

SAFETY DATA SHEET

Date Revised: 8/28/2013

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Names: Paver Lock

Manufacturer Name and Address:

BASALITE CONCRETE PRODUCTS, VANCOUVER, ULC
8650 130th Street
Surrey, British Columbia, V3W-1G1





















Emergency Contact:


Jason Barbosa – Quality Assurance
Technician - Surrey Facility
(604) 596 -3844

For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC day or night within USA and Canada: 1-800-424-9300 CCN694598

Recommended Use of the Product: Refer to [Technical Data Sheets](#) available at www.basalite.com

SECTION 2 - HEALTH HAZARD IDENTIFICATION

<p>Emergency Overview:</p> <p>1. TOXIC – Contains quartz, crystalline silica.</p> <p>GHS  WHMIS </p> <p>2. CORROSIVE MATERIAL Caustic</p> <p> </p> <p>3. IRRITANT Caustic</p> <p></p> <hr/> <p>Environmental Hazard: GHS</p>	<p>Primary Route of Exposure:</p> <p>Inhalation: Normal use of this product mix for construction purposes is not believed to cause additional acute toxic effects. However, repeated overexposure to very high levels of respirable crystalline silica (quartz, cristobalite, tridymite) for periods as short as six months have caused acute silicosis. Acute silicosis is a rapidly progressive, incurable lung disease that is typically fatal. Symptoms include (but are not limited to); shortness of breath, cough, fever, weight loss, and chest pain.</p> <p>Eye and Skin Contact: Eye contact with the wet product mix may cause irritation or burns; skin contact may cause irritation. Long term skin or eye contact with wet Cement Aggregate mix may result in chemical burns, dermatitis, skin blisters or corneal damage.</p> <p>Inhalation and, Eye and Skin Contact Contact with dust from dry mix may cause skin, eye and respiratory irritation.</p> <hr/> <p>Uncured cementitious materials or finely divided (crushed) concrete material is an environmental hazard, which may adversely affect fish and other aquatic habitat. Do not use crushed concrete as fill</p>	<table border="0"> <thead> <tr> <th style="text-align: center;">Personal Equipment</th> <th style="text-align: center;">Protective</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"></td> <td></td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;"></td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;"></td> </tr> </tbody> </table>	Personal Equipment	Protective						
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	near any aquatic habitat.	
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A. CHRONIC HAZARDS:

1. <u>Crystalline Silica:</u>	ACGIH and OSHA have determined that adverse effects are not likely to occur in the workplace provided exposure levels do not exceed the appropriate TLVs/PELs. However, because of the wide variation in individual susceptibility, lower exposure limits may be appropriate for some individuals, including persons with pre-existing medical conditions such as those described under Sub-chronic and Chronic Effects.
2. <u>Cement and Aggregates</u>	<p>A wet product mix exhibits caustic, abrasive and dehydrating properties that will cause irritation or burns to skin and eyes.</p> <p>Contact from dust resulting from handling and mixing dry concrete products, breaking or crushing of hardened products may cause eyes and skin irritation. It will also cause upper respiratory tract irritation.</p>

B. SUBCHRONIC AND CHRONIC HEALTH EFFECTS:

<u>Pulmonary Diseases:</u>	Excessive exposure to particulates (dust containing crystalline silica) over an extended period of time may result in the development of silicosis and other pulmonary diseases.
<u>Carcinogenicity:</u>	<p>The classifications below are based on experimental studies with animals and epidemiologic studies of workers exposed to respirable crystalline silica.</p> <p>IARC: classified respirable crystalline silica (quartz) as Group 1, a known carcinogen in humans. NTP: classifies as (1) human carcinogen ACGIH: classified as (A2) suspect human carcinogen NIOSH: classified as a potential occupational carcinogen</p>

California Proposition 65 Warning: This product will expose you to respirable crystalline silica which is “known in the State of California to cause cancer and to other substances which are known to the State of California to cause cancer, birth defects and other reproductive harm.”

