSTANCE NOTES: The GreenScreen® Benchmark assessment score of BM-3dg was provided through the HPD 2.3 Builder Tool.				

CARBON BLACK

ID: **1333-86-4**

HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2024-03-31 14:29:12		
%: 0.3000 - 0.3000	GreenScreen: BM-1	RC: None	NANO: No	SUBSTANCE ROLE: Pigment

HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification
CAN	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CAN	IARC	Group 2b - Possibly carcinogenic to humans
EYE	GHS - New Zealand	Eye irritation category 2
CAN	GHS - New Zealand	Carcinogenicity category 2
CAN	GHS - Japan	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]
MAM	GHS - Japan	H372 - Causes damage to organs through prolonged or repeated exposure [Specific target organs/systemic toxicity following repeated exposure - Category 1]
PHY	GHS - Japan	H251 - Self-heating;; may catch fire [Self-heating substances and mixtures - Category 1]
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION
None found		No listings found on Additional Hazard Lists

SUBSTANCE NOTES: The GreenScreen® Benchmark assessment score of BM-1 was provided through the HPD 2.3 Builder Tool.

C13-14 ISOPARAFFIN			ID: 64742-47-8	
HAZARD DATA SOURCE: Pharos Chemical and Materials Library		HAZARD SCREENING DATE: 2024-03-31 14:29:12		
%: 0.1250 - 0.1500	GreenScreen: BM-2	RC: None	NANO: No	SUBSTANCE ROLE: Solvent
HAZARD TYPE	LIST NAME AND SOURCE	WARNINGS		
CAN	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification		
MAM	EU - GHS (H-Statements) Annex 6 Table 3-1	H304 - May be fatal if swallowed and enters airways [Aspiration hazard - Category 1]		
AQU	GHS - Japan	H401 - Toxic to aquatic life [Hazardous to the aquatic environment (acute) - Category 2]		
AQU	GHS - Japan	H411 - Toxic to aquatic life with long lasting effects [Hazardous to the aquatic environment (chronic) - Category 2]		
ADDITIONAL LISTINGS	LIST NAME AND SOURCE	NOTIFICATION		
RESTRICTED LIST	Green Science Policy Institute (GSPI)	GSPI - Six Classes Precautionary List		
		Some Solvents		

TRIISOTRIDECYL PHOSPHITE

ID: 77745-66-5

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2024-03-31 14:29:12	
%: 0.1000 - 0.1500	GreenScreen: LT-P1	RC: None	NANO: No	SUBSTANCE ROLE: Stabilizer
HAZARD TYPE	LIST NAME AND SOURCE		WARNINGS	
MUL	German FEA - Substances Hazardous to Waters		Class 2 - Hazard to Waters	
ADDITIONAL LISTINGS	LIST NAME AND SOURCE		NOTIFICATION	
None found			No listings found on Additional Hazard Lists	
SUBSTANCE NOTES:				

OLEIC ACID

ID: 112-80-1

HAZARD DATA SOURCE: Pharos Chemical and Materials Library			HAZARD SCREENING DATE: 2024-03-31 14:29:12	
%: 0.0750 - 0.1250	GreenScreen: LT-P1	RC: None	NANO: No	SUBSTANCE ROLE: Stabilizer
HAZARD TYPE	LIST NAME AND SOURCE		WARNINGS	
END	TEDX - Potential Endocrine Disruptors		Potential Endocrine Disruptor	
SKI	GHS - New Zealand		Skin irritation category 2	
EYE	GHS - New Zealand		Eye irritation category 2	
ADDITIONAL LISTINGS	LIST NAME AND SOURCE		NOTIFICATION	
None found			No listings found on Additional Hazard Lists	
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	RFCl FloorScore	
CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: All facilities. CERTIFICATE URL: https://cdn.scs-certified.com/products/cert_pdfs/Ext1_Seohae%20Tech_2024_SCS-FS-07243_s.pdf	ISSUE DATE: 2024-09-01 00:00:00 EXPIRY DATE: 2025-11-30 00:00:00	CERTIFIER OR LAB: SCS Global Services
CERTIFICATION AND COMPLIANCE NOTES: Registration # SCS-FS-07243. Conforms to the CDPH/EHLB Standard Method v1.2-2017 (California Section 01350), effective April 1, 2017, for the school classroom and private office parameters when modeled as Flooring. Measured Concentration of Total Volatile Organic Compounds (TVOC): Less than/equal to 0.5 mg/m ³ (in compliance with CDPH/EHLB Standard Method v1.2-2017).		

