



Like our products, we're built to last.
Atlas Block: 60 years & counting.

MATERIAL SAFETY DATA SHEET

PCR Block™ Lightweight Glass Series

1. Product and Company Identification

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PRODUCT NAME: PCR Block™

CHEMICAL NAME: n.a.

COMMON NAMES/SYNONYMS: CONCRETE BLOCK with Expanded Glass Granules

TDG (Canada) CLASSIFICATION: not regulated by TDG (Canada)

WHMIS CLASSIFICATION: n.a.

PREPARED BY: Research & Development

PREPARATION DATE: October 8, 2009



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2. Composition, Information on Ingredients

The material information listed below are the ingredients for colored concrete block.

Material Name: Natural sand and gravel
Chemical Family: N/A
Trade Name: Aggregate, sand, crushed gravel

Material Name: Portland cement
Chemical Family: Calcium salts, calcium silicate salts, other calcium salts containing iron and aluminum

Material Name: Limestone
Chemical Family: Carbonate rock

Material Name: Solar Concrete Plasticizer "W"
Chemical Name: Calcium Stearate

Material Name: Poraver® (all grain sizes)
Trade name: Expanded Glass Granules

Sand and gravel may contain varying concentrations of:
Quartz (Crystalline Silica) C.A.S.,N.A. or U.N. # 14808-60-7
Mica C.A.S., N.A. or U.N. # 12001-26-2

This MSDS is applicable to sand and gravel only when the concentration of Quartz or Mica is greater than 0.1%.

Portland Cement

Name	CAS #	%
Calcium Carbonate	1317-65-3	1-5
Tricalcium Silicate	12168-85-3	40-70
Dicalcium Silicate	10034-77-2	10-30
Tertracalcium-Alumino-Ferrite	12068-35-8	5-10
Tricalcium aluminate	12042-78-3	7-13
Crystalline Silica	14808-60-7	0.1-0.2
Calcium Sulfate	7778-18-9	3-7
Magnesium Oxide	1309-48-4	1-5
Calcium Oxide	1305-78-8	0.5-1.5
Hexavalent Chromium		<0.1

Hazardous Ingredient: **Limestone** (Primarily Calcium and Magnesium Carbonates)
Approximate Concentration Percentage: 100
C.A.S., N.A. or U.N.# 1317-65-3
Hazardous Ingredient: **Quartz** (Crystalline Silica)
Approximate Concentration Percentage: 10-30%
C.A.S., N.A. or U.N.# 14808-60-7

Poraver®

<u>Ingredient</u>	<u>Chemical Formula</u>	<u>Typical % By Weight</u>	<u>CAS #</u>
Silicon Dioxide	SiO ₂	70 %	60676-86-0
Sodium Oxide	Na ₂ O	15 %	1313-59-3
Calcium Oxide	CaO	11 %	1305-78-8
Magnesium Oxide	MgO	2 %	1309-48-4

Solar Concrete Plasticizer "W": not WHMIS controlled

3. Hazards Identification

- Flammability of all ingredients in PCR Blocks: not combustible / not flammable.
- Fire Fighting Instructions: This product is not a fire hazard. Treat adjacent material using extinguisher to the primary cause of the fire.
- Fire Fighting Equipment: Self contained breathing apparatus is recommended to limit exposure to smoke from any combustion sources.
- General Hazards: Avoid breathing dust.
- Hazardous Combustion Products: None.

4. First Aid Measures

- Dust in Eyes: Flush out eyes with running water for 15 minutes. Contact a physician if irritation persists.
- Dust on Skin: Wash with soap and water. Contact a physician if irritation is aggravated.
- Dust Inhalation: Remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists.
- Ingestion: Consult a physician.
- **NOTES TO PHYSICIANS OR FIRST AID PROVIDER:** Glass particles present in this product can cause internal injury to the trachea, stomach and intestines.

5. Fire Fighting Measures

Not applicable.

6. Accidental Release Measures

Shovel up or vacuum up material and dispose of waste in accordance with local, state / provincial and federal regulation.

