

SAFETY DATA SHEET

Date Revised: 8/28/2013

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: FLOOR TOP

Manufacturer Name and Address:

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












Emergency Contact:

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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

Emergency Overview:	Primary Route of Exposure:	Personal Equipment	Protective Equipment
<p>1. TOXIC – Contains quartz, crystalline silica. GHS WHMIS</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>2. CORROSIVE MATERIAL Caustic</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 product mix may result in chemical burns, dermatitis, skin blisters or corneal damage.</p>	 	
<p>3. IRRITANT Caustic</p> 	<p>Inhalation and, Eye and Skin Contact Contact with dust from dry mix may cause skin, eye and respiratory irritation.</p>	 	
<p>Environmental Hazard: GHS</p> 	<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 near any aquatic habitat.</p>		

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>	A wet product mix exhibits caustic, abrasive and dehydrating properties that will cause irritation or burns to skin and eyes. 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.

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>	The classifications below are based on experimental studies with animals and epidemiologic studies of workers exposed to respirable crystalline silica. 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

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 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 gastrointestinal irritation and blockage.
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.
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D. MEDICAL CONDITIONS AGGREGATED BY EXPOSURE:

E. Excessive dust exposure may aggravate any existing respiratory disorders or diseases. Possible complications of allergies resulting in irritation to skin, eyes and respiratory passage may occur from excessive exposure to dusts. If any symptoms persist, consult a physician.

Dusts may irritate the nose, throat, and respiratory tract by mechanical abrasion. Coughing, sneezing, and shortness of breath may occur following exposures in excess of appropriate exposure limits. Use of natural sand and gravel 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.

SECTION 3 - PRODUCT AND COMPONENT DATA

<u>Composition</u>	<u>CAS Number</u>	<u>Percent</u>	<u>Exposure Limits</u>
Cement	65997-15-1	10 - 30 %	Refer to Section 8
Calcium Aluminate Cement	65997-16-2	5 - 20 %	
Anhydrous Calcium Sulphate	7778-18-9	1 - 5 %	
Aggregate (Quartz)	14808-60-7	40 -70 %	
Calcium Carbonate	471-43-1	10 -20 %	
Polyvinyl Acetate	24937-78-8	1 - 5 %	
Additives		< 1 %	

SECTION 4 – FIRST AID AND MEASURES

Eyes	Immediately flush eye(s) with plenty of clean water for at least 15 minutes, while holding the eyelid(s) open. Occasionally lift the eyelid(s) to ensure thorough rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Contact a physician if irritation persists or later develops.
Skin	Wash with soap and water. Contact a physician if irritation persists or later develops.
Ingestion	If person is conscious, give large quantity of water; however, never attempt to make an unconscious person drink or vomit. Get immediate medical attention.
Inhalation	Move to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or later develops.

SECTION 5 - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): NA
 Extinguishing Media: NA
 Unusual Fire and Explosion Hazards: None

Flammable Limits: Not Flammable, not combustible
 LEL: NA UEL: NA
 Special Fire Fighting Procedures: None

SECTION 6 – ACCIDENTAL RELEASE INFORMATION

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Use adequate ventilation, dustless vacuum or cleanup systems for handling, storage, and clean-up so that airborne dust does not exceed the PEL. 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:

Product Composition	CAS Number	Percent	OSHA PEL-TWA (mg/m ³)	ACGIH TLV-TWA ^A (mg/mg ³)
Cement ⁽¹⁾		10 - 30 %	See Below for the individual exposure limits.	
Calcium Aluminate Cement ⁽²⁾	65997-16-2	5- 20 %		
Anhydrous Calcium Sulphate ⁽³⁾	7778-18-9	1 - 5 %		
Aggregate (Quartz) ⁽⁶⁾	14808-60-7	40 -70 %		
Calcium Carbonate ⁽⁴⁾	471-43-1	10 -20 %		
Polyvinyl Acetate ⁽⁵⁾	24937-78-8	1 - 5 %		
Additives		< 1 %		

(1). Cement

COMPONENT	PERCENT (By ght)	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). Calcium Aluminate Cement (CA Cement)

COMPONENT (Mineralogical Phase)	PERCENT (By Weight)	CAS NUMBER	OSHA PEL-TWA (mg/m ³)	ACGIH TLV-TWA (mg/mg ³)
CaO.Al ₂ O ₃		12042-68-1		
CaO.2Al ₂ O ₃		12004-88-5		
12CaO.7Al ₂ O ₃		12005-57-1		

2CaO.Al ₂ O ₃ .SiO ₂		12068-46-1		
4CaO.Al ₂ O ₃ .Fe ₂ O ₃		12068-35-8		

Calcium Aluminates react chemically and harden when mixed with water. It undergoes exothermic reaction resulting in increase in temperature.

(3) Anhydrous Calcium Sulphate

Composition	CAS Number	Percent	OSHA PEL-TWA (mg/m ³)	ACGIH TLV-TWA (mg/mg ³)
Anhydrous Calcium Sulphate	7778-18-9	>99 %	5 (Resp.), 10 (Tot)	10 (Tot)
Crystalline Silica	14808-60-7	< 5 %	See Below (4)	See below (4)

(4). Calcium Carbonate

COMPONENT	PERCENT (By Weight)	CAS NUMBER	OSHA PEL-TWA (mg/m ³)	ACGIH TLV-TWA (mg/mg ³)
Calcium Carbonate	94 – 98	1317-65-3	5 (Resp.); 15 (Tot)	3(Resp.); 10(Tot)
Magnesium Carbonate	1 - 5	546-93-0	5 9Resp); 15 (Tot)	Not listed

(5) Polyvinyl Acetate

COMPONENT	PERCENT (By Weight)	CAS NUMBER	OSHA PEL-TWA (mg/m ³)	ACGIH TLV-TWA (mg/mg ³)
Ethylene Vinyl Acetate Copolymer	~100	24937-78-8	5 (Resp. fraction) 15 (Tot dust 8 –Hr. day)	3 (Resp. fraction), 10 (tot inhalable fraction)
Vinyl Acetate	Traces (Less	108-05-4	30 (8 – hr. day)	

(6). Crystalline Silica from Cements and 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 cristobalite 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)

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):	3.0
Vapor Pressure (mm Hg):	NA	Melting Point:	NA
Vapor Density (Air = 1):	NA	Evaporation Rate:	
Solubility in Water:	0	(Butyl Acetate = 1)	NA
pH:	11 – 13		

Appearance and Odor: 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 mix is generally considered chemically inert in the environment.

ENVIRONMENTAL EFFECT ON AQUATIC HABITAT:

Uncured mix 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 product mix 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 UN/NA Code: None
Placard Required: 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 as limestone.
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. Limestone is included in the Domestic Substances List (DSL).

SECTION 16 - OTHER INFORMATION

Hazard Ratings:

GHS	
Fire Hazard	
Health Hazard	4
Reactivity	
Physical Hazard	

HMIS	
Fire Hazard	0
Health Hazard	1
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		
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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