Canada WHMIS Classification:

1. Products containing quartz (crystalline Silica) are typically classified as Division 2 A (very toxic) if the chemical has been shown to be carcinogenic, mutagenic (to reproductive cells), reproductive toxic, sensitizer (to respiratory tract or chronic (long-term) toxicity (at low doses).
2. Portland cement is a nuisance dust.

C. ACUTE HAZARDS:

Eye Contact	Direct contact with dust may cause irritation by mechanical abrasion.
Skin Contact	Direct contact may cause irritation by mechanical abrasion. If burning, itching, redness and pain or other symptoms persist, consult a physician. Long term skin contact with the wet product mix may result in chemical burns or dermatitis.
Skin Absorption	Not expected to be a significant exposure route.
Ingestion	Expected to be practically non-toxic. Ingestion of large amounts may cause

Practice good housekeeping. Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Maintain, clean, and fit test respirators in accordance with OSHA regulations. Maintain and test ventilation and dust collection equipment. Wash or vacuum clothing which has become dusty.

LOCAL EXHAUST: When using this product, use sufficient local exhaust to reduce the level of respirable dust to the applicable standards set forth in Section III. See ACGIH "Industrial Ventilation, A Manual of Recommended Practice," latest edition.

SECTION 7 – HANDLING AND STORAGE INFORMATION

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: None for normal handling and storage of intact bags. Store this product in dry place until used. This product is not intended or designed for use as an abrasive blasting medium or for foundry applications and should not be used for those purposes. Do not store near food and beverages or smoking materials.

SAFETY MEASURES: Wear hard hats and/or steel-toed safety shoes if bags may fall from an elevation or be dropped during handling.

WORK/HYGIENIC PRACTICES: Avoid creating and breathing dust.

SECTION 8 - PERSONAL PROTECTION, SAFETY AND EXPOSURE CONTROL MEASURES

EXPOSURE LIMITS:

COMPONENTS	CAS #	% By Weight	
Cement ⁽¹⁾	65997-15-1	0 – 5%	Refer below
Aggregate (Quartz) ⁽²⁾	14808-60-7	80 – 100 %	
Polyvinyl Acetate copolymer ⁽³⁾	24937-78-8	1 – 5 %	

Chemical Composition

(1). Cement

COMPONENT	PERCENT (By Weight)	CAS NUMBER	OSHA PEL-TWA (mg/m ³)	ACGIH TLV-TWA (mg/mg ³)
Portland Cement ^(a)	100	65997-15-1	5 (Resp.); 15 (Tot)	10 (Tot)
Calcium Sulfate	0 -10	13397-24-5	5 (Resp.); 15 (Tot)	10 (Tot)
Calcium Carbonate	0 -10	1317-65-3	5 (Resp.); 15 (Tot)	3(Resp.); 10(Tot)
Magnesium Oxide	0 - 5	1309-48-4	15 (Tot)	10 (Tot)
Calcium Oxide	0 -5	1305-78-8	5 (Tot)	2 (Tot)
Crystalline Silica	0 - 5	14808-60-7	See Below	

(a)Portland cement is manufactured from raw material mined from the earth (limestone, marl, sand, shale, clay, etc.) and process heat is provided by burning fossil fuels, trace, but detectable, amounts of naturally occurring, and possible harmful, elements may be found during chemical analysis. Under ASTM standards, Portland cement may contain 0.75 percent insoluble residue. It may also contain trace amount (<0.05%) of chromium salts or other metals. A fraction of these residues may be free crystalline silica.

(2) Crystalline Silica from Aggregates

COMPONENT	PERCENT (By Weight)	CAS NUMBER	OSHA PEL-TWA (mg/m ³)	ACGIH TLV-TWA (mg/mg ³)	NIOSH REL (8– HR TWA)
Quartz ^(b)		14808-60-7	*See Below	0.05 mg/m ³ (Resp.)	0.05 mg/m ³ (Resp)

(b) OSHA PEL for crystalline silica in the form of quartz is = 10 mg/m³ ÷ (% SiO₂+2), and 50% of this value for crystobalite and tridymite.

