MATERIAL SAFETY DATA SHEET

Holcim

Material: Portland Cement

Section I - Identification

Supplier:
Name: Holcim (US) Inc.
Address: 6211 N. Ann Arbor Road
Dundee, MI 48131
Telephone: 800-854-4656

Emergency Contact Information: (CHEMTREC)
Health 1-800-424-9300
Transportation 1-800-424-9300

Product Codes: Portland Cement Type I, IA, II, IIA, III, IIIA, IV, IVA, V, VA, White Cement. CSA Type GU, MS, HE, LH, HS. This MSDS covers many products. Individual constituents will vary.

Formula: This product consists of finely ground Portland cement clinker mixed with a small amount of calcium sulfate (gypsum).

Chemical Family: Chemical compounds. Calcium silicate components and other calcium compounds containing iron and aluminum make up the majority of this product.

Chemical Name and Synonyms: Portland cement. Portland cement is also known as hydraulic cement.

Section II - Components

Hazardous Ingredients

Component (%)	CAS No.	OSHA PEL (8-hour TWA)	ACGIH TLV-TWA (2009)
Portland Cement (100)	65997-15-1	15 mg/m^3 (T); 5 mg/ mg/m^3 (R)	10 mg/m^3(E)
Tri-calcium silicate (20-70)	12168-85-3	see Nuisance Dust PEL	see Nuisance Dust TLV
Di-calcium silicate (10-60)	10034-77-2	see Nuisance Dust PEL	see Nuisance Dust TLV
Tetra-calcium- alumino-ferrite (5-15)	12068-35-8	see Nuisance Dust PEL	see Nuisance Dust TLV
Calcium sulfate (2-10)	13397-24-5	see Nuisance Dust PEL	10 mg/m^3 (I)
Tri-calcium Aluminate (1-15)	12042-78-3	see Nuisance Dust PEL	see Nuisance Dust TLV
Calcium Carbonate (0 -20)	471-34-1	see Nuisance Dust PEL	see Nuisance Dust TLV
Magnesium oxide (0-4)	1309-48-4	see Nuisance Dust PEL	see Nuisance Dust TLV
Nuisance Dusts	---	15 mg/m^3 (total dust); 5 mg/m^3 (respirable dust)	10 mg/m^3 (inhalable particles); 3 mg/m^3 (respirable dust)
Crystalline Silica (Quartz) * (0-1%)	14808-60-7	10 mg/m^3 /percent silica + 2 (respirable dust) 30 mg total dust/m^3/percent silica + 2 (total dust)	0.025 mg/m^3 (R)

(I) = Inhalable Sized Particulates (see 2009 ACGIH TLV Booklet for Additional Information)
(R) = Respirable Fraction
(T) = Total Dust or (PNOR) Particulates Not Otherwise Regulated (OSHA) or (PNOC) Particulates Not Otherwise Classified (ACGIH)
(E) = For particulate matter containing no asbestos and <1% crystalline silica.
Trace Constituents: Cement is made from materials mined from the earth and processed using energy provided by fuels. Additional materials, such as fly ash, kiln dust and slag may also be introduced into the cement manufacturing process. A chemical analysis of cement may reveal trace amounts of naturally occurring but potentially harmful chemical compounds such as free crystalline silica, organic compounds, potassium and sodium compounds, heavy metals including cadmium, chromium (including hexavalent chromium), nickel and lead. Other trace constituents may include calcium oxide (also known as free lime or quick lime) and organic compounds from grinding aids such as amine acetate salts, glycols and 1,2-ethanediol.

Section III – Hazards Identification

Emergency Overview

Portland cement is a light gray, off white or white powder that poses little immediate hazard. It is not combustible or explosive. A single short-term exposure to the dry powder is not likely to cause serious harm. However, exposure of sufficient duration to wet portland cement can cause serious, potentially irreversible tissue (skin or eye) destruction in the form of chemical (caustic) burns. The same type of tissue destruction can occur if wet or moist areas of the body are exposed for sufficient duration to dry portland cement. Portland cement contains trace amounts of hexavalent chromium which has an OSHA Permissible Exposure Limit (PEL) (8-hour time weighted average) of 5 µg/m^3, an OSHA Action Level of 2.5 µg/m^3, and an ACGIH TLV of 10 µg/m^3.

Potential Health Effects

- *Relevant Routes of Exposure:* Eye contact, skin contact, inhalation, and ingestion

- *Effects resulting from eye contact:* Exposure to airborne dust may cause immediate or delayed irritation or inflammation. Eye contact with larger amounts of dry powder or splashes of wet Portland cement may cause effects ranging from moderate eye irritation to chemical burns and blindness. Such exposures require immediate first aid (see section IV) and medical attention to prevent significant damage to the eye.

- *Effects resulting from skin contact:* 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 has ended and significant injury has occurred. Exposure to dry Portland cement may cause drying of the skin with consequent mild irritation or more significant effects attributable to aggravation of other conditions. Irritant dermatitis may be caused by the physical properties of cement including alkalinity and abrasion. Dry portland cement contacting wet skin or exposure to moist or wet portland cement may cause more severe skin effects including thickening, cracking or fissuring of the skin. Prolonged exposure can cause severe skin damage in the form of (caustic) chemical burns. Some individuals may exhibit an allergic response upon exposure to portland cement, possibly due to trace amounts of chromium. The response may appear in a variety of forms ranging from a mild rash to severe skin ulcers. Persons already sensitized may react to the first contact with the product. Other persons may experience this effect after years of contact with portland cement products.

