Sensitile's Terrazzo Line by Sensitile Systems

Health Product Declaration v2.2

created via: HPDC Online Builder

HPD UNIQUE IDENTIFIER: 27722
CLASSIFICATION: 09 66 00 Terrazzo Flooring
PRODUCT DESCRIPTION: Sensitile's Terrazzo products feature hundreds of light-conducting channels embedded in a fine terrazzo substrate, allowing the materials to manipulate light in unique ways. The surprising result is a shifting, shimmering, and twinkling response to light, movement, and shadows. Sensitile's Terrazzo family of materials is available both as pre-cast tiles or slabs, and can also be custom cast to the specific requirements of different projects. This HPD covers the following Sensitile Terrazzo product lines: Sensitile Terrazzo™ Slabs; Sensitile Terrazzo™ Tiles; Terrazzo Lumina™ Slabs; Terrazzo Lumina™ Tiles; PIXA™ Slabs. Also includes the following CSI MasterFormat numbers: 09 66 13 Portland Cement Terrazzo Flooring; 09 66 16 Terrazzo Floor Tile; 09 66 16.13 Portland Cement Terrazzo Floor Tile; 09 77 33 Terrazzo Wall Finish; 12 36 00 Countertops; 12 36 13 Concrete Countertops; 10 22 00 Partitions.

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 except SC substances characterized according to SC guidance.

Screened ◉ Yes Ex/SC ○ Yes ○ No

All substances screened using Priority Hazard Lists with results disclosed except SC substances screened according to SC guidance.

Identified ○ Yes Ex/SC ○ Yes ◉ No

One or more substances not disclosed by Name (Specific or Generic) and Identifier and/ or one or more Special Condition did not follow guidance.

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

SENSITILE'S TERRAZZO LINE [SC:SAND Not Screened PORTLAND CEMENT LT-P1 | CAN | END GLASS OXIDE LT-UNK DIETHYLENE GLYCOL MONO-N-BUTYL ETHER LT-P1 | END | EYE UNDISCLOSED NoGS SILICON DIOXIDE BM-1 | CAN TITANIUM DIOXIDE LT-1 | CAN | END *ALUMINUM CALCIUM IRON OXIDE (ALCA2FEO5)* NoGS *FERRIC OXIDE* BM-1 | CAN QUARTZ 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:

Special conditions applied: GeologicalMaterial

[LEED v4] "Yes ex/SC" result is due only to materials and substances for which Special Conditions were applied. Thus "Yes ex/SC" does not disqualify the product for the LEED v4 Materials and Resources Disclosure and Optimization credit, Option 1.

This Health Product Declaration (HPD) was completed in accordance with the HPD Standard version 2.2, and discloses hazards associated with all substances present at or above 1000 parts per million (ppm) in the finished product, along with the role and percent weight. Substances not "Identified" are those considered proprietary to suppliers.

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: Intertek - Certified Clean Air Gold
LCA: Environmental Product Declaration (EPD) by SCS

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: 2022-03-02
PUBLISHED DATE: 2022-03-02
EXPIRY DATE: 2025-03-02

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

SENSITILE'S TERRAZZO LINE

PRODUCT THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES CONSIDERED: Yes

RESIDUALS AND IMPURITIES NOTES: Residuals and Impurities were Considered as outlined in Emerging Best Practices. Residuals or impurities with the potential to be present at or above the Content Inventory Threshold indicated that return a GS score of BM-1, LT-1, LT-P1 or NoGS have been disclosed, based on information provided in supplier documentation and/or as predicted by process chemistry (Pharos CML).

OTHER PRODUCT NOTES: Percent by weight of substances reported as range to account for the various options available.

SC:SAND ID: SC:GeoMat

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **Not Screened**

%: **55.0000 - 68.0000** GS: **Not Screened** RC: **None** NANO: **No** SUBSTANCE ROLE: **Filler**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
	Hazard Screening not performed	

SUBSTANCE NOTES:
Version: SCGeoMats/2019-06-20
Origin: USA
Typical Composition: Silica/Quartz [14808-60-7; LT-1 | CAN]; Aluminum oxide [1344-28-1; BM-2 | RES; <1.1%]; Iron Oxide [1309-37-1; BM-1 | CAN; <0.1%]; Titanium dioxide [13463-67-7; LT-1 | CAN; <0.1%].
Potential presence of toxic metals: None identified by suppliers.
Presence of Radioactive Elements: None identified by suppliers. Natural sand obtained from multiple suppliers. Contact manufacturer if more information is required.