MANAGEMENT	ISO 9001:2015 Quality management systems	
CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: #12-39, 172 Beongil, Seobunam-ro, Seonjang-myeon, Asan-si, Chungnam, 31545, South Korea CERTIFICATE URL:	ISSUE DATE: 2020-06-19 00:00:00 EXPIRY DATE: 2026-06-18 00:00:00	CERTIFIER OR LAB: Converged Management Certification
CERTIFICATION AND COMPLIANCE NOTES:		

MANAGEMENT	ISO 14001:2004 Environmental management systems	
CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: #12-39, 172 Beongil, Seobunam-ro, Seonjang-myeon, Asan-si, Chungnam, 31545, South Korea CERTIFICATE URL:	ISSUE DATE: 2023-06-09 00:00:00 EXPIRY DATE: 2026-06-08 00:00:00	CERTIFIER OR LAB: Converged Management Certification
CERTIFICATION AND COMPLIANCE NOTES: Certification for ISO 14001:2014		

LCA	Environmental Product Declaration (EPD) by SCS	
CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: 12-39, Seobunam-ro, 172beongil, Seonjang-myeon, Asan-si, Gyeongsangnam-do, Korea, Republic of CERTIFICATE URL: https://cdn.scs-certified.com/products/cert_pdfs/SCS-EPD-09305_SeohaeTechCo_LVT_081123.pdf	ISSUE DATE: 2023-08-11 00:00:00 EXPIRY DATE: 2028-08-10 00:00:00	CERTIFIER OR LAB: SCS Global Services
CERTIFICATION AND COMPLIANCE NOTES: SCS-EPD-09305. PCR Guidance for building-Related Products and Services Part A: Life Cycle Assessment Calculation Rules and Report Requirements Version 3.2. UL Environment. December 2018. PCR Guidance or building-Related Products and Services Part B: Flooring EPD Requirements Version 2.0 UL Environment. September May 2018.		

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.

No accessories are required for this product.

Section 5: General Notes

Seohae Tech Co., Ltd. worked with the HPDC Approved Preparer to confirm that all intentionally added ingredients, residuals and impurities were considered under the preparation of this HPD. This was accomplished by obtaining full formulation disclosure, including residuals and impurities, down to the 1,000 ppm threshold.

MANUFACTURER INFORMATION

MANUFACTURER: **seohae tech co.,ltd**
 ADDRESS: **#12-39, 172 Beongil, Seobunam-ro, Seonjang-myeon**
Asan-si, Chungnam 31545
 COUNTRY: **South Korea**

WEBSITE: **N/A**
 CONTACT NAME: **Youn Sun Tae**
 TITLE: **Senior Managing Director**
 PHONE: **+82-10-4821-2095**
 EMAIL: **cyl6733@naver.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-P1 List Translator Possible 1 (Possible Benchmark-1)
BM-3 Benchmark 3 (use but still opportunity for improvement)	LT-1 List Translator 1 (Likely Benchmark-1)
BM-2 Benchmark 2 (use but search for safer substitutes)	LT-UNK List Translator Benchmark Unknown
BM-1 Benchmark 1 (avoid - chemical of high concern)	NoGS No GreenScreen.
BM-U Benchmark Unspecified (due to insufficient data)	

GreenScreen Benchmark scores sometimes also carry subscripts, which provide more context for how the score was determined. These are DG (data gap), TP (transformation product), and CoHC (chemical of high concern). For more information, see 2.2.2.4 GreenScreen® for Safer Chemicals, www.greenscreenchemicals.org, and Best Practices for Hazard Screening on the HPDC website (hpd-collaborative.org).

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

