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

Boulevard Pavers - Saint-Eustache plant
by Permacon

HPD UNIQUE IDENTIFIER: 22583
CLASSIFICATION: 03 45 00 Precast Architectural Concrete
PRODUCT DESCRIPTION: This HPD covers Permacon's Boulevard Pavers with and without glass powder made at Permacon's Saint-Eustache plant. More specifically this HPD concerns Boulevard Pavers in the following colors: cinder grey, charcoal, light charcoal, salmon, brown, red, beige grey, beige, beige shefford, black, light grey, grey and cambien brown. It also includes the entire range of sizes available for this product.

Section 1: Summary

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 in 3 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.

MATERIAL | SUBSTANCE | RESIDUAL OR IMPURITY
GREENSCREEN SCORE | HAZARD TYPE
SC:GEOMAT:AGGREGATES | SC:SILICA | Not Screened
SC:LIMESTONE | Not Screened
SC:GRANITE GNEISS | Not Screened
SC:ALUMINUM TAILINGS | Not Screened
PORTLAND CEMENT | PORTLAND CEMENT LT-P | END | CAN CALCIUM OXIDE LT-P | QUARTZ LT-1 | CAN PHOSPHOGYPSUM LT-UNK | GLASS POWDER | GLASS / MINERAL FIBER (POST-CONSUMER RECYCLED) LT-UNK | ADMIXTURES [ TRIETHOXYOCTYLSILANE LT-UNK | ACETIC ACID, GLACIAL BM-2 | RES | SKI ALKENES, C14-16 ALPHA-, SULFONATED, SODIUM SALTS LT-UNK | POTASSIUM HYDROXIDE LT-P | SKI ETHANOL BM-2 | CAN | PHY | END | REP | DEV | COLOR PIGMENTS [ IRON OXIDE BM-1 | CAN FERRIC OXIDE BM-1 | CAN FERRIC OXIDE, YELLOW LT-UNK ]

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.

Boulevard pavers come in different sizes and colors that may affect their composition as described in this HPD. HPD has been built as a Material Content Inventory Display. 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 Boulevard Pavers 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
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Yes</strong></td>
<td><strong>VERIFIER:</strong></td>
</tr>
<tr>
<td><strong>No</strong></td>
<td><strong>VERIFICATION #:</strong></td>
</tr>
<tr>
<td></td>
<td><strong>PUBLISHED DATE:</strong> 2020-10-19</td>
</tr>
<tr>
<td></td>
<td><strong>EXPIRY DATE:</strong> 2023-10-19</td>
</tr>
</tbody>
</table>

**Boulevard Pavers - Saint-Eustache plant**
hpdrepository.hpd-collaborative.org

HPD v2.2 created via HPDC Builder Page 2 of 10
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)

**SC:GEOMAT:AGGREGATES**  
%: 78.6000 - 82.0000

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

RESIDUALS AND IMPURITIES NOTES: No residuals or impurities reported by the manufacturers; however, naturally occurring elements can be present and are listed.

OTHER MATERIAL NOTES: SpecialConditionApplied:GeologicalMaterial --- Aggregates consist of multiple crushed stones and sand. Range in composition comes from the variation among product dimensions and various combination of aggregate materials from different quarries to produce the different colors of Boulevard Pavers.

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

%: 18.0000 - 100.0000  
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: Canada (Province of Quebec)  
Typical Composition: Natural silica sand or gravel  
Potential presence of toxic metals: None.  
Presence of Radioactive Elements: None

May contain Iron oxide (1309-37-1), aluminium oxide (1344-28-1), titanium dioxide (13463-67-7), and calcium oxide (1305-78-8).

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

%: 0.0000 - 40.0000  
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: Canada (Province of Quebec and Ontario)  
Typical Composition: Limestone (90-100%) and silica (0-1.5%)  
Potential presence of toxic metals: None.  
Presence of Radioactive Elements: None known.

Limestone CAS number is 1317-65-3 and Silica CAS number is 14808-60-7. The limestone may contain siliconium aluminium, iron or potassium.
**SC: GRANITE GNEISS**

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

| %: 0.0000 - 30.0000 | GS: Not Screened | RC: None | NANO: No | SUBSTANCE ROLE: Filler |

**SUBSTANCE NOTES:**
Version: SCGeoMats/2019-06-20  
Origin: Canada (Province of Quebec)  
Typical Composition: n/a  
Potential presence of toxic metals: None known.  
Presence of Radioactive Elements: None known.

See material notes.