PORTLAND CEMENT ID: 65997-15-1

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-03-02 14:02:19**

%: **27.0000 - 30.0000** GS: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Binder**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor

SUBSTANCE NOTES: NIST lists the composition of Portland Cement as including: Calcium Oxide (64%) [1305-78-8; LT-P1 | NO]; Silicon Dioxide (20%) [7631-86-9; LT-P1 | CAN]; Aluminum Oxide (5%) [1344-28-1; BM-2 | RES]; Iron III Oxide (4%) [1309-37-1; BM-1 | CAN]; Sulfur Trioxide (3%) [7446-11-9; LT-P1 | MAM]; and Magnesium Oxide (1%) [1309-48-4; LT-UNK | CAN]. Supplier documentation includes the following statement: "The structure of Portland cement may contain the following in some concentration ranges: Calcium oxide; Quartz [14808-60-7; BM-1 | CAN], Hexavalent chromium [<0.1%; 18450-29-9; LT-1 | CAN].

GLASS OXIDE ID: 65997-17-3

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-03-02 14:02:20**

%: **5.4000 - 5.5000** GS: **LT-UNK** 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:

DIETHYLENE GLYCOL MONO-N-BUTYL ETHER

ID: **112-34-5**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-03-02 14:02:20**

%: **0.1000 - 0.2000** GS: **LT-P1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Stabilizer**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
EYE	EU - GHS (H-Statements) Annex 6 Table 3-1	H319 - Causes serious eye irritation [Serious eye damage/eye irritation - Category 2A]

SUBSTANCE NOTES: Component of shrinkage-reducing admixture.

UNDISCLOSED

ID: **Undisclosed**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-03-02 14:02:21**

%: **0.1000 - 0.2000** 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: Supplier has shared substance identity under the terms of a non-disclosure agreement; substance to remain proprietary to supplier. Substance has been screened against HPD Priority Lists using the HPD Builder with results disclosed.

SILICON DIOXIDE

ID: **7631-86-9**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-03-02 14:02:21**

%: **0.0800 - 0.1200** GS: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Processing regulator**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	GHS - Japan	H350 - May cause cancer [Carcinogenicity - Category 1A]
CAN	GHS - Australia	H350i - May cause cancer by inhalation [Carcinogenicity - Category 1A or 1B]

SUBSTANCE NOTES: Component of plasticizer and shrinkage-reducing admixture. GreenScreen Benchmark® assessment score of BM-1 was provided by the HPD Builder Tool. Warnings restricted to respirable forms (Silica, crystalline - airborne particles of respirable size). May also represent potential impurity of Portland cement as per Pharos CML.

TITANIUM DIOXIDE

ID: **13463-67-7**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-03-02 14:02:22**

%: **0.0000 - 1.5000** GS: **LT-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Pigment**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CAN	IARC	Group 2B - Possibly carcinogenic to humans - inhaled from occupational sources
CAN	MAK	Carcinogen Group 3A - Evidence of carcinogenic effects but not sufficient to establish MAK/BAT value
END	TEDX - Potential Endocrine Disruptors	Potential Endocrine Disruptor
CAN	MAK	Carcinogen Group 4 - Non-genotoxic carcinogen with low risk under MAK/BAT levels
CAN	EU - GHS (H-Statements) Annex 6 Table 3-1	H351 - Suspected of causing cancer [Carcinogenicity - Category 2]

SUBSTANCE NOTES: Identified on the US EPA Safer Chemical Ingredient List (Green Circle - Verified Low Concern). Form-specific hazards: airborne particles of respirable size – occupational setting. Specific guidelines have been 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; however, this function is not yet available in the HPD Builder. Substance not used in all formulations. Contact manufacturer if more information is required.

ALUMINUM CALCIUM IRON OXIDE (ALCA2FEO5)

ID: **12068-35-8**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-03-02 14:02:22**

%: **Impurity/Residual** GS: **NoGS** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

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

SUBSTANCE NOTES: Potential impurity of Portland cement as per Pharos CML.

FERRIC OXIDE

ID: **1309-37-1**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-03-02 14:02:23**

%: **Impurity/Residual** GS: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Impurity/Residual**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	MAK	Carcinogen Group 3B - Evidence of carcinogenic effects but not sufficient for classification

SUBSTANCE NOTES: Potential impurity of Portland cement as per Pharos CML. GreenScreen Benchmark® assessment score of BM-1 was provided by the HPD Builder Tool. Warnings restricted to respirable forms (Silica, crystalline - airborne particles of respirable size).

