

SCS Global Services does hereby certify that an independent assessment has been conducted on behalf of:

Jae Young Chemical Co., Ltd.

41, Jiryegongdan-gil, Jirye-myeon, Gimcheon-Si, Korea, Republic Of

For the following product(s):

Vinyl Flooring:

Vinyl Tile (3mm, 5mm)

The product(s) meet(s) all of the necessary qualifications to be certified for the following claim(s):

VERIFIED HEALTH PRODUCT DECLARATION

This validation conforms to the **Health Product Declaration Open Standard, Version 2.2 (May 18, 2020)**. Products have a complete, basic method, product threshold HPD and have been validated for health hazard warnings at an inventory threshold 1,000 ppm (0.1%).

HPD Screening Dates: 10/01/2021

Verification #: qGE-13063

Registration # SCS-HPD-07351

Valid from: October 22, 2021 to October 1, 2024



A handwritten signature in black ink that reads 'Stanley Mathuram'.

Stanley Mathuram, PE, Executive Vice President
SCS Global Services
2000 Powell Street, Ste. 600, Emeryville, CA 94608 USA

HPD UNIQUE IDENTIFIER: 26310

CLASSIFICATION: 09 65 19.23 Vinyl Tile Flooring

PRODUCT DESCRIPTION: As a floor covering material manufacturer, we supply resilient vinyl flooring tiles with various wood designs such as modern natural, vintage and antique as well as other designs of concrete, fabric, marble and slate. Our products have features such as easy cleaning and maintenance, anti-slip, water resistance and anti-scratch function by polyurethane (PU) & ceramic coating treatment on product surfaces. Also, the products can be made with various designs and tile sizes upon customer's request. It is very easy to clean and maintain; even marker stains on tile surface are easily removed.

Section 1: Summary

Basic Method / Product Threshold

CONTENT INVENTORY

Table with 4 columns: Inventory Reporting Format, Threshold Level, Residuals/Impurities, and Characterized/Screened/Identified. Includes radio button options for reporting methods and thresholds.

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
VINYL TILE (3MM, 5MM) [LIMESTONE BM-3dg POLYVINYL CHLORIDE LT-P1 | RES BIS(2-ETHYLHEXYL) CYCLOHEXANE-1,4-DICARBOXYLATE NoGS BIS(2-ETHYLHEXYL) TEREPHTHALATE BM-3dg CALCIUM CARBONATE BM-3 CONTINUOUS FILAMENT GLASS FIBER, NON-RESPIRABLE LT-UNK EPOXIDIZED SOYBEAN OIL LT-P1 HYDROCARBONS, C6-20, POLYMERS, HYDROGENATED LT-UNK ISOCTYL DIPHENYL PHOSPHITE LT-P1 | MUL DIPHENYL ISODECYL PHOSPHITE LT-P1 | MUL BARIUM NEODECANOATE LT-P1 | MUL C12-18 FATTY ACIDS, BARIUM SALT NoGS POLYVINYL CHLORIDE LT-P1 | RES]

Number of Greenscreen BM-4/BM3 contents ... 1

Contents highest concern GreenScreen Benchmark or List translator Score ... LT-P1

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

Jae Young Chemical 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
LCA: Environmental Product Declaration (EPD) by SCS
LCA: ISO 14040:2006 Environmental management -- Life cycle assessment
Formaldehyde emissions: EN 14041:2004 Resilient, textile and laminate floor coverings - Formaldehyde Class E2

CONSISTENCY WITH OTHER PROGRAMS

No pre-checks completed or disclosed.

Summary table with 3 columns: Third Party Verified?, PREPARER: Self-Prepared, VERIFIER: SCS Global Services, VERIFICATION #: qGE-13063, SCREENING DATE: 2021-10-01, PUBLISHED DATE: 2021-10-22, EXPIRY DATE: 2024-10-01.

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

VINYL TILE (3MM, 5MM)

PRODUCT THRESHOLD: 1000 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Yes

RESIDUALS AND IMPURITIES NOTES: Jae Young Chemical 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:

LIMESTONE

ID: 1317-65-3

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-10-02 0:04:09

#: 42.9763 - 53.9119 GS: BM-3dg RC: None NANO: No SUBSTANCE ROLE: Filler

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

SUBSTANCE NOTES:

POLYVINYL CHLORIDE

ID: 9002-86-2

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-10-02 0:04:10

#: 24.5490 - 36.9072 GS: LT-P1 RC: None NANO: No SUBSTANCE ROLE: Structure component

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

SUBSTANCE NOTES:

BIS(2-ETHYLHEXYL) CYCLOHEXANE-1,4-DICARBOXYLATE

ID: 84731-70-4

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2021-10-02 0:04:10

#: 5.8976 - 8.3100 GS: NoGS RC: None NANO: No SUBSTANCE ROLE: Plasticizer

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

SUBSTANCE NOTES:

BIS(2-ETHYLHEXYL) TEREPHTHALATE

ID: 6422-86-2

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-10-02 0:04:11**

#: **3.8800 - 6.3500** GS: **BM-3dg** RC: **None** NANO: **No** SUBSTANCE ROLE: **Plasticizer**

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

SUBSTANCE NOTES: The GreenScreen® Benchmark assessment score of BM-3dg was provided through the HPD 2.2 Builder Tool.

CALCIUM CARBONATE

ID: **471-34-1**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-10-02 0:04:11**

#: **1.5750 - 1.6667** GS: **BM-3** RC: **None** NANO: **No** SUBSTANCE ROLE: **Glass component**

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

SUBSTANCE NOTES: The GreenScreen® Benchmark assessment score of BM-3 was provided through the HPD 2.2 Builder Tool.