- *Effects resulting from inhalation:* Portland cement may contain trace amounts of free crystalline silica. Prolonged exposure to respirable free crystalline silica can aggravate other lung conditions and cause silicosis, a disabling and potentially fatal lung disease and/or other diseases. Risk of injury or disease depends on duration and degree of exposure. (Also see "Carcinogenic potential" below.) Some studies have shown that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis may be associated with the increased incidence of several autoimmune disorders such as scleroderma (thickening of the skin), systemic lupus, erythematosus, rheumatoid arthritis and diseases affecting the kidneys. Silicosis increases the risk of tuberculosis and some studies have shown an increased incidence of chronic kidney disease and end-stage renal disease in workers exposed to respirable crystalline silica. Exposure to Portland cement may cause irritation to the moist mucous membranes of the nose, throat, and upper respiratory system. It may also leave unpleasant deposits in the nose.

- *Effects resulting from ingestion:* Although small quantities of dust are not known to be harmful, ill effects are possible if larger quantities are consumed. Portland cement should not be eaten.

- *Carcinogenic potential: NTP, OSHA, or IARC has not listed Portland cement as a carcinogen.* It may, however, contain trace amounts of substances listed as carcinogens by these organizations. Crystalline silica and hexavalent chromium, which may be present in portland cement in small amounts, have been listed by IARC and the NTP as a known human carcinogen (Group I).

- *Medical conditions which may be aggravated by inhalation or dermal exposure*:
  - Pre-existing upper respiratory and lung diseases
  - Unusual (hyper) sensitivity to hexavalent chromium (chromium^{+6}) salts.

Section IV - First Aid

Eyes: Immediately flush eyes thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.

Skin: Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment in all cases of prolonged exposure to wet cement, wet cement mixtures, wet concrete liquids from fresh cement products, or prolonged wet skin exposure to dry cement.

Inhalation of Airborne Dust: Remove to fresh air. Seek medical help if coughing or other symptoms do not subside. (Inhalation of gross amounts of portland cement requires immediate medical attention.)

Ingestion: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician or poison control immediately.

Section V - Fire & Explosion Data

Flash point:	*None*	Auto ignition temperature:	*Not Combustible*
Lower Explosive Limit:	*None*	Upper Explosive Limit:	*None*
Extinguishing media:	*Not Combustible*	Unusual fire & explosion hazards	*None*
Hazardous combustion products:	*None*		
Special fire fighting procedures:	*None.* (Although portland cement poses no fire-related hazards, a self-contained breathing apparatus is recommended to limit exposure to combustion products when fighting any fire.)		

Section VI - Accidental Release Measures

Collect dry material using a scoop. Avoid actions that cause dust to become airborne. Avoid inhalation of dust and contact with skin. Wear appropriate personal protective equipment as described in Section VIII.
Scrape up wet material and place in an appropriate container. Allow the material to "dry" before disposal. Do not attempt to wash portland cement down drains.
Dispose of waste material according to local, state, and federal regulations.

Section VII - Handling & Storage

Keep portland cement dry until used. Normal temperatures and pressures do not affect the material. Promptly remove dusty clothing or clothing which is wet with cement fluids and launder before reuse. Wash thoroughly after exposure to dust or wet cement mixtures or fluids.

Section VIII - Exposure Control/Personal Protection

Skin Protection: Prevention is essential to avoiding potentially severe skin injury. Avoid contact with unhardened wet portland cement products. If contact occurs, promptly wash affected area with soap and water. Where prolonged exposure to unhardened portland cement products might occur, wear impervious clothing and gloves to prevent skin contact. Where required, wear sturdy boots that are impervious to water to eliminate foot and ankle exposure. Do not rely on barrier creams; barrier creams should not be used in place of gloves. Periodically wash areas contacted by dry portland cement or wet cement or concrete with a pH neutral soap. Wash again at the end of the work. If irritation occurs, immediately wash the affected area and seek treatment. If clothing becomes saturated with wet concrete, it should be removed and replaced with clean, dry clothing.

Respiratory protection: Avoid actions that cause dust to become airborne. Use local or general ventilation to control exposures below applicable exposure limits. Use NIOSH/MSHA-approved (under 30 CFR 11) or NIOSH-approved (under 42 CFR 84) respirators in poorly ventilated areas, if an applicable exposure limit is exceeded, or when dust causes discomfort or irritation. (Advisory: Respirators and filters purchased after July 10, 1998, must be certified under 42 CFR 84.) Respirators should be used in accordance with the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

Ventilation: Use local exhaust or general dilution ventilation to control exposure within applicable limits.

Eye Protection: In conditions where user may be exposed to splashes or puffs of cement, wear safety glasses with side shields or goggles that meet the ANSI Z87.1 standard. In extremely dusty or unpredictable environments, wear unvented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when working with portland cement or fresh cement products.

Section IX - Physical & Chemical Properties

Appearance:	*Gray, off white or white powder*	Vapor Pressure:	*Not applicable*
		Vapor density:	*Not applicable*
Odor:	*No distinct odor*	Boiling point:	*Not applicable (i.e., > 1000 ° C)*
Physical state:	*Solid (powder)*	Melting point:	*Not applicable*
pH (in water):	*12 to 13*	Flash point:	*Not applicable (Non combustible)*
Solubility in water:	*Slightly (0.1 to 1.0%)*	Specific gravity (H_2O = 1.0):	*3.15*
Evaporation Rate:	*Not applicable*		

Section X - Stability & Reactivity

Stability:	*Stable.*
Incompatibility:	*Wet portland cement is alkaline. As such it is incompatible with acids, ammonium salts, and aluminum metal. Cement dissolves in hydrofluoric acid, producing corrosive silicon tetrafluoride gas.*
Conditions to avoid:	*Unintentional contact with water.*
Hazardous decomposition:	*Will not spontaneously occur. Adding water produces (caustic) calcium hydroxide as a result of hydration.*
Hazardous polymerization:	*Will not occur.*

Section XI - Toxicological Information

For a description of available, more detailed toxicological information, contact Holcim (US) Inc. (in Section I).

