

HPD UNIQUE IDENTIFIER: 27694

CLASSIFICATION: 04 21 29 Terra Cotta Masonry

**PRODUCT DESCRIPTION:** TerraClad® architectural ceramics are predominantly clays and naturally occurring minerals that are mixed with water, extruded and then fired in a high temperature kiln, producing long-lasting aesthetic and structurally functional cladding for building exteriors. TerraClad® is available in a variety of standard shapes and sizes, but is also extremely customizable in order to accommodate a project's specific needs. TerraClad® finished products are naturally UV/corrosion/mildew-resistant and provide optimum thermal, fire and sound insulation. This HPD covers all TerraClad® products in our standard through-body colors.

**Section 1: Summary**

**Nested Method / Material Threshold**

**CONTENT INVENTORY**

<p><b>Inventory Reporting Format</b></p> <p><input checked="" type="radio"/> Nested Materials Method</p> <p><input type="radio"/> Basic Method</p> <p><b>Threshold Disclosed Per</b></p> <p><input checked="" type="radio"/> Material</p> <p><input type="radio"/> Product</p>	<p><b>Threshold Level</b></p> <p><input type="radio"/> 100 ppm</p> <p><input checked="" type="radio"/> 1,000 ppm</p> <p><input type="radio"/> Per GHS SDS</p> <p><input type="radio"/> Other</p>	<p><b>Residuals/Impurities</b></p> <p>Considered in 1 of 1 Materials</p> <p><b>Explanation(s) provided for Residuals/Impurities?</b></p> <p><input checked="" type="radio"/> Yes <input type="radio"/> No</p>	<p><i>All Substances Above the Threshold Indicated Are:</i></p> <p><b>Characterized</b> <input type="radio"/> Yes Ex/SC <input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p><i>% weight and role provided for all substances.</i></p> <p><b>Screened</b> <input type="radio"/> Yes Ex/SC <input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p><i>All substances screened using Priority Hazard Lists with results disclosed.</i></p> <p><b>Identified</b> <input type="radio"/> Yes Ex/SC <input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p><i>All substances disclosed by Name (Specific or Generic) and Identifier.</i></p>
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**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**  
**TERRA COTTA (POST-HEAT) [ QUARTZ BM-1 | CAN ALUMINUM OXIDE BM-2 | RES POTASSIUM OXIDE BM-2 CALCIUM OXIDE BM-2 SODIUM OXIDE BM-2 TITANIUM DIOXIDE LT-1 | CAN | END FERRIC OXIDE 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:**

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.

**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®

**CONSISTENCY WITH OTHER PROGRAMS**

Pre-checked for LEED v4 Material Ingredients Option 1

<p>Third Party Verified?</p> <p><input type="radio"/> Yes</p> <p><input checked="" type="radio"/> No</p>	<p>PREPARER: Self-Prepared</p> <p>VERIFIER:</p> <p>VERIFICATION #:</p>	<p>SCREENING DATE: 2022-02-25</p> <p>PUBLISHED DATE: 2022-02-25</p> <p>EXPIRY DATE: 2025-02-25</p>
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## 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](http://www.hpd-collaborative.org/hpd-2-2-standard)

### TERRA COTTA (POST-HEAT) %: 100.0000 - 100.0000

MATERIAL THRESHOLD: 1000 ppm RESIDUALS AND IMPURITIES CONSIDERED: Yes MATERIAL TYPE: Geologically Derived Material

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 results of EDS analysis.

OTHER MATERIAL NOTES: Analysis performed post-heat using energy dispersive spectroscopy (EDS). Boston Valley Terra Cotta uses 12%-20% by weight recycled content in the manufacture of its terra cotta products.

### QUARTZ

ID: 14808-60-7

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2022-02-25 18:53:14

%: 60.0000 - 65.0000 GS: BM-1 RC: Both NANO: No SUBSTANCE ROLE: Ceramic body

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: Synonym: Silicon dioxide. Sources: Kaolin, Feldspar, Aluminum Silicate, Calcium Silicate. 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).

### ALUMINUM OXIDE

ID: 1344-28-1

HAZARD SCREENING METHOD: Pharos Chemical and Materials Library HAZARD SCREENING DATE: 2022-02-25 18:53:15

%: 30.0000 - 35.0000 GS: BM-2 RC: Both NANO: No SUBSTANCE ROLE: Ceramic body

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

SUBSTANCE NOTES: Sources: Kaolin, Feldspar. GreenScreen Benchmark® assessment score of BM-2 was provided by the HPD Builder Tool.

**POTASSIUM OXIDE**

ID: 12136-45-7

HAZARD SCREENING METHOD: <b>Pharos Chemical and Materials Library</b>		HAZARD SCREENING DATE: <b>2022-02-25 18:53:15</b>		
%: <b>1.0000 - 5.0000</b>	GS: <b>BM-2</b>	RC: <b>Both</b>	NANO: <b>No</b>	SUBSTANCE ROLE: <b>Ceramic body</b>

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

SUBSTANCE NOTES: Source: Feldspar. GreenScreen Benchmark® assessment score of BM-2 was provided by the HPD Builder Tool.

