

Montania White Cement

Buildings Products Information Requirements (BPIR) Class I November 2023



Product Name: Montania White Cement

Application: Mortar

Product Description and Intended Use:

Montania is a White Portland Cement is a cement where its primary purpose is for mortar in non structural brick laying applications where the cement is mixed with various sand colours to determine a desired mortar colour in the bricks.

Product Identifier:

Bags are labelled as per bag sample attached.



Place of manufacture: Thailand

Legal and trading name of the manufacturer: SCG Thailand

Web site <https://scginternational.com/home-page/international-supply-chain-solutions/construction/>

Address for Service:

Caledonian Pacific Ltd

7 Chesterfield Place , Rangiora 7400

Website