Lightweight Block - Milton plant  
by Permacon

Health Product Declaration v2.2
created via: HPDC Online Builder

HPD UNIQUE IDENTIFIER: 22581
CLASSIFICATION: 04 22 23 Architectural Concrete Unit Masonry
PRODUCT DESCRIPTION: This HPD covers Permacon’s Lightweight Block with and without glass powder. More specifically this HPD concerns Lightweight Blocks made at Permacon’s Milton plant.

Section 1: Summary

CONTENT INVENTORY

<table>
<thead>
<tr>
<th>Inventory Reporting Format</th>
<th>Threshold Disclosed Per</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nested Materials Method</td>
<td>Material</td>
</tr>
<tr>
<td>Basic Method</td>
<td>Product</td>
</tr>
</tbody>
</table>

Threshold level
- 100 ppm
- 1,000 ppm
- Per GHS SDS
- Other

Residuals/Impurities
- Considered in 4 of 5 Materials
- 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

All substances disclosed by Name (Specific or Generic) and Identifier except SC substances identified according to SC 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.

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>SUBSTANCE</th>
<th>RESIDUAL OR IMPURITY</th>
<th>GREENSCREEN SCORE</th>
<th>HAZARD TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGGREGATES</td>
<td>BLAST FURNACE SLAG LT-UNK SC</td>
<td>LIMESTONE Not Screened</td>
<td>PORTLAND LIMESTONE CEMENT</td>
<td>PORTLAND CEMENT LT-P1</td>
</tr>
</tbody>
</table>

Number of Greenscreen BM-4/BM3 contents ...
Contents highest concern GreenScreen Benchmark or List translator Score ...
Nanomaterial ...

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.

Permacon’s products have been screened at a 1,000 ppm level so that all intentional materials and known potential residuals that could have existed in raw materials, at that level, have been disclosed. Permacon’s Lightweight Block contains special condition materials, geological materials, which have been reported accordingly.

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: CDPH Standard Method V1.2 (Section 01350/CHPS) - N/A

CONSISTENCY WITH OTHER PROGRAMS

Pre-checked for LEED v4 Material Ingredients Option 1
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)

## AGGREGATES

<table>
<thead>
<tr>
<th>%: 86.5000</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRODUCT THRESHOLD: 1000 ppm</td>
</tr>
<tr>
<td>RESIDUALS AND IMPURITIES CONSIDERED: Yes</td>
</tr>
<tr>
<td>MATERIAL TYPE: Geologically Derived Material</td>
</tr>
</tbody>
</table>

RESIDUALS AND IMPURITIES NOTES: No residuals or impurities reported by the manufacturers. Naturally occurring elements can be present in the limestone, such as Vanadium pentoxide.

OTHER MATERIAL NOTES: Aggregates are composed of lightweight aggregates (slag) and block screenings (limestone).

### BLAST FURNACE SLAG

<table>
<thead>
<tr>
<th>%: 75.0000</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZARD SCREENING METHOD: Pharos Chemical and Materials Library</td>
</tr>
<tr>
<td>HAZARD SCREENING DATE: 2020-10-19</td>
</tr>
<tr>
<td>GS: LT-UNK</td>
</tr>
<tr>
<td>RC: None</td>
</tr>
<tr>
<td>NANO: No</td>
</tr>
<tr>
<td>SUBSTANCE ROLE: Filler</td>
</tr>
</tbody>
</table>

HAZARD TYPE

None found

WARNINGS

No warnings found on HPD Priority Hazard Lists

SUBSTANCE NOTES: Lightweight aggregates

### SC:LIMESTONE

<table>
<thead>
<tr>
<th>%: 25.0000</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZARD SCREENING METHOD: Pharos Chemical and Materials Library</td>
</tr>
<tr>
<td>HAZARD SCREENING DATE: 2020-10-19</td>
</tr>
<tr>
<td>GS: Not Screened</td>
</tr>
<tr>
<td>RC: None</td>
</tr>
<tr>
<td>NANO: No</td>
</tr>
<tr>
<td>SUBSTANCE ROLE: Filler</td>
</tr>
</tbody>
</table>

HAZARD TYPE

Hazard Screening not performed

SUBSTANCE NOTES:

- Version: SCGeoMats/2019-06-20
- Origin: Canada (province of Ontario)
- Typical Composition: Primarily calcium carbonate and magnesium carbonate
- Potential presence of toxic metals: May contain traces of Vanadium pentoxide
- Presence of Radioactive Elements: No radioactive elements present.