Exposure Limits: (Acceptable exposure levels for this product must be defined in the workplace due to the combination of silica and other constituents and condition of use.) Unless specified otherwise, limits are

expressed as eight-hour Time-weighted averages (TWA). Limits for cristobalite and tridymite (other forms of crystalline silica) are equal to one-half of the limits for quartz.

Particulates or Dust: TLV – 10 mg/m³ (total particulate) or 3 mg/m³ (respirable particulate), not otherwise classified; OSHA PEL = 15 mg/m³ (total particulate, not otherwise regulated). OSHA PEL = 5 mg/m³ (respirable particulate, not otherwise regulated).

Respirable Dust containing silica: OSHA PEL = 10 mg/m³ ÷ (%SiO₂ + 2)

Total Dust containing silica: OSHA PEL = 30 mg/m³ ÷ (%SiO₂ + 2)

(3) Polyvinyl Acetate copolymer Exposure Guidelines:

COMPONENT	OSHA PEL - TWA (mg/m ³)	ACGIH TLV-TWA (mg/m ³)
Particulate Insoluble or poorly soluble, Not otherwise specified	15 (8-hr day total dust) 5 (8-hr day, respirable fraction)	10 (8-hr day total dust)
Other Exposure Limits for Potential Decomposition Products		
Vinyl Acetate	10 ppm, 30 mg/m ³ (8-hr day) STEL = 20 ppm, 60 mg/m ³	10 ppm (8-r day), STEL = 15 ppm, 60 mg/mg ³ (15-min exposure)

For Abbreviations: Refer to Section 16.

Personal Protective Equipment:

RESPIRATORY PROTECTION: To minimize exposure to dust and/or crystalline silica, NIOSH/MSHA approved respirators must be worn in accordance with a respiratory protection program which meets OSHA requirements as set forth at 29 CFR 1910.134 and ANSI Z88.2-1080 "Practices for Respiratory Protection."

SKIN PROTECTION: Use gloves, boots and protective clothing, if abrasion or allergic reactions are experienced.

EYE PROTECTION: Use safety glasses with side shields. Dust goggles should be worn when excessively (visible) dusty conditions are present or are anticipated.

OTHER CONTROL MEASURES: Respirable dust and quartz levels should be monitored regularly. Dust and quartz levels in excess of appropriate exposure limits should be reduced by feasible engineering controls, including (but not limited to) wet sanding, wet suppression, ventilation, and process enclosures. Respirators must be worn when such controls are not feasible or do not completely control dust generation.

SECTION 9 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point:	NA	Specific Gravity (H ₂ O = 1):	2.7
Vapor Pressure (mm Hg):	NA	Melting Point:	NA
Vapor Density (Air = 1):	NA	Evaporation Rate:	
Solubility in Water:	0	(Butyl Acetate = 1)	NA
pH:	7 – 9		

Appearance and Odor: Vitrified solid, essentially odorless, wide range of colors

SECTION 10 – REACTIVITY AND STABILITY DATA

Stability: Unstable: Stable: [X] Conditions to Avoid: None
 Incompatibility (Materials to Avoid): None known
 Hazardous Decomposition or Byproducts: None known
 Hazardous Polymerization: May Occur: Will Not Occur: [X] Conditions to Avoid: None

SECTION 11 – TOXICOLOGICAL INFORMATION

Standard animal toxicity data like LD50, LC50 are not available. Animal tests and epidemiologic studies of workers indicate an increased risk of lung cancer from exposure to respirable crystalline silica. The effect was more pronounced in those with silicosis.

SECTION 12 – ECOLOGICAL INFORMATION

This product is generally considered chemically inert in the environment.

ENVIRONMENTAL EFFECT ON AQUATIC HABITAT:

Uncured or finely divided (crushed) concrete material is an environmental hazard, which may adversely affect fish and other wildlife. Do not use crushed concrete as fill near any aquatic habitat. Discharge of large quantities to any waterways would be expected to cause significant consequence on aquatic habitat.