Section XII - Ecological Information

Ecotoxicity:	*No recognized unusual toxicity to plants or animals*
Relevant physical and chemical properties:	*See Sections IX & X*

Section XIII - Disposal

Dispose of waste material according to local, state, and federal regulations. (Since portland cement is stable, uncontaminated material may be saved for future use.) Dispose of bags in an approved landfill or incinerator.

Section XIV - Transportation Data

Hazardous materials description/proper shipping name:	*Portland cement is not hazardous under U.S. Department of Transportation (DOT) regulations*
	Not applicable
Hazard class:	*Not applicable*
Identification class:	*Not applicable*
Required label text:	*Not applicable*
Hazardous substances/reportable quantities (RQ):	

Section XV - Other Regulatory Information

Status under USDOL-OSHA Hazard Communication Rule, 29 CFR 1910.1200:	*Portland cement is considered a "hazardous chemical" under this regulation, and should be part of any hazard communication program.*
Status under CERCLA/Superfund, 40 CFR 117 and 302:	*Not listed.*
Hazard Category under SARA (Title III), Sections 311 & 312:	*Portland cement qualifies as a "hazardous substance" with delayed health effects.*
Status under SARA (Title III) Section 313:	*Not subject to reporting requirements under section 313.*
Status under TSCA (as of May 1997):	*Some substances in portland cement are on the TSCA inventory list.*
Status under the Federal Hazardous Substances Act:	*Portland cement is a "hazardous substance" subject to statutes promulgated under the subject act.*
Status under California Proposition 65:	*Portland cement contains chemicals (crystalline silica and trace metals) known to the State of California to cause cancer, birth defects or other reproductive harm. California law requires the manufacturer to give the above warning in the absence of definitive testing to prove that the defined risks do not exist.*
Status under Canadian Environmental Protection Act:	*Not listed.*
Workplace Hazardous Material Information System (Canada):	*Portland cement is considered to be a hazardous material under the Hazardous Product Act as defined by the Controlled Products Regulations (Class E - Corrosive Material) and is therefore subject to the labeling and MSDS requirements of the Workplace Hazardous Materials Information System (WHMIS).*

Section XVI - Other Information

Approved by: Al Innis, VP of Quality & Product Performance
Revision Date: May 26, 2009

Other important information: Portland cement should only be used by knowledgeable persons. While the information provided in the material safety data sheet is believed to provide a useful summary of the hazards of portland cement as it is commonly used, the sheet cannot anticipate and provide all of the information that might be needed in every situation. Inexperienced product users should obtain proper training before using this product.
A key to using the product safely requires the user to recognize that portland cement chemically reacts with water, and that some of the intermediate products of this reaction (that is, those present while a portland cement product is "setting") pose a more severe hazard than does portland cement itself. These hazards include potential injuries to eyes and skin.
The data furnished in this sheet do not address hazards that may be posed by other materials mixed with portland cement to produce portland cement products. Users should review other relevant material safety data sheets before working with this portland cement or with portland cement products, including, for example, portland cement concrete.

SELLER MAKES NO WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THERE OF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY HOLCIM (US) INC., EXCEPT THAT THE PRODUCT SHALL CONFORM TO CONTRACTED SPECIFICATIONS.

Peninsula Products, Inc.
3014 W. Palmira Ave., #200
Tampa, FL 33629
T: 813-832-4080
F: 813-832-4202
www.easyspred.com

...for mortar, grout & plaster

MATERIAL SAFETY DATA SHEET May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

95 / 95

PRODUCT NAME: EASY-SPRED® (REGULAR, COLORED, WHITE & PLUS) Page 1 of 4

Section I MANUFACTURER'S INFORMATION

Manufacturer's Name and Address:
American Colloid Company
One North Arlington
1500 West Shure Drive
Arlington Heights, Illinois 60004

Date Prepared: January 1, 2008

Telephone: 847-392-4600 | Fax: 847-577-5560
EMERGENCY CONTACT: CHEMTREC 800-424-9300
E-mail: www.colloid.com

Section II HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

PRODUCT IDENTIFICATION:

Chemical Name: Dry Mixture of Bentonite Clay and Proprietary Ingredients
Formula: **Mixture**
NFPA/HMIS: Health – 1*, Fire - 0, Reactivity - 0, Specific Hazard - *See Section VI.*
DOT Class: Not Regulated

HAZARDOUS COMPONENTS: (Specific Chemical Identity: Common Name(s))	OSHA PEL (TWA)	ACGIH TLV (TWA)	NIOSH REL (TWA)	% (optional)
Quartz: CAS# 14808-60-7 (naturally occurring constituent)	–	–	–	–
Respirable Quartz:	0.1 mg/m^3	50 µg/m^3	50 µg/m^3	<1- 2%
Nuisance Dust - Respirable:	5 mg/m^3	3 mg/m^3	–	–
Total Dust:	15 mg/m^3	10 mg/m^3	–	–

OSHA PEL - OSHA Permissible Exposure Limit, 8 hour Time-Weighted Average
ACGIH TLV - American Conference of Governmental Industrial Hygienists Threshold Limit Value, 8 hr. TWA, 40 hr. week
NIOSH REL - National Institute for Occupational Safety and Health, Recommended Exposure Limit, 10 hr. TWA, 40 hr. week

*** WARNING:** This product contains a small amount of quartz that may cause delayed respiratory disease if inhaled over a prolonged period of time. Avoid breathing dust. Use NIOSH/MSHA approved respirator where TLV for quartz may be exceeded. IARC Monographs on the evaluation of the Carcinogenic Risk of Chemicals to Humans (volume 68, 1997) concludes that quartz is carcinogenic to humans (IARC classification 1).

