

HPD UNIQUE IDENTIFIER: 23861

CLASSIFICATION: 09 30 33 Stone Tiling

PRODUCT DESCRIPTION: Biomason bioLITH tile units are used in vertical facing assemblies and installed on a support wall with adhesive or mechanical systems; use on a substrate in horizontal conditions. Appropriate for exterior and interior use in commercial, institutional, and residential building projects. Biomason bioLITH tiles meet and exceed the properties of standard materials for common tests. bioLITH tile units fall under a variety of CSI divisions and sections based on application. Please contact Biomason for further details. bioLITH tiles are installed using various mortars/adhesives not covered by this HPD.

Section 1: Summary

Nested Method / Product Threshold

CONTENT INVENTORY

Inventory Reporting Format	Threshold level	Residuals/Impurities	<i>All Substances Above the Threshold Indicated Are:</i> Characterized <input type="radio"/> Yes Ex/SC <input checked="" type="radio"/> Yes <input type="radio"/> No % weight and role provided for all substances. Screened <input type="radio"/> Yes Ex/SC <input checked="" type="radio"/> Yes <input type="radio"/> No All substances screened using Priority Hazard Lists with results disclosed. Identified <input type="radio"/> Yes Ex/SC <input checked="" type="radio"/> Yes <input type="radio"/> No All substances disclosed by Name (Specific or Generic) and Identifier.
<input checked="" type="radio"/> Nested Materials Method	<input checked="" type="radio"/> 100 ppm	Residuals/Impurities	
<input type="radio"/> Basic Method	<input type="radio"/> 1,000 ppm	Considered in 0 of 2 Materials	
Threshold Disclosed Per	<input type="radio"/> Per GHS SDS	Explanation(s) provided for Residuals/Impurities?	
<input type="radio"/> Material	<input type="radio"/> Other	<input checked="" type="radio"/> Yes <input type="radio"/> No	

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
GRANITE [GRANITE NoGS] BIOCEMENT [CALCIUM CARBONATE BM-3]

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

Contents highest concern GreenScreen Benchmark or List translator Score ... NoGS

Nanomaterial ... No

INVENTORY AND SCREENING NOTES:

This Health Product Declaration (HPD) was completed in accordance with the HPD Standard version 2.1.1, and discloses hazards associated with all substances present at or above 100 parts per million (ppm) in the finished product, along with the role and percent weight.

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: Inherently non-emitting source per LEED guidelines
 Multi-attribute: ILFI Declare - Red List Free

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Material Ingredients Option 1 and Option 2

Third Party Verified?	PREPARER: Self-Prepared	SCREENING DATE: 2020-05-14
<input type="radio"/> Yes	VERIFIER:	PUBLISHED DATE: 2021-02-23
<input checked="" type="radio"/> No	VERIFICATION #:	EXPIRY DATE: 2023-05-14

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

GRANITE %: 80.0000 - 90.0000

PRODUCT THRESHOLD: 100 ppm RESIDUALS AND IMPURITIES CONSIDERED: No MATERIAL TYPE: Geologically Derived Material

RESIDUALS AND IMPURITIES NOTES: Residuals/Impurities not considered for this material due to the nature of its source.

OTHER MATERIAL NOTES: Granite aggregate recycled from mining operations is used as aggregate in biocement material and bound together by calcium carbonate grown by non-pathogenic microorganisms in ambient conditions. This disclosure does not provide typical composition or potential presence of toxic metals or radioactive elements which may be found in certain geological materials.

GRANITE

ID: Not registered

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2020-05-14

%: 100.0000 - 100.0000 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: Granite aggregate recycled from mining operations is used as aggregate in biocement material and bound together by calcium carbonate grown by non-pathogenic microorganisms in ambient conditions. This disclosure does not provide typical composition or potential presence of toxic metals or radioactive elements which may be found in certain geological materials.

BIOCEMENT %: 10.0000 - 20.0000

PRODUCT THRESHOLD: 100 ppm RESIDUALS AND IMPURITIES CONSIDERED: No MATERIAL TYPE: Other: Other biologically and geologically derived material

RESIDUALS AND IMPURITIES NOTES: Residuals/Impurities not considered for this material due to the nature of its source.

OTHER MATERIAL NOTES: Biomason's proprietary technology uses non-pathogenic microorganisms to grow its biocement® material in ambient temperatures and eliminates the need for high-heat curing. This Health Product Declaration (HPD) discloses hazards associated with all substances present at or above 100 parts per million (ppm) in the finished product, along with the role and percent by weight.

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2020-05-14**

%: **100.0000 - 100.0000** GS: **BM-3** 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: Calcium carbonate grown through biological reactions of non-pathogenic microorganisms in ambient temperatures being fed an aqueous solution of calcium. The calcium carbonate binds the recycled aggregate to create a cementitious product similar in composition to a natural stone.

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	Inherently non-emitting source per LEED guidelines		
CERTIFYING PARTY: Self-declared	ISSUE DATE: 2020-05-	EXPIRY DATE:	CERTIFIER OR LAB: None
APPLICABLE FACILITIES: All	11		
CERTIFICATE URL:			
CERTIFICATION AND COMPLIANCE NOTES: bioLITH tiles have a final composition similar to that of natural limestone and are inherently non-emitting.			

MULTI-ATTRIBUTE	ILFI Declare - Red List Free		
CERTIFYING PARTY: Self-declared	ISSUE DATE: 2020-03-	EXPIRY DATE: 2021-	CERTIFIER OR LAB: ILFI
APPLICABLE FACILITIES: Durham, NC	01	03-01	
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.

No accessories are required for this product.

Section 5: General Notes

bioLITH tile units are grown by non-pathogenic microorganisms in ambient conditions that are fed an aqueous solution for less than 72 hours, after which the feed process stops and the material has reached industry standards of performance. Aggregate used in the material is pre-consumer recycled granite from mining practices that are too small to be used for other purposes.

MANUFACTURER INFORMATION

MANUFACTURER: **Biomason**
 ADDRESS: **PO Box 110345**
Durham NC 27709, US
 WEBSITE: <https://www.biomason.com/>

CONTACT NAME: **Alyssa Holland**
 TITLE: **Graphic Designer**
 PHONE: **9194733246**
 EMAIL: inquiry@biomason.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)	
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)	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.