7. Handling and Storage

- Respirable dust may be generated during processing, handling and storage.
- Stored in a cool, dry, ventilated area.
- Protect against physical damage.
- Use adequate ventilation and dust collection.
- Practice good housekeeping.
- Do not allow dust to collect on walls, floors, sills, ledges, machinery, or equipment.
- Where possible dampen materials before re-working.
- If dust generation is unavoidable, local exhaust ventilation or good natural ventilation should be employed.
- It is recommended that this product is wet sawn and drilled.

8. Exposure Controls/Personal Protection

Generating dusts from this product should be avoided.

- **VENTILATION:** Provide local and/or general exhaust to control dust generation below exposure limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
- **RESPIRATORY PROTECTION:** Wear a NIOSH approved mask for control of nuisance dust. Respirable dust levels should be monitored regularly.
- **EYE PROTECTION:** Wear safety glasses with side shields to protect against eye contact.
- **SKIN PROTECTION:** Wear general purpose work gloves to protect skin from irritation. Wash periodically exposed skin with soap and water. Rinse wet kiln dust mixtures from clothing to prevent skin contact.

9. Physical and Chemical Properties

Sand and gravel physical state: Solid

Odor and appearance: No Odor

Specific Gravity: 2.5-2.8

Portland cement physical state: fine grey powder (solid and odorless)

PH (in water): 12-13

Specific Gravity: (H₂O=1) 2.6-2.8

Solubility in Water: 1-15%

Limestone physical state: Solid

Odor and appearance: No Odor

Poraver®

Physical State: Solid

Appearance: White beads

Odor: None

Odor Threshold: None

pH As Supplied: Not Applicable

pH (Other): 10.7 (100 g in 1 l of water)

Coefficient Of Water/Oil Distribution: Not Available

Boiling Point: Not available

Melting Point: approximately 750 ° C

Vapor Pressure (mmHg): Not applicable

Vapor Density (AIR = 1): Not applicable

Specific Gravity (H₂O = 1) @ 25 ° C: 0.27 – 0.9

Evaporation Rate... Basis (=1): Not applicable

Solubility In Water: Insoluble

Percent Solids By Weight: 100

Percent Volatile By Wt: 0

Solar Plasticizer "W" physical state: liquid

Odor and appearance: white, mild

Solubility in water: completely

Specific gravity: 1.0

10. Stability and Reactivity

Chemical Stability: All ingredients are stable.

Incompatibility to Other Substances for sand and gravel, limestone: None

Incompatibility to Other Substances for Portland Cement: Dissolves in hydrofluoric acid producing corrosive silicon tetrafluoride gas. Silicates react with powerful oxidizers such as fluorine, chlorine trifluoride and oxygen difluoride.

Incompatibility to Other Substances for Poraver®: None

Incompatibility to Other Substances for Solar concrete plasticizer "W": acids

Hazardous Decomposition Products of all ingredients: Not spontaneous

Reactivity of sand and gravel, Portland cement: N/A

Reactivity of Limestone: Neutralizing agent for strong acids

Reactivity of Poraver®: None known

Reactivity of Solar concrete plasticizer "W": Acids

11. Toxicological Information

Route of Entry: Skin Contact, Eye contact

Effects of Acute Exposure:

Skin: drying, irritation, cracking

Eyes: Exposure to dust may irritate eyes

Respiratory : Exposure to dust may aggravate respiratory system.

This product contains trace amounts of heavy metals in the Poraver® content such as lead, chromium and antimony. Users need to be aware of their presence even though they are lower than any required reporting limit.

12. Ecological Information

Not applicable.

13. Disposal Considerations

Dispose of waste in accordance with local, state / provincial and federal regulation.

14. Transport Information

Not regulated.

15. Regulatory Information

CANADIAN WHMIS CLASSIFICATION: Not Controlled / Not Regulated.

16. Other Information

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. Atlas Block Co. Limited and Poraver North America Ltd. make no warranties, expressed or implied, statutory or otherwise, including, but not limited to, any implied warranty or condition of merchantability or fitness for a particular purpose or course of performance or usage of trade. The user is responsible for determining whether PCR Block™ product is fit for a particular purpose and suitable for the user's method of use or application. Given the variety of factors that can affect the use and application of the PCR Block™, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the PCR Block™ to determine whether it is fit for a particular purpose and suitable for the user's method of use or application.