Note: The Permissible Exposure Limits (PELs) reported above are the pre-1989 limits that were reinstated by OSHA June 30, 1993 following a decision by the United States Circuit Court of Appeals for the 11th Circuit. Federal OSHA is now enforcing these PELs. More restrictive exposure limits may be enforced by some other jurisdictions.

National Institute for Occupational Safety and Health (NIOSH) has recommended that the permissible exposure limit be changed to 50 micrograms respirable free silica per cubic meter of air (0.05 mg/ m^3) as determined by a full shift sample up to a 10 hour working day, 40 hours per week. *See*: 1974 NIOSH criteria for a recommended Standard for Occupational Exposure to Crystalline Silica for more detailed information.

Peninsula Products, Inc.
3014 W. Palmira Ave., #200
Tampa, FL 33629
T: 813-832-4080
F: 813-832-4202
www.easyspred.com

...for mortar, grout & plaster

95 / 95
Page 2 of 4

PRODUCT NAME: EASY-SPRED® (REGULAR, COLORED, WHITE & PLUS)

Section III PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point:	- Not Applicable	**Specific Gravity** (Water = 1.0)	- 2.5
Vapor Pressure (mm Hg.)	- Not Applicable	**Melting Point**	- Not Applicable
Vapor Density (Air = 1.0)	- Not Applicable	**Evaporation Rate** (Butyl Acetate = 1.0)	- Not Applicable
Solubility in Water	- Negligible		
Appearance and Odor	- Pale gray to buff powder or granules, odorless		

Section IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (*Method Used*) - Not Applicable
Extinguishing Media - Not Applicable
Flammable Limits - Not Applicable **LEL** - Not Applicable **UEL** - Not Applicable
Special Fire Fighting Procedure - Inorganic mineral – non-flammable
Unusual Fire/Explosion Hazards - None known

Section V REACTIVITY DATA

Stability - Stable **Conditions to Avoid** - None Known
Incompatibility (*Materials to Avoid*) - None Known
Hazardous Decomposition or By-products - None Known
Hazardous Polymerization - Will Not Occur Conditions to Avoid - None Known

Section VI HEALTH HAZARD DATA

This product is a chemically inert, non-combustible mineral. A single exposure will not result in serious adverse effects. Excessive occupational, uncontrolled inhalation of dust may cause lung disease, silicosis, with symptoms of shortness of breath and reduced pulmonary function.

Route(s) of Entry: Inhalation? Yes Skin? No Ingestion? No

Health Hazards (Acute and Chronic): May cause delayed respiratory disease if dust inhaled over a prolonged period of time.

Inhalation: Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may cause irritation of the nose, throat and respiratory passages. Inhalation of dust may have the following serious chronic health effects:

Silicosis: Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes-fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop tuberculosis.

Cancer Status: The International Agency for Research on Cancer has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1 - carcinogenic to humans). Refer to *IARC Monograph 68, Silica, Some Silicates and Organic Fibers* (published in June 1997) in conjunction with the use of these materials.

The National Toxicology Program classifies respirable crystalline silica as a known human carcinogen. For further information *See:* "Adverse Effects of Crystalline Silica Exposure" published by the American Thoracic Society Medical Section of the American Lung Association, American Journal of Respiratory and Critical Care Medicine, Volume 155, page 761-765, 1997.

Peninsula Products, Inc.
3014 W. Palmira Ave., #200
Tampa, FL 33629
T: 813-832-4080
F: 813-832-4202
www.easyspred.com

...for mortar, grout & plaster

95 / 95
Page 3 of 4

PRODUCT NAME: EASY-SPRED® (REGULAR, COLORED, WHITE & PLUS)

Section VI HEALTH HAZARD DATA (continued)

Skin Contact: No adverse effects expected
Eye Contact: Contact may cause mechanical irritation and possible injury
Ingestion: No adverse effects expected for normal, incidental ingestion

Chronic Health Effects: See "Inhalation" subsection above with respect to silicosis, cancer status and other data with possible relevance to human health.

Signs and Symptoms of Exposure: There are generally no signs or symptoms of exposure to crystalline silica. See "Inhalation" subsection above for symptoms of silicosis.

Medical Conditions Generally Aggravated by Exposure: Individuals with respiratory disease, including but not limited to asthma and bronchitis, or subject to eye irritation should not be exposed to crystalline silica dust.

Emergency and First Aid Procedures:

Eye Contact – Flush the eyes immediately with large amounts of water, lifting the upper and lower lids occasionally. If irritation persists or for imbedded foreign body, get immediate medical attention.

Gross Inhalation – Remove to fresh air. If breathing has stopped, perform artificial respiration. If breathing is difficult have qualified personnel administer oxygen. Get prompt medical attention.