QUARTZ

ID: **14808-60-7**

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-03-02 14:02:23**

%: **0.0000 - 5.8000** GS: **BM-1** RC: **None** NANO: **No** SUBSTANCE ROLE: **Filler**

HAZARD TYPE	AGENCY AND LIST TITLES	WARNINGS
CAN	US CDC - Occupational Carcinogens	Occupational Carcinogen
CAN	CA EPA - Prop 65	Carcinogen - specific to chemical form or exposure route
CAN	US NIH - Report on Carcinogens	Known to be Human Carcinogen (respirable size - occupational setting)
CAN	MAK	Carcinogen Group 1 - Substances that cause cancer in man
CAN	IARC	Group 1 - Agent is carcinogenic to humans - inhaled from occupational sources
CAN	IARC	Group 1 - Agent is Carcinogenic to humans
CAN	GHS - New Zealand	6.7A - Known or presumed human carcinogens
CAN	GHS - Japan	H350 - May cause cancer [Carcinogenicity - Category 1A]
CAN	GHS - Australia	H350i - May cause cancer by inhalation [Carcinogenicity - Category 1A or 1B]

SUBSTANCE NOTES: Aggregate not used in all formulations. Contact manufacturer if more information is required. May also represent potential impurity of sand and Portland cement as per supplier documentation and Pharos CML. GreenScreen Benchmark® assessment score of BM-1 was provided by the HPD Builder Tool. Quartz is one of several compounds with warnings restricted to respirable forms (Silica, crystalline - airborne particles of respirable size).

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 — **Intertek - Certified Clean Air Gold**

CERTIFYING PARTY: Third Party
APPLICABLE FACILITIES: Ypsilanti, MI 48198 USA
CERTIFICATE URL: https://tinyurl.com/3m9ewrh4

ISSUE DATE: 2021-05-19

EXPIRY DATE: 2022-05-19

CERTIFIER OR LAB: Intertek

CERTIFICATION AND COMPLIANCE NOTES: Certificate Number: CA-18479-2021a. Conformance Criteria: California Department of Public Health (CDPH) Standard Method v1.2: Private Office and School Classroom. Product Category: Building Products. Models Included: PIXA™, Sensitile Terrazzo™, Terrazzo Lumina™. TVOC Range: Between 0.5 and 5.0 mg/m3.

LCA — **Environmental Product Declaration (EPD) by SCS**

CERTIFYING PARTY: Third Party
APPLICABLE FACILITIES: Ypsilanti, MI 48198
CERTIFICATE URL: https://www.scsglobalservices.com/certified-green-products-guide?pd_pid=43373

ISSUE DATE: 2018-01-09

EXPIRY DATE: 2023-01-08

CERTIFIER OR LAB: SCS Global Services

CERTIFICATION AND COMPLIANCE NOTES: EPD Number: SCS-EPD-04816. Products: Sensitile Systems Concrete Slabs and Tiles; Product Lines: Terrazzo Lumina™; PIXA™; Sensitile Terrazzo™. Declared Unit: 1 m2 of slab or tile surface. Reference Flow: 1 m2 of slab or tile with a 1-1/4" thickness, and with a total weight of 64 kg/m2. Results are shown as an average of slab/tile products with, or without, aggregate. Reference PCR: Product Category Rule (PCR) for preparing an Environmental Product Declaration (EPD) for Construction Products and CPC 54 Construction Services, v2.2, May 2017.

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.

STONETECH® BULLETPROOF® SEALER BY LATICRETE INTERNATIONAL INC.

HPD URL: **https://hpdrepository.hpd-collaborative.org/repository/HPDs/168_STONETECH_Bulletproof_Sealer.pdf**

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:
Sealant employed on a project-by-project basis. Contact manufacturer if more information is required.

Section 5: General Notes

Section 6: References

MANUFACTURER INFORMATION

MANUFACTURER: **Sensitile Systems**
ADDRESS: **1735 Holmes Road**
Ypsilanti MI 48198, USA
WEBSITE: **www.sensitile.com**

CONTACT NAME: **Justyna Bernacki**
TITLE: **Production**
PHONE: **313-872-6314**
EMAIL: **info@sensitile.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
CAN Cancer
DEV Developmental toxicity
END Endocrine activity
EYE Eye irritation/corrosivity
GEN Gene mutation
GLO Global warming
LAN Land toxicity
MAM Mammalian/systemic/organ toxicity
MUL Multiple
NEU Neurotoxicity
NF Not found on Priority Hazard Lists
OZO Ozone depletion
PBT Persistent, bioaccumulative, and toxic
PHY Physical hazard (flammable or reactive)
REP Reproductive
RES Respiratory sensitization
SKI Skin sensitization/irritation/corrosivity
UNK Unknown

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 (due to insufficient data)
LT-P1 List Translator Possible 1 (Possible Benchmark-1)
LT-1 List Translator 1 (Likely Benchmark-1)
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.)
NoGS No GreenScreen.

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.