CONTINUOUS FILAMENT GLASS FIBER, NON-RESPIRABLE

ID: **65997-17-3**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-10-02 0:04:12**

#: **0.4050 - 0.4286** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Glass component**

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

SUBSTANCE NOTES:

EPOXIDIZED SOYBEAN OIL

ID: **8013-07-8**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-10-02 0:04:12**

#: **0.1170 - 0.5950** GS: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Stabilizer**

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

SUBSTANCE NOTES:

HYDROCARBONS, C6-20, POLYMERS, HYDROGENATED

ID: **69430-35-9**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-10-02 0:04:13**

#: **0.0228 - 0.2394** GS: **LT-UNK** RC: **None** NANO: **No** SUBSTANCE ROLE: **Stabilizer**

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

SUBSTANCE NOTES:

ISOCTYL DIPHENYL PHOSPHITE

ID: 26401-27-4

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-10-02 0:04:13**%: **0.0091 - 0.1596** GS: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Stabilizer**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters

SUBSTANCE NOTES:

DIPHENYL ISODECYL PHOSPHITE

ID: 26544-23-0

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-10-02 0:04:14**%: **0.0091 - 0.1197** GS: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Stabilizer**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters

SUBSTANCE NOTES:

BARIUM NEODECANOATE

ID: 55172-98-0

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-10-02 0:04:14**%: **0.0091 - 0.1197** GS: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Stabilizer**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
MUL	German FEA - Substances Hazardous to Waters	Class 2 - Hazard to Waters

SUBSTANCE NOTES:

C12-18 FATTY ACIDS, BARIUM SALT

ID: 68131-57-7

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-10-02 0:04:14**%: **0.0091 - 0.1197** GS: **NoGS** RC: **None** NANO: **No** SUBSTANCE ROLE: **Stabilizer**

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

SUBSTANCE NOTES:

POLYVINYL CHLORIDE

ID: 9002-86-2

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2021-10-02 0:04:15**%: **0.0000 - 17.3810** GS: **LT-P1** RC: **PostC** NANO: **No** SUBSTANCE ROLE: **Structure component**

HAZARD TYPE

AGENCY AND LIST TITLES

WARNINGS

RES	AOEC - Asthmagens	Asthmagen (Rs) - sensitizer-induced
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SUBSTANCE NOTES: Jae Young Chemical Co., Ltd. receives Recycled PVC from the YoungHaw in Korea. The recycled PVC is sourced from reclaimed Vinyl Tiles from Belgium and The Netherlands.

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	RFCI FloorScore		
CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: All Facilities CERTIFICATE URL: https://www.scsglobalservices.com/certified-clients/certificates/25390	ISSUE DATE: 2021-02-01	EXPIRY DATE: 2022-01-31	CERTIFIER OR LAB: SCS Global Services
CERTIFICATION AND COMPLIANCE NOTES: Registration # SCS-FS-05299. Indoor air quality is certified to SCS-EC10.3-2014 v4.0 and 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/m3 (in compliance with CDPH/EHLB Standard Method v1.2-2017)			
LCA	Environmental Product Declaration (EPD) by SCS		
CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: All Facilities CERTIFICATE URL: https://www.scs-certified.com/products/cert_pdfs/SCS-EPD-07183_JFlor_071321.pdf	ISSUE DATE: 2021-07-13	EXPIRY DATE: 2026-07-12	CERTIFIER OR LAB: SCS Global Services
CERTIFICATION AND COMPLIANCE NOTES: EPD Number: SCS-EPD-07183. The scope of EPD is cradle-to-grave, including raw material extraction and processing, transportation, product manufacture, product delivery, installation and use, and product disposal.			
LCA	ISO 14040:2006 Environmental management -- Life cycle assessment		
CERTIFYING PARTY: Third Party APPLICABLE FACILITIES: All Facilities CERTIFICATE URL:	ISSUE DATE: 2021-07-09	EXPIRY DATE:	CERTIFIER OR LAB: SCS Global Services
CERTIFICATION AND COMPLIANCE NOTES: The primary intended application of this LCA is to support the development of an Environmental Product Declaration (EPD), conformant to ISO 140251, ISO 140442 and ISO 219303. The LCA study scope, methodology, data sources, assumptions, and limitations, used to calculate final indicator results developed for the EPD are described in this report. The following life cycle stages are included: raw material extraction and processing; transport to manufacturer; product manufacturing and packaging; product distribution, use and maintenance; and product disposal.			
FORMALDEHYDE EMISSIONS	EN 14041:2004 Resilient, textile and laminate floor coverings - Formaldehyde Class E2		
CERTIFYING PARTY: Second Party APPLICABLE FACILITIES: All Facilities CERTIFICATE URL:	ISSUE DATE: 2019-03-05	EXPIRY DATE:	CERTIFIER OR LAB: Technical and Test Institute for Construction Prague
CERTIFICATION AND COMPLIANCE NOTES: Determination of free formaldehyde content in air samples taken from the test chamber. Method Number: 100607-03.			

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

Jae Young Chemical 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: Jae Young Chemical Co., Ltd.
ADDRESS: 41, Jiryegongdan-Gil, Jirye-Myeon
 Gimcheon-Si Gyeongsangbuk-do 39690, Korea
WEBSITE: <http://www.jflor.co.kr>

CONTACT NAME: Darren Mok
TITLE: Assistant Manager
PHONE: +82-31-948-6600
EMAIL: darrenmok@jflor.co.kr

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.