Skin Contact - No first aid should be needed since this product does not affect the skin. Wash exposed skin with soap and water before breaks and at the end of the shift.

Ingestion - If large amounts are swallowed, get immediate medical attention.

Section VII PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled: Vacuum if possible to avoid generating airborne dust. Avoid breathing dust. Wear an approved respirator. Avoid adding water; product will become slippery when wet. Waste Disposal Method – Follow federal, state and local regulations for solid waste.

Handling and Storing Precautions: Do not breathe dust. Use normal precautions against bag breakage or spills of bulk material. Avoid creation of respirable dust. Use good housekeeping in storage and use areas to prevent accumulation of dust in work areas. Use adequate ventilation and dust collection. Maintain and use proper, clean respiratory equipment. Launder clothing that has become dusty. Empty containers (bags, bulk containers, storage tanks, etc.) retain silica residue and must be handled in accordance with provisions of this Material Safety Data Sheet. Warn and Train employees in accordance with state and federal regulations.

Other Precautions: Slippery when wet.

WARN YOUR EMPLOYEES (AND YOUR CUSTOMERS – USERS IN CASE OF RESALE) BY POSTING AND OTHER MEANS OF THE HAZARDS AND OSHA PRECAUTIONS TO BE USED. PROVIDE TRAINING FOR YOUR EMPLOYEES ABOUT OSHA PRECAUTIONS.

Section VIII CONTROL MEASURES

Respiratory Protection: Use appropriate respiratory protection for respirable particulate based on consideration of airborne workplace concentration and duration of exposure arising from intended end use. Refer to the most recent standards of ANSI (Z88.2) OSHA (29 CFR 1910.134), MSHA (30 CFR Parts 56 and 57) and NIOSH Respirator Decision Logic.

Ventilation: Use local exhaust as required to maintain exposures below applicable occupational exposure limits (*See Section II*). See also ACGIH "Industrial Ventilation – A Manual for Recommend Practice", (*current edition*).

Protective Gloves: Recommended.

Eye Protection: Safety glasses or goggles recommended.

Other Protective Clothing or Equipment: As appropriate for work environment. Dusty clothing should be laundered before reuse.

Peninsula Products, Inc.
3014 W. Palmira Ave., #200
Tampa, FL 33629
T: 813-832-4080
F: 813-832-4202
www.easyspred.com

...for mortar, grout & plaster

PRODUCT NAME: EASY-SPRED® (REGULAR, COLORED, WHITE & PLUS)

Section VII PRECAUTIONS FOR SAFE HANDLING AND USE (continued)

Transportation Data:	**U.S. DOT Hazard Classification**
Proper Shipping Name:	**Not regulated**
Technical Name:	**N/A**
UN Number:	**N/A**
Hazard Class/Packing Group:	**N/A**
Labels Required:	**None**
DOT Packaging Requirements:	**N/A**
Exceptions:	**N/A**

Section IX OTHER REGULATORY INFORMATION

SARA 311/312: Hazard Categories for SARA Section 311/312 Reporting: Chronic Health

SARA 313: This product contains the following chemicals subject to annual release reporting requirements under the SARA section 313 (40 CFR 372): None

CERCLA Section 103 Reportable Quantity: None

California Proposition 65: This product contains the following substances known to the state of California to cause cancer and/or reproductive harm: crystalline silica (respirable).

Toxic Substances Control Act: All of the components of this product are listed on the EPA TSCA Inventory or are exempt from notification requirements.

European Inventory of Commercial Chemical Substances: All the components of this product are listed on the EINECS Inventory or exempt from notification requirements. (The EINECS number for Quartz: 231-545-5)

Canadian Environmental Protection Act: All the components of this product are listed on the Canadian Domestic Substances List or exempt from notification requirements.

Japan MITI: All the components of this product are existing chemical substances as defined in the Chemical Substance Control Law

Australian Inventory of Chemical Substances: All the components of this product are listed on the AICS Inventory or exempt from notification requirements.

Canadian WHMIS Classification: This product contains crystalline silica (respirable), classified as a Class D, Division 2, Subdivision A substance.

European Community Labeling Classification: Harmful (Xn)

European Community Risk and Safety Phrases: R40, R48, S22

REFERENCES:

Registry for Toxic Effects of Chemical Substances (RTECS), 1995.
Patty's Industrial Hygiene and Toxicology.
NTP Ninth Annual Report on Carcinogens, 1997.
IARC Monograph Volume 68, Silica, Some Silicates and Organic Fibers, 1997.

GRAYMONT

MATERIAL SAFETY DATA SHEET

SECTION I - CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name:	**HIGH CALCIUM HYDRATED LIME**	**WHMIS – CLASSIFICATION: D2A: MATERIALS CAUSING OTHER TOXIC EFFECTS E: CORROSIVE MATERIAL**

MANUFACTURER'S AND SUPPLIER'S NAME:

GRAYMONT (NB) INC	4634, Route 880, Havelock, New Brunswick, E4Z 5K8.
GRAYMONT (PA) INC.	194, Match Factory Place, Bellefonte, Pennsylvania, 16823
GRAYMONT (QC) INC.	25 – 206, rue De Lauzon, Boucherville, Québec, J4B 1E7.
GRAYMONT (WESTERN CANADA) INC.	#260 – 4311, 12th Street N.E., Calgary, Alberta, T2E 4P9
GRAYMONT WESTERN LIME INC.	206 N. 6th Avenue, West Bend, Wisconsin, 53095
GRAYMONT (WESTERN US) INC.	3950 South, 700 East, Suite 301, Salt Lake City, Utah, 84107
GRAYMONT (WI) INC.	Foot of Hill Avenue, Superior, Wisconsin, 54880