**SC: ALUMINUM TAILINGS**

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

| %: 0.0000 - 81.6000 | GS: Not Screened | RC: None | NANO: No | SUBSTANCE ROLE: Filler |

**SUBSTANCE NOTES:**
Version: SCGeoMats/2019-06-20  
Origin: Canada (Province of Quebec)  
Typical Composition: Albite (0-45%); Anorthite (0-45%); Illeminte (0-8%); Hematite (0-2%); Magnesium aluminate (0-2%)  
Potential presence of toxic metals: None known.  
Presence of Radioactive Elements: None known.  

This sand comes from tailings from the aluminium industry. The CAS number for Albite, Anorthite, Ilmenite, Hematite and Magnesium alumina are 12244-10-9, 130254-1, 98072-94-7, 76774-74-8 and 12068-51-8, respectively.

**PORTLAND CEMENT**

| %: 15.9000 - 20.0000 |

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

**RESIDUALS AND IMPURITIES NOTES:** No residuals or impurities present above the declaration threshold. Manufacturer's statement: Cement has a variable composition depending upon the cementitious products produced in the cement kiln. Small amounts of naturally occurring, but potentially harmful, chemical compounds might be detected during chemical analysis. These trace compounds might include free crystalline silica, potassium and sodium compounds; heavy metals including cadmium, chromium, nickel and lead; and organic compounds. Other trace constituents may include calcium oxide (also known as free lime or quick lime).

**OTHER MATERIAL NOTES:** Range in composition comes from the variation among product colors and dimensions.

**PORTLAND CEMENT**

| %: 90.0000 - 100.0000 | GS: LT-P1 | RC: None | NANO: No | SUBSTANCE ROLE: Binder |

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

<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

| ID: 1305-78-8 |

<table>
<thead>
<tr>
<th>HAZARD SCREENING METHOD: Pharos Chemical and Materials Library</th>
<th>HAZARD SCREENING DATE: 2020-10-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>%: 0.3000 - 1.0000</td>
<td>GS: LT-P1</td>
</tr>
</tbody>
</table>

### Quartz

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

**SUBSTANCE NOTES:** Crystalline Silica

| ID: 14808-60-7 |

<table>
<thead>
<tr>
<th>HAZARD SCREENING METHOD: Pharos Chemical and Materials Library</th>
<th>HAZARD SCREENING DATE: 2020-10-19</th>
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</thead>
<tbody>
<tr>
<td>%: 0.0000 - 1.5000</td>
<td>GS: LT-1</td>
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</table>

### Phosphogypsum

<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:** Crystalline Silica

| ID: 13397-24-5 |

<table>
<thead>
<tr>
<th>HAZARD SCREENING METHOD: Pharos Chemical and Materials Library</th>
<th>HAZARD SCREENING DATE: 2020-10-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>%: 0.0000 - 5.0000</td>
<td>GS: LT-UNK</td>
</tr>
</tbody>
</table>
## Glass Powder

### Substance Notes:
See material notes.

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

**ID:** 65997-17-3

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library

**HAZARD SCREENING DATE:** 2020-10-19

<table>
<thead>
<tr>
<th>%</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>SUBSTANCE ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>100.0000</td>
<td>LT-UNK</td>
<td>PostC</td>
<td>No</td>
<td>Filler</td>
</tr>
</tbody>
</table>

**HAZARD TYPE**

None found

**WARNINGS**

No warnings found on HPD Priority Hazard Lists

**SUBSTANCE NOTES:** This substance is made from recycled glass transformed into powder.

## Admixtures

### Composition

**%:** 0.0800 - 0.0900

**PRODUCT THRESHOLD:** 1000 ppm

**RESIDUALS AND IMPURITIES CONSIDERED:** No

**MATERIAL TYPE:** Polymeric Material

**RESIDUALS AND IMPURITIES NOTES:** No residuals or impurities present above the declaration threshold.

**OTHER MATERIAL NOTES:** Four different kinds of admixtures are used. Since the admixtures are present in the final product below the declaration threshold, the information based on the safety data sheet is sufficient to meet the HPD Open Standard requirements. One of the four admixtures is not disclosed since the product does not contain any components classified as hazardous under the referenced regulation. Range in composition comes from the variation among product colors and dimensions.

