Portland Cement

SECTION 1. IDENTIFICATION

Product Identifier	Portland Cement
Other Means of Identification	Portland Cement
Additional Product Names	CSA A3000 Types GU, MS, MH, HE, LH, HS. ASTM C150/AASHTO M85 Types I, IA, II, II-MH, I-II, III, IV, V
Product Family	KING Home Improvement Products
Recommended Use	A general-purpose cement suitable for all uses where the special properties of other types are not required.
Manufacturer	St. Marys Cement, 55 Industrial Street, Toronto, ON, M4G 3W9, 1-800-268-6148
Supplier Identifier	King Packaged Materials Company, 3385 Harvester Road, Burlington, Ontario, L7R 3Y5, www.kpmindustries.com
Emergency Phone No.	CANUTEC, 1-613-996-6666 (call collect or *666)
SDS No.	0164
Date of Preparation	December 05, 2016

SECTION 2. HAZARD IDENTIFICATION

Classification

Skin irritation - Category 2; Serious eye damage - Category 1; Specific target organ toxicity (single exposure) - Category 3; Specific target organ toxicity (repeated exposure) - Category 1

Label Elements

Danger
Hazard Statement(s):
Causes skin irritation.
Causes serious eye damage.
May cause respiratory irritation.
May cause cancer if inhaled.
Causes damage to organs (lungs) through prolonged or repeated exposure if inhaled.
Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust.
Wash hands and skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Response:
IF ON SKIN: Wash with plenty of water.

If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTRE or doctor.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF exposed or concerned: Get medical advice/attention.
Storage:
Store locked up.
Disposal:
Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

Dusts from this product, when combined with water or sweat, produce a corrosive alkaline solution. The potential exists for static build-up and static discharge when moving cement powders through a plastic, nonconductive, or non-grounded pneumatic conveyance system. Static discharge may result in damage to equipment and injury to workers.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers
Portland cement	65997-15-1	90-100%	Not applicable
Calcium oxide	1305-78-8	0.3-3.0%	Not applicable
Silica, total quartz	14808-60-7	0.1-1.5%	Not applicable
Chromate compounds		<0.1%	Not applicable
Nickel compounds		<0.1%	Not applicable

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. If exposed or concerned, get medical advice or attention. Call a Poison Centre or doctor. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor.

Skin Contact

Take off immediately contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash with plenty of water. Immediately call a Poison Centre or doctor. Quickly and gently blot or brush away excess chemical. Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes. Seek medical attention for rash, burns, irritation, dermatitis and prolonged unprotected exposures to wet cement, cement mixtures or liquids from wet cement. If skin irritation occurs, get medical advice or attention.

Eye Contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a Poison Centre or doctor. Take care not to rinse contaminated water into the unaffected eye or onto the face.

Ingestion

Rinse mouth with water. Do not induce vomiting. Immediately call a Poison Centre or doctor.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire.

Unsuitable Extinguishing Media

Use caution when using water. Do not get water inside closed containers; contact with water will generate heat. Water jet may cause spattering of the corrosive solution. Use caution when using CO2; it may scatter the dry powder.

Specific Hazards Arising from the Product

Does not burn. Bulk powder of this product may heat spontaneously when damp with water.
Corrosive; reacts with water releasing heat and forming an alkaline solution.

Special Protective Equipment and Precautions for Fire-fighters

Although Portland cement products pose no fire-related hazards, a self-contained breathing apparatus is recommended to limit exposure to combustion products when fighting any fire.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Collect dry material in an appropriate container and minimize dust. Scrape wet product and place in container. Allow material to dry or solidify before disposal. Avoid generating dust. Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Obtain special instructions before use. Do not breathe in this product. Remove contaminated clothing and protective equipment before entering eating areas or leaving work area. Wash hands thoroughly after handling this material. Static Hazard: Properly ground all pneumatic conveyance systems. The potential exists for static build-up and discharge when moving cement powders through a plastic, nonconductive, or non-grounded pneumatic conveyance system. Static discharge may result in damage to equipment and injury to workers.

Conditions for Safe Storage

Store in an area that is: well-ventilated, separate from incompatible materials (see Section 10: Stability and Reactivity). Restrict access to authorized personnel only. Keep away from food and drinking water. Keep Portland cement products dry until used. Normal temperatures do not affect the material.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

	ACGIH TLV®		OSHA PEL		AIHA WEEL	
Chemical Name	**TWA**	**STEL**	**TWA**	**Ceiling**	**8-hr TWA**	**TWA**
Portland cement	1 mg/m3 (R) A4		5 mg/m3 (R)			
Calcium oxide	2 mg/m3					
Silica, total quartz	0.05 mg/m3 (R) A2		0.1 mg/m3			

Appropriate Engineering Controls

If user operations generate dust, fume, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual Protection Measures

Eye/Face Protection

Wear ANSI- or CSA-approved safety glasses with side shields or goggles. Provide emergency eyewash stations. In extremely dusty environments and unpredictable environments wear un-vented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should NOT be worn when working with Portland cement products.

Skin Protection

Prevention is essential to avoiding potentially severe skin injury. Avoid contact with cement products. If contact occurs, promptly wash affected area with soap and water. In case of severe contact, provide emergency showers. Clothing saturated with wet concrete products should be promptly removed and replaced with clean, dry clothing. Where prolonged exposure to cement products might occur, wear impervious clothing and cut/abrasion resistant (Heavyweight Nitrile coated Safety Cuff) gloves to eliminate skin contact. Where required, wear boots that are impervious to water to eliminate foot and ankle exposure. Do not rely solely on barrier creams in place of gloves.

Respiratory Protection

Avoid actions that cause dust to become airborne.