EMERGENCY TEL. No.: (613) 996 – 6666 CANUTEC (Canada) (800) 424 – 9300 CHEMTREC (US)

Chemical Name	Chemical Family	Chemical Formula
Calcium hydroxide	**Alkaline earth hydroxide**	**Complex mixture - mostly $Ca(OH)_2$**
Molecular Weight	Trade Name and Synonyms	Material Use
$Ca(OH)_2$ = 74.096	**Hydrated Lime, Lime, Slaked lime, Lime Putty, Lime Slurry, Milk of Lime, Calcium Hydroxide**	**Neutralization, Flocculation, Stabilization, absorption**

SECTION II - COMPOSITION AND INFORMATION ON INGREDIENTS

Hazardous Ingredients	Approximate Concentration (% by weight)	C.A.S. Number	Exposure limits (mg/m^3)					
			OSHA PEL	ACGIH TLV	RSST VEMP	MSHA PEL	NIOSH REL	NIOSH IDLH
(Complex Mixture)	**(% by weight)**		**(TWA) 8/40h**	**(TWA) 8/40h**	**(TWA) 8/40h**	**(TWA) 8/40h**	**(TWA) 10/40h**	
Calcium hydroxide	**92 to 100**	**1305-62-0**	**15 (T) 5 (R)**	**5**	**5**	**5**	**5**	**N/A**
Crystalline Silica, Quartz	**0 à 0.1 Or 0.1 à 1 (Note 1)**	**14808-60-7**	**30/(%SiO_2)+2 (T) 10/(%SiO_2)+2 (R)**	**0.025 (R)**	**0.1 (R)**	**30/(%SiO_2)+2 (T) 10/(%SiO_2)+2 (R)**	**0.05 (R)**	**50**

(**Note 1**): Concentration of crystalline silica in a series of lime products will vary from source to source. It was not detected on some samples (< 0.1% w/w). Therefore two ranges are being disclosed. (**Note 2**): **ACGIH TLV** Version 1973 has been adopted by the Mine Safety Health Administration (**MSHA**) as the regulatory Exposure Standard. (**Note 3**): (**T**) Total Dust; (**R**): Respirable Dust.

Product Name: HIGH CALCIUM HYDRATED LIME

SECTION III - PHYSICAL AND CHEMICAL DATA

Physical State Gas ☐ Liquid ☐ Solid ☑	Odor and Appearance **Slight earthy odor – Fine white powder**		Odor Threshold (p.p.m.) **Not applicable**	Specific Gravity **2.3 – 2.4**
Vapor Pressure (mm) **Not applicable**	Vapor Density (Air = 1) **Not applicable**	Evaporation Rate **Not applicable**	Boiling Point (°C) **Not applicable**	Melting Point (°C) **Not applicable**
Solubility in Water (20°C) **0.165g/100g solution**	Volatiles (% by volume) **Not applicable**	pH (25 °C) **Sat. soln $Ca(OH)_2$ 12.45**	Bulk Density (kg/m^3) **320 - 690**	Coefficient of water/oil distribution **Not applicable**

SECTION IV - FIRE OR EXPLOSION HAZARD DATA

Flammability Yes ☐ No ☑	If yes, under which conditions?	
Extinguishing Media **Calcium Hydroxide does not burn. Use extinguishing media appropriate to surrounding fire conditions.**		
Special Fire Fighting Procedures **Not applicable**		
Flash point (°C) and Method **Not applicable**	Upper flammable limit (% by volume) **Not applicable**	Lower flammable limit (% by volume) **Not applicable**
Auto Ignition Temperature (°C) **Not applicable**	TDG Flammability Classification **Non-flammable**	Hazardous Combustion Products **None**
Dangerous Combustion Products **None**		

EXPLOSION DATA

Sensitivity to Chemical Impact	Rate of Burning	Explosive Power	Sensitivity to Static Discharge
Not applicable	**Not applicable**	**Not applicable**	**Not applicable**

Product Name: HIGH CALCIUM HYDRATED LIME

Page 3 of 7

SECTION V - REACTIVITY DATA

Chemical Stability		
Yes ☑ No ☐	If no, under which conditions?	**Absorbs carbon dioxide in the air to form calcium carbonate.**
Incompatibility to other substances		
Yes ☑ No ☐	If so, which ones?	**Boron tri-fluoride, chlorine tri-fluoride, ethanol, fluorine, hydrogen fluoride, phosphorus pentoxide; and acids (violent reaction with generating heat and possible explosion in confined area).**
Reactivity		
Yes ☑ No ☐	If so, under which conditions?	**Reacts violently with strong acids. Reacts chemically with acids and many other compounds and chemical elements to form calcium based compounds. Explosive when mixed with nitro organic compounds.**
Hazardous Decomposition Products		**Thermal decomposition at 540°C will produce calcium oxide and water.**
Hazardous Polymerization Products		**Will not occur.**

SECTION VI - TOXICOLOGICAL PROPERTIES

Route of Entry

☑ Skin Contact ☐ Skin Absorption ☑ Eye Contact ☑ Acute Inhalation ☐ Chronic Inhalation ☑ Ingestion

Effects of Acute Exposure to Product

Skin	**Severe irritation of mucous and skin, removes natural skin oils.**
Eyes	**Severe eye irritation, intense watering of the eyes, possible lesions, possible blindness when exposed for prolonged period. Eye irritation data: Eye-Rabbit-10mg/ 24 h – Severe.**
Inhalation	**If inhaled in form of dust, irritation of breathing passages, cough, sneezing.**
Ingestion	**If ingested: pain, vomiting blood, diarrhea, collapse, drop in blood pressure (indicates perforation of esophagus or stomach).**

Effects of Chronic Exposure to Product:

Contact dermatitis. Following repeated or prolonged contact, this product can cause redness, desquamation and fissures. This product may contain trace amounts of crystalline silica. Excessive inhalation of respirable crystalline silica dust may result in respiratory disease, including silicosis, pneumoconiosis and pulmonary fibrosis.