Limestone screenings. Limestone CAS number is 1317-65-3

### PORTLAND LIMESTONE CEMENT

<table>
<thead>
<tr>
<th>%: 9.9500</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRODUCT THRESHOLD: 1000 ppm</td>
</tr>
<tr>
<td>RESIDUALS AND IMPURITIES CONSIDERED: Yes</td>
</tr>
<tr>
<td>MATERIAL TYPE: Geologically Derived Material</td>
</tr>
</tbody>
</table>

RESIDUALS AND IMPURITIES NOTES: Chromate and nickel compounds can be present in the cement at trace levels, i.e., below the declaration threshold.

OTHER MATERIAL NOTES: Limestone replaces clinker used to produce regular Portland cement.
### Portland Cement

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2020-10-19

%: 80.0000 - 90.0000  
**GS:** LT-P1  
**RC:** None  
**NANO:** No  
**SUBSTANCE ROLE:** Binder

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

**SUBSTANCE NOTES:** See Material notes

### Quartz

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2020-10-19

%: 0.1000 - 1.5000  
**GS:** LT-1  
**RC:** None  
**NANO:** No  
**SUBSTANCE ROLE:** Binder

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

**SUBSTANCE NOTES:** Crystalline silica.

### Calcium Oxide

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2020-10-19

%: 0.0000 - 2.0000  
**GS:** LT-P1  
**RC:** None  
**NANO:** No  
**SUBSTANCE ROLE:** Binder

**HAZARD TYPE** | **AGENCY AND LIST TITLES** | **WARNINGS**
--- | --- | ---
None found

**SUBSTANCE NOTES:** See Material notes

### Limestone

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2020-10-19

**SUBSTANCE NOTES:** See Material notes
### Phosphogypsum

**ID:** 13397-24-5  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2020-10-19  
**%:** 0.0000 - 6.0000  
**GS:** LT-UNK  
**RC:** None  
**NANO:** No  
**SUBSTANCE ROLE:** Processing regulator  
**HAZARD TYPE**  
None found  
**AGENCY AND LIST TITLES**  
**WARNINGS**  
No warnings found on HPD Priority Hazard Lists  
**SUBSTANCE NOTES:** See material notes.

### Glass Powder

<table>
<thead>
<tr>
<th>%</th>
<th>3.4600</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRODUCT THRESHOLD:</strong></td>
<td>1000 ppm</td>
</tr>
<tr>
<td><strong>RESIDUALS AND IMPURITIES CONSIDERED:</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>MATERIAL TYPE:</strong></td>
<td>Glass</td>
</tr>
<tr>
<td><strong>RESIDUALS AND IMPURITIES NOTES:</strong></td>
<td>No residuals reported. As this is recycled glass, ceramic particles can be present in the glass powder.</td>
</tr>
<tr>
<td><strong>OTHER MATERIAL NOTES:</strong></td>
<td>Alternate material to Slag cement.</td>
</tr>
</tbody>
</table>

### Glass / Mineral Fiber (Post-consumer Recycled)

**ID:** 65997-17-3  
**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2020-10-19  
**%:** 100.0000  
**GS:** LT-UNK  
**RC:** PostC  
**NANO:** No  
**SUBSTANCE ROLE:** Filler  
**HAZARD TYPE**  
None found  
**AGENCY AND LIST TITLES**  
**WARNINGS**  
No warnings found on HPD Priority Hazard Lists  
**SUBSTANCE NOTES:** This substance is made from recycled glass transformed into powder.

### Slag Cement

<table>
<thead>
<tr>
<th>%</th>
<th>3.4600</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRODUCT THRESHOLD:</strong></td>
<td>1000 ppm</td>
</tr>
<tr>
<td><strong>RESIDUALS AND IMPURITIES CONSIDERED:</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>MATERIAL TYPE:</strong></td>
<td>Geologically Derived Material</td>
</tr>
<tr>
<td><strong>RESIDUALS AND IMPURITIES NOTES:</strong></td>
<td>Manufacturer’s statement: Granulated blast-furnace slag is a co-product of the steel industry produced by adding a limestone flux to the ore to remove non-ferrous contaminants. As such, it may contain small quantities of hazardous heavy metals, including trace amounts of chromium, usually in solution in the glass. The ground granulated blast-furnace slag is a vitreous material containing silica, alumina, magnesia and calcium oxides. It also contains a small quantity of iron, sodium, titanium and manganese oxides. The oxides do not actually occur in free form but as complexed silica-based glasses.</td>
</tr>
<tr>
<td><strong>OTHER MATERIAL NOTES:</strong></td>
<td>Ground granulated blast-furnace slag cement.</td>
</tr>
</tbody>
</table>
## BLAST FURNACE SLAG

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2020-10-19  
**%:** 95.0000 - 100.0000  
**GS:** LT-UNK  
**RC:** PreC  
**NANO:** No  
**SUBSTANCE ROLE:** Filler

### HAZARD TYPE

<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>None found</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** See material notes.