## Triethoxyoctylsilane

### Substance Notes:
See material notes.

### Acetic Acid, Glacial

**ID:** 64-19-7

**HAZARD SCREENING METHOD:** Pharos Chemical and Materials Library

**HAZARD SCREENING DATE:** 2020-10-19

<table>
<thead>
<tr>
<th>%</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>SUBSTANCE ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2500 - 1.2500</td>
<td>BM-2</td>
<td>None</td>
<td>No</td>
<td>Water resistance</td>
</tr>
</tbody>
</table>

**HAZARD TYPE**

None found

**WARNINGS**

No warnings found on HPD Priority Hazard Lists

**SUBSTANCE NOTES:** See material notes.
## ALKENES, C14-16 ALPHA-, SULFONATED, SODIUM SALTS

**ID:** 68439-57-6

<table>
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<tr>
<th>HAZARD SCREENING METHOD</th>
<th>Pharos Chemical and Materials Library</th>
<th>HAZARD SCREENING DATE</th>
<th>2020-10-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>%: 0.1250 - 0.3750</td>
<td>GS: LT-UNK</td>
<td>RC: None</td>
<td>NANO: No</td>
</tr>
<tr>
<td>SUBSTANCE ROLE:</td>
<td>Surfactant</td>
<td></td>
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</tr>
</tbody>
</table>

None found

No warnings found on HPD Priority Hazard Lists

**SUBSTANCE NOTES:** See material notes.

## POTASSIUM HYDROXIDE

**ID:** 1310-58-3

<table>
<thead>
<tr>
<th>HAZARD SCREENING METHOD</th>
<th>Pharos Chemical and Materials Library</th>
<th>HAZARD SCREENING DATE</th>
<th>2020-10-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>%: 0.1250 - 0.3750</td>
<td>GS: LT-P1</td>
<td>RC: None</td>
<td>NANO: No</td>
</tr>
<tr>
<td>SUBSTANCE ROLE:</td>
<td>Surfactant</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SKIN IRRITATION**

| EU - GHS (H-Statements) | H314 - Causes severe skin burns and eye damage |

**SUBSTANCE NOTES:** See material notes.

## ETHANOL

**ID:** 64-17-5

<table>
<thead>
<tr>
<th>HAZARD SCREENING METHOD</th>
<th>Pharos Chemical and Materials Library</th>
<th>HAZARD SCREENING DATE</th>
<th>2020-10-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>%: 0.0250 - 0.2500</td>
<td>GS: BM-2</td>
<td>RC: None</td>
<td>NANO: No</td>
</tr>
<tr>
<td>SUBSTANCE ROLE:</td>
<td>Surfactant</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CANCER**

| IARC                    | Group 1 - Agent is Carcinogenic to humans |

**CANCER**

| CA EPA - Prop 65        | Carcinogen - specific to chemical form or exposure route |

**PHYSICAL HAZARD (REACTIVE)**

| EU - GHS (H-Statements) | H225 - Highly flammable liquid and vapour |

**ENDOCRINE**

| TEDX - Potential Endocrine Disruptors | Potential Endocrine Disruptor |

**CANCER**

| MAK                    | Carcinogen Group 5 - Genotoxic carcinogen with very slight risk under MAK/BAT levels |

**CANCER**

| GHS - Japan            | Carcinogenicity - Category 1A [H350] |

**REPRODUCTIVE**

| GHS - Japan            | Toxic to reproduction - Category 1A [H360] |

**DEVELOPMENTAL**

| CA EPA - Prop 65       | Developmental - specific to chemical form or exposure route |
COLOR PIGMENTS

PRODUCT THRESHOLD: 1000 ppm
RESIDUALS AND IMPURITIES CONSIDERED: No
MATERIAL TYPE: Geologically Derived Material

RESIDUALS AND IMPURITIES NOTES: No color pigment is present in more than 0.74% in the product, the information based on the safety data sheet is sufficient to meet the HPD Open Standard requirements.

OTHER MATERIAL NOTES: A weight percentage is used to cover multiples variations of the same product.

IRON OXIDE

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

SUBSTANCE NOTES: C.I. Pigment Black 11
A weight percentage is used to cover multiple coloration of the products; hence, different combination of coloring substances.

FERRIC OXIDE

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

SUBSTANCE NOTES: A weight percentage is used to cover multiple coloration of the products; hence, different combination of coloring substances.

FERRIC OXIDE, YELLOW

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

SUBSTANCE NOTES: C.I. Pigment Yellow.
A weight percentage is used to cover multiple coloration of the products; hence, different combination of coloring substances.
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>
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<tr>
<td>APPLICABLE FACILITIES:</td>
<td>All facilities.</td>
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<tr>
<td>CERTIFICATE URL:</td>
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<tr>
<td>ISSUE DATE:</td>
<td>2020-09-24</td>
</tr>
<tr>
<td>EXPIRY DATE:</td>
<td></td>
</tr>
<tr>
<td>CERTIFIER OR LAB:</td>
<td>n/a</td>
</tr>
</tbody>
</table>

CERTIFICATION AND COMPLIANCE NOTES: Concrete is a inherently non emitting source.

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
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.