SECTION 13 – DISPOSAL METHODS

This material is classed as a non-hazardous solid waste for disposal. Dispose of construction debris containing cement, including empty bags at permitted disposal firm. Do not dispose of crushed concrete material in any waterways. Used material that may be contaminated or may have change the characteristics should be evaluated or profiled and disposed in compliance with federal, state, provincial and local standards.

SECTION 14 – TRANSPORTATION

DOT Hazard Classification: Not Regulated
Placard Required: None

UN/NA Code: None
Labeling Requirement: None

SECTION 15 – REGULATORY INFORMATION

US Federal Regulations	
OSHA/MSHA <i>Hazard Communication</i>	This product contains Crystalline silica
CERCLA	Not applicable
SARA TITLE III also known as Community Right to know	This product is not subject to the reporting requirements of Title III of SARA, 1986, and 40 CFR 372.
RCRA Hazardous Waste	Not RCRA hazardous waste according to 40 CFR 261
TSCA	Substances are listed under TSCA Inventory
State Regulations	
CA, FL, MA, MN, NJ, PA	Crystalline Silica, Quartz CAS # 14808-60-7, a component of these products is listed under state list of hazardous materials
Canada WHMIS	Products containing crystalline silica are classified as D2A, and E. Portland Cement is classified as E. Both materials are subject to WHMIS requirements.

SECTION 16 - OTHER INFORMATION

Hazard Ratings:

GHS

Fire Hazard	
Health Hazard	3
Reactivity	
Physical Hazard	

HMIS

Fire Hazard	0
Health Hazard	2
Reactivity	0
Physical Hazard	0



GHS Hazard Category

1 = Severe
2 = Serious
3 = Moderate
4 = Slight
5 = Minimum

HMIS/NFPA Hazard Ratings

0 = No Hazard
1 = Slight
2 = Moderate
3 = Serious
4 = Severe

Abbreviations:

>, <	Greater than, Less than	NA	Not Applicable
%	Percent	NFPA	National Fire Protection Association
ACGIH	American Conference of Governmental Industrial Hygienists	NIOSH	National Institute for Occupational Safety and Health
ANSI	American National Standards Institute		
ASTM	American Society for Testing and Materials	NTP	National Toxicity Program
CAS #	Chemical Abstract Services Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	PEL	Permissible Exposure Limit
CFR	Code of Federal Register	pH	Negative logarithm of hydrogen ion
CL	Ceiling Limit	PPE	Personal Protective Equipment
DOT	US Department of Transportation	Resp. P	Respirable Particulate
HEPA	High-Efficiency Particulate Air	RCRA	Resource Conservation and Recovery Act
HMIS	Hazardous Materials Identification Systems	SARA	Superfund amendments and Reauthorization Act
IARC	International Agency for Research on Cancer		
IDLH	Immediate Dangerous to Life or Health Concentration	STEL	Short Term Exposure Limit
LC ₅₀	Lethal Concentration	Tot	Total particulate
LD ₅₀	Lethal Dose	TDG	Transportation of Dangerous Goods
LEL	Lower Explosive Limit	TLV	Threshold Limit Value
mg/kg	Milligrams per cubic meter	TWA	Time Weighted Average (8 hour)
MSHA	Mining Safety and Health Administration	UEL	Upper Explosive Limit
Mm Hg	Millimeter of mercury	WHMIS	Workplace Hazardous Materials Information System (Canada)

DISCLAIMER: The information and recommendations contained herein are based upon the data believed to be correct. However, Basalite Concrete Products, ULC makes no guarantee or warranty of any kind, express

or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful health effects that may be caused by exposure to airborne dust particles and use of these products. Customers/users of these products must comply with all applicable environmental, health and safety laws, rules, regulations, and orders including but not limited to Federal US and Canada, State and Provincial regulations.

MSDS STATUS: Revision 1

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