## QUARTZ

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library  
**HAZARD SCREENING DATE:** 2020-10-19  
**%:** Impurity/Residual  
**GS:** LT-1  
**RC:** None  
**NANO:** No  
**SUBSTANCE ROLE:** Impurity/Residual

### HAZARD TYPE

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

**SUBSTANCE NOTES:** Crystalline silica comes from unreacted molten slag.

## ADMIXTURE

**%:** 0.0400

**PRODUCT THRESHOLD:** 1000 ppm  
**RESIDUALS AND IMPURITIES CONSIDERED:** No  
**MATERIAL TYPE:** Polymeric Material

**RESIDUALS AND IMPURITIES NOTES:** Composition, residuals and impurities are below the declaration threshold.

**OTHER MATERIAL NOTES:** The admixture is a mixture of the substances listed below with additional nonhazardous ingredients. Since the admixture is present in the final product below the declaration threshold, the information listed on the safety data sheet is sufficient to meet the HPD Open Standard requirements.
<table>
<thead>
<tr>
<th>HAZARD TYPE</th>
<th>AGENCY AND LIST TITLES</th>
<th>WARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENDOCRINE</td>
<td>OSPAR - Priority PBTs &amp; EDs &amp; equivalent concern</td>
<td>Endocrine Disruptor - Chemical for Priority Action</td>
</tr>
<tr>
<td>REstricted List</td>
<td>US EPA - PPT Chemical Action Plans</td>
<td>EPA Chemical of Concern - Action Plan Published</td>
</tr>
<tr>
<td>ENDOCRINE</td>
<td>ChemSec - SIN List</td>
<td>Endocrine Disruption</td>
</tr>
<tr>
<td>Reproductive</td>
<td>US EPA - PPT Chemical Action Plans</td>
<td>Reproductive effects</td>
</tr>
<tr>
<td>Chron Aquatic</td>
<td>US EPA - PPT Chemical Action Plans</td>
<td>Highly toxic to aquatic organisms</td>
</tr>
<tr>
<td>Developmental</td>
<td>US EPA - PPT Chemical Action Plans</td>
<td>Developmental Effects</td>
</tr>
<tr>
<td>Endocrine</td>
<td>EU - SVHC Authorisation List</td>
<td>Equivalent Concern - Candidate List</td>
</tr>
</tbody>
</table>

**SUBSTANCE NOTES:** Hazardous ingredient disclosed in the admixture SDS
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.

<table>
<thead>
<tr>
<th>VOC EMISSIONS</th>
<th>CDPH Standard Method V1.2 (Section 01350/CHPS) - N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>CERTIFYING PARTY:</td>
<td>Self-declared</td>
</tr>
<tr>
<td>APPLICABLE FACILITIES:</td>
<td>All facilities.</td>
</tr>
<tr>
<td>CERTIFICATE URL:</td>
<td></td>
</tr>
<tr>
<td>ISSUE DATE:</td>
<td>2020-09-18</td>
</tr>
<tr>
<td>EXPIRY DATE:</td>
<td></td>
</tr>
<tr>
<td>CERTIFIER OR LAB:</td>
<td>n/a</td>
</tr>
<tr>
<td>CERTIFICATION AND COMPLIANCE NOTES:</td>
<td>Concrete is an inherently non-emitting source.</td>
</tr>
</tbody>
</table>

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
MANUFACTURER INFORMATION

MANUFACTURER: Permacon  
ADDRESS: 8375 5th Side Road  
Milton ON L9T 2X7, Canada  
WEBSITE: www.permacon.ca

CONTACT NAME: Customer Service  
TITLE: -  
PHONE: 905-875-4215  
EMAIL: customerservicegta@permacon.ca

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  
PHY Physical hazard (flammable or reactive)  
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.