Use NIOSH-approved respirators (N95 rating or greater) for dust, if an applicable exposure limit is exceeded or when dust levels cause discomfort or irritation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Grey - white.
Odour	Odourless
Odour Threshold	Not available
pH	12 - 13
Melting Point/Freezing Point	Not available (freezing)
Initial Boiling Point/Range	Not applicable
Flash Point	Not applicable
Evaporation Rate	Not applicable
Upper/Lower Flammability or Explosive Limit	Not applicable (upper); Not applicable (lower)
Vapour Pressure	Not applicable
Vapour Density (air = 1)	Not applicable
Relative Density (water = 1)	3.15
Solubility	Slightly soluble in water
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not applicable

Other Information

Physical State	Solid

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability

Stable, except in the presence of moisture.

Conditions to Avoid

Accidental contact with water.

Incompatible Materials

Wet Portland cement is alkaline and is incompatible with acids, ammonium salts and aluminum metal.

Hazardous Decomposition Products

Will not spontaneously occur. Adding water produces (caustic) calcium hydroxide.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Eye contact; skin contact; inhalation; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Silica, total quartz		500 mg/kg (rat)	

Skin Corrosion/Irritation

Discomfort or pain cannot be relied upon to alert a person to a hazardous skin exposure. Consequently, the only effective means of avoiding skin injury or illness involves minimizing skin contact, particularly contact with wet cement. Exposed persons may not feel discomfort until hours after the exposure, and significant injury has occurred.

Exposure to dry cement products may cause drying of the skin with consequent mild irritation or more significant effects attributable to aggravation of other conditions. Skin contact with wet or dry cement products may cause more severe skin effects including thickening, cracking or fissuring of the skin. Prolonged skin contact can cause severe chemical burns.

Some ultra-sensitive individuals may exhibit an allergic response upon exposure to cement products, possibly due to trace amounts of chromium (hexavalent chromium salts). The response may appear in a variety of forms ranging from mild rash to severe skin ulcers. Persons already sensitized might react to their first contact with the product; others might experience this effect only after years of contact with cement products.

Serious Eye Damage/Irritation

Eye contact by larger amounts of dry powder or splashes of wet Portland cement products may cause effects ranging from moderate eye irritation to chemical burns and blindness, requiring immediate first aid (see Section 4) and medical attention.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Exposure to Portland cement products may cause irritation to the moist membranes of the nose, throat, and upper respiratory system. Inhalation may also aggravate pre-existing upper respiratory and lung diseases. It may also leave unpleasant deposits in the nose. Portland cement products may contain trace amounts of free crystalline silica. Prolonged exposure to respirable free crystalline silica may aggravate lung conditions. It also may cause delayed lung injury including silicosis, a disabling and potentially fatal lung disease, and/or other diseases.

Ingestion

Although small quantities of dust are not known to be harmful, ill effects are possible if larger quantities are accidentally consumed.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

(Silica, total quartz) respirable crystalline silica is the chief cause of pulmonary dust disease. Prolonged inhalation of crystalline silica can result in silicosis, a disabling pulmonary fibrosis characterized by generalized fibrotic changes, the development of miliary nodules in both lungs, and clinically by shortness of breath on exertion, decreased chest expansion, lessened capacity for work, dry cough, absence of fever, increased susceptibility to tuberculosis, and characteristic x-ray findings of diffuse discrete nodulation scattered throughout both lung fields. In advanced stages, silicosis can include marked fatigue, extreme dyspnea and cyanosis, loss of appetite, pleuritic pain and total incapacity to work. The disease can result in death either from cardiac failure or from destruction of lung tissue, with resultant anoxemia.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Silica, total quartz	Group 1	A2	Known carcinogen	

IARC: Group 1 – Carcinogenic to humans. ACGIH®: A1 – Confirmed human carcinogen. NTP: Known human carcinogen.
(Silica, total quartz) cARCINOGEN.

Key to Abbreviations

IARC = International Agency for Research on Cancer. ACGIH® = American Conference of Governmental Industrial Hygienists. NTP = National Toxicology Program.

Reproductive Toxicity

Development of Offspring

No information was located.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

Other Information

Chromates & Nickel Compounds - Cement products may contain trace amounts of hexavalent chromium and nickel compounds. Soluble chromates in cement have been stated to be the cause of cement dermatitis in some workers. Inorganic nickel compounds - pure or trace amounts - are not absorbed through the skin in amounts sufficient to cause systemic intoxication. However, their capability to cause contact dermatitis in sensitized individuals is well known.

No information was located for: Skin Corrosion/Irritation, Serious Eye Damage/Irritation, STOT (Specific Target Organ Toxicity) - Single Exposure, STOT (Specific Target Organ Toxicity) - Repeated Exposure, Respiratory and/or Skin Sensitization, Carcinogenicity, Development of Offspring, Sexual Function and Fertility, Germ Cell Mutagenicity, Interactive Effects

SECTION 12. ECOLOGICAL INFORMATION

No recognized unusual toxicity to plants or animals.

Ecotoxicity

Harmful to aquatic life.

Persistence and Degradability

No information was located.

Bioaccumulative Potential

No information was located.

Mobility in Soil

No information was located.

Other Adverse Effects

There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

WHMIS 1988 Classification

Class D2A

Class E

D2A - Very Toxic; E - Corrosive

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

SECTION 16. OTHER INFORMATION

SDS Prepared By	King Packaged Materials
Phone No.	905-639-2993
Date of Preparation	December 05, 2016
Additional Information	Portland cement products should only be used by trained, knowledgeable persons.
Disclaimer	To the best of our knowledge, the information contained herein is accurate. However, neither KPM Industries Ltd., nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.