LD_{50} of Product (Specify Species and Route) **7340 mg/kg (Rat, Oral)** **7300 mg/kg (Mouse, Oral)**	Irritancy of Product **Severe to moist tissues**	Exposure limits of Product **Unavailable**
LC_{50} of Product (Specify Species) **Unavailable**	Sensitization to Product **None**	Synergistic materials **None reported**

Product Name: HIGH CALCIUM HYDRATED LIME

Page 4 of 7

SECTION VI - TOXICOLOGICAL PROPERTIES (Cont'd)

☑ Carcinogenicity ☐ Reproductive effects ☐ Tératogenicity ☐ Mutagenicity

Calcium Hydroxide is not listed as a carcinogen by ACGIH, MSHA, OSHA, NTP, DFG, RSST or IARC. It may, however, contain trace amounts of Crystalline Silica listed carcinogens by these organizations.

Crystalline Silica, which inhaled in the form of quartz or crystobalite from occupational sources, is classified by IARC as carcinogenic to humans. (Group 1)

Silica, crystalline (Airborne particles of respirable size) is regulated under California's Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Crystalline Silica is listed as a chemical known to the State to cause cancer.

NIOSH considers crystalline silica to be potential occupational carcinogen as defined by the OSHA carcinogen policy [29 CFR 1990]. (Ca).

NTP lists respirable Crystalline Silica as known to be human carcinogens based on sufficient evidence of carcinogenicity in humans. (K).

ACGIH lists respirable Crystalline Silica (quartz) as suspected human carcinogen. (A2).

DFG lists respirable Crystalline Silica as a substance that causes cancer in man (1)

RSST lists respirable Crystalline Silica (quartz) as suspected human carcinogen.

SECTION VII - PREVENTIVE MEASURES

Personal Protective Equipment (PPE)	**Wear clean, dry gloves, full length pants over boots, long sleeved shirt buttoned at the neck, head protection and approved eye protection selected for the working conditions.**
Gloves (Specify)	**Gauntlets Cuff style.**
Respiratory (Specify)	**Respirator Recommendations for Calcium Hydroxide: Not available.** **Respirator Recommendations for Calcium Oxide: NIOSH approved respirator.** **Up to 10 mg/m^3: (APF = 5) Any quarter-mask respirator.** **Up to 20 mg/m^3: (APF = 10) Any particulate respirator equipped with an N95, R95 or P95 filter except quarter-mask respirator. Any supplied-air respirator.** **Up to 25 mg/m^3: (APF = 25) Any supplied-air respirator operated in a continuous-flow mode. Any powered, air purifying respirator with a high-efficiency particulate filter.**
Eyes (Specify)	**ANSI, CSA or ASTM approved safety glasses with side shields. Tight fitting dust goggles should be worn when excessive (visible) dust conditions are present. Do not wear contact lenses without tight fitting goggles when handling this chemical.**
Footwear (Specify)	**Resistant to caustics.**
Clothing (Specify)	**Fully covering skin. Remove when wet or contaminated. Change daily.**
Other (Specify)	**Evaluate degree of exposure and use PPE if necessary. After handling lime, employees must shower. If exposed daily, use oil, Vaseline, silicone base crème etc. to protect exposed skin, particularly neck, face and wrists.**

Engineering Controls (e.g. ventilation, enclosed process, specify)

Enclose dust sources; use exhaust ventilation (dust collector) at handling points, keep levels below Max. Concentration Permitted.

Product Name: HIGH CALCIUM HYDRATED LIME

Page 5 of 7

SECTION VII - PREVENTIVE MEASURES (Cont'd)

Leak and Spill Procedure

Limit access to trained personnel. Use industrial vacuums for large spills. Ventilate area.

Waste Disposal

Transport to disposal area or bury. Review Federal, Provincial and local Environmental regulations.

Handling Procedures and Equipment

Avoid skin and eye contact. Minimize dust generation. Wear protective goggles and in cases of insufficient ventilation, use NIOSH approved dust respirator. An eye wash station and safety shower should be readily available where this material or its water dispersions are used. Contact lenses should not be worn when working with this chemical.

Storage Requirements

Keep tightly closed containers in a cool, dry and well-ventilated area, away from acids. Keep out of reach of children.

Special Shipment Information

Calcium Hydroxide is neither regulated by the Transportation of Dangerous Goods (TDG) Regulations (Canada) nor by the Hazardous Materials Regulations (USA).

SECTION VIII - FIRST AID MEASURES

Skin

Carefully and gently brush the contaminated body surfaces in order to remove all traces of lime. Use a brush, cloth or gloves. Remove all lime-contaminated clothing. Rinse contaminated area with lukewarm water for 15 to 20 minutes. Consult a physician if exposed area is large or if irritation persists.

Eyes

Immediately rinse contaminated eye(s) with gently running lukewarm water (saline solution is preferred) for 15 to 20 minutes. In the case of an embedded particle in the eye, or chemical burn, as assessed by first aid trained personnel, contact a physician.