**CALCIUM OXIDE**

ID: 1305-78-8

HAZARD SCREENING METHOD: <b>Pharos Chemical and Materials Library</b>		HAZARD SCREENING DATE: <b>2022-02-25 18:53:16</b>		
%: <b>1.0000 - 5.0000</b>	GS: <b>BM-2</b>	RC: <b>Both</b>	NANO: <b>No</b>	SUBSTANCE ROLE: <b>Ceramic body</b>

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

SUBSTANCE NOTES: Source: Calcium Silicate. GreenScreen Benchmark® assessment score of BM-2 was provided by the HPD Builder Tool.

**SODIUM OXIDE**

ID: 1313-59-3

HAZARD SCREENING METHOD: <b>Pharos Chemical and Materials Library</b>		HAZARD SCREENING DATE: <b>2022-02-25 18:53:16</b>		
%: <b>0.1000 - 1.0000</b>	GS: <b>BM-2</b>	RC: <b>Both</b>	NANO: <b>No</b>	SUBSTANCE ROLE: <b>Ceramic body</b>

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

SUBSTANCE NOTES: Source: Feldspar. GreenScreen Benchmark® assessment score of BM-2 was provided by the HPD Builder Tool.

**TITANIUM DIOXIDE**

ID: 13463-67-7

HAZARD SCREENING METHOD: <b>Pharos Chemical and Materials Library</b>		HAZARD SCREENING DATE: <b>2022-02-25 18:53:17</b>		
%: <b>Impurity/Residual</b>	GS: <b>LT-1</b>	RC: <b>Both</b>	NANO: <b>No</b>	SUBSTANCE ROLE: <b>Impurity/Residual</b>

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: Source: Naturally occurring impurity in Kaolin. Identified on the US EPA Safer Chemical Ingredient List (Green Circle - Verified Low Concern). Form-specific hazards: airborne particles of respirable size – occupational setting.

## FERRIC OXIDE

ID: 1309-37-1

HAZARD SCREENING METHOD: **Pharos Chemical and Materials Library** HAZARD SCREENING DATE: **2022-02-25 18:53:17**

%: **Impurity/Residual** GS: **BM-1** RC: **Both** 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: Source: Naturally occurring impurity in Kaolin. GreenScreen Benchmark® assessment score of BM-1 was provided by the HPD Builder Tool. Form-specific hazards: airborne particles of respirable size – occupational setting.

## 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®

CERTIFYING PARTY: Self-declared

ISSUE DATE: 2022-02-

EXPIRY DATE:

CERTIFIER OR LAB: N/A

APPLICABLE FACILITIES: Orchard Park, NY

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CERTIFICATE URL:

CERTIFICATION AND COMPLIANCE NOTES: Product as described is an inherently non-emitting source of VOCs (stone, ceramic, powder-coated metals, plated or anodized metal, glass, concrete, clay brick, and unfinished or untreated solid wood) and has no binders, surface coatings, or sealants that include organic chemicals.

## 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.*

### ALUMINUM FRAMING

HPD URL: No HPD available

CONDITION WHEN RECOMMENDED OR REQUIRED AND/OR OTHER NOTES:

For assembly and mounting. Minimum 60% recycled content.

## Section 5: General Notes

The finished TerraClad® products are odorless, stable, non-flammable and are completely inert with no VOCs - hence they pose no immediate hazard to health. Health hazards are only present during situations where grinding, cutting or demolition of Terra Cotta may be taking place, and therefore airborne particulate dust is present. It should be clearly understood that during normal handling and construction operations, TerraClad® materials pose no such hazard. TerraClad® is a 100% recyclable material with multiple re-use options ranging from earth fill material to reintroduction into clay recipes.

**MANUFACTURER INFORMATION**

**MANUFACTURER:** Boston Valley Terra Cotta  
**ADDRESS:** 6860 South Abbott Rd.  
 Orchard Park NY 14127, USA  
**WEBSITE:** <https://bostonvalley.com/>

**CONTACT NAME:** Mike Andres  
**TITLE:** Safety & Sustainability  
**PHONE:** 716-649-7490 Ext.135  
**EMAIL:** [mandres@bostonvalley.com](mailto:mandres@bostonvalley.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**

<b>AQU</b> Aquatic toxicity	<b>LAN</b> Land toxicity	<b>PHY</b> Physical hazard (flammable or reactive)
<b>CAN</b> Cancer	<b>MAM</b> Mammalian/systemic/organ toxicity	<b>REP</b> Reproductive
<b>DEV</b> Developmental toxicity	<b>MUL</b> Multiple	<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>NF</b> Not found on Priority Hazard Lists	<b>UNK</b> Unknown
<b>GEN</b> Gene mutation	<b>OZO</b> Ozone depletion	
<b>GLO</b> Global warming	<b>PBT</b> Persistent, bioaccumulative, and toxic	

**GreenScreen (GS)**

<b>BM-4</b> Benchmark 4 (prefer-safer chemical)	<b>LT-1</b> List Translator 1 (Likely Benchmark-1)
<b>BM-3</b> Benchmark 3 (use but still opportunity for improvement)	<b>LT-UNK</b> 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.)
<b>BM-2</b> Benchmark 2 (use but search for safer substitutes)	
<b>BM-1</b> Benchmark 1 (avoid - chemical of high concern)	
<b>BM-U</b> Benchmark Unspecified (due to insufficient data)	
<b>LT-P1</b> List Translator Possible 1 (Possible Benchmark-1)	<b>NoGS</b> 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.*