Inhalation

Move source of dust or move victim to fresh air. Obtain medical attention immediately. If victim does not breathe, give artificial respiration.

Ingestion

If victim is conscious, give 300 ml (10 oz) of water, followed by diluted vinegar (1 part vinegar, 2 parts water) or fruit juice to neutralize the alkali. Do not induce vomiting. Contact a physician immediately.

General Advise

Consult a physician for all exposures except minor instances of inhalation.

Product Name: HIGH CALCIUM HYDRATED LIME

SECTION IX - REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 (SARA Title III). / The Emergency Planning and "Community Right-to-Know" Act (EPCRA). / Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). / Resource Conservation and Recovery Act (**RCRA**).

Component Calcium Hydroxide has been reviewed against the following regulatory listings:

- **SARA Section 302 – Emergency Planning Notification. Extremely Hazardous Substances (EHS) List and Threshold Planning Quantity (TPQ). (40 CFR, Part 355, Section 30) : Not listed.**
- **SARA Section 304 – Emergency Release Notification. Extremely Hazardous Substances (EHS) and Reportable Quantity (RQ) List. (40 CFR, Part 355, Section 40) : Not listed.**
- **SARA Section 311/312 – Hazard Categories (40 CFR, Part 370) : This product is regulated under CFR 1910.1200 (OSHA Hazard Communication) as Immediate (Acute) Health Hazards – Irritant.**
- **SARA Section 313 – Toxics Release Inventory (TRI). Toxic Chemical List (40 CFR, Part 372). Not listed.**
- **CERCLA – Hazardous Substance (40 CFR, Part 302): Not listed in Table 302.4.**
- **RCRA – Hazardous Waste Number (40 CFR, Part 261, Subpart D): Not listed.**
- **RCRA – Hazardous Waste Classification (40 CFR, Part 261, Subpart C): Not classified.**

CWA 311. - Clean Water Act List of Hazardous Substances.

Calcium Hydroxide has been withdrawn from the Clean Water Act (CWA) list of hazardous substances. (11/13/79) (44FR65400)

California Proposition 65.

Component Calcium Hydroxide does not appear on the above regulatory listing. This product may contain small amounts of crystalline silica. Silica, crystalline (Airborne particles of respirable size) is regulated under California's Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Crystalline silica is listed as a chemical known to the State to cause cancer.

Transportation - Hazardous Materials Regulations (USA) & Transportation of Dangerous Goods (TDG) Regulations (Can).

Calcium Hydroxide does not appear on the above regulatory listings

Toxic Substances Control Act (TSCA).

All naturally occurring components of this product are automatically included in the USEPA TSCA Inventory List per 40 CFR 710.4 (b). All other components are listed on the USEPA TSCA Chemical Substances Inventory. Calcium Hydroxide is subject to inventory update reporting (IUR).

Canadian Environmental Protection Act (CEPA) – Substances Lists (DSL/NDSL).

Calcium Hydroxide is specified on the public Portion of the Domestic Substances List (DSL).

ANSI/NSF 60 - Drinking Water Treatment Additives.

Hydrated Lime has been investigated with respect to elements identified by EPA as toxic and it has been classified for use in direct contact with drinking water (in accordance with Standard ANSI/NSF 60). For a list of classified products, refer to Underwriters Laboratories Inc.'s Online Certifications Directory.

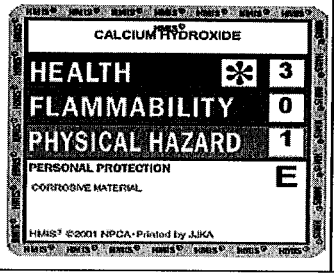
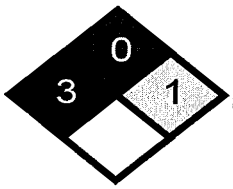
FDA - U.S. Food and Drug Administration, Department of Health and Human Services.

Calcium Hydroxide has been determined as "Generally Recognized As Safe" (GRAS) by FDA. See 21CFR184.1205. (CFR Title 21 Part 184 - - Direct food substances affirmed as generally recognized as safe).

Product Name: HIGH CALCIUM HYDRATED LIME

Page 7 of 7

SECTION X - OTHER INFORMATION

Hazardous Materials Identification System (U.S.)		National Fire Protection Association (U.S.) NFPA 704 **Health Hazard** **Fire Hazard** **Instability / Thermal Hazard** **Specific hazard** 

WHMIS – Classification: **"E" Corrosive Materials.**	WHMIS – Classification: **"D2A" Materials causing other toxic effects.**
Symbol: 	Symbol: 

Additional Information/Comments:

The technical data contained herein is given as information only and is believed to be reliable. GRAYMONT makes no guarantee of results and assumes no obligation or liability in connection therewith.

Sources Used:

NFPA, NLA, TDG, CSST, RSST, (LSRO-FASEB), Hazardous Products Act, Environment Canada, Enviroguide, OSHA, ACGIH, IARC, NIOSH, CFR, NTP, HSDB, EPA SRS, RTECS, DFG, Chemistry and Technology of Lime and Limestone (John Wiley and Sons, Inc.), Lime and Limestone (WILEY-VCH).

SECTION XI - PREPARATION INFORMATION

Prepared by:	Telephone number:	Date :
GRAYMONT (QC) INC. **Quality Assurance & Technical Services**	**(450) 449-2262**	**May 2012**

An electronic version of this MSDS is available at: www.graymont.com under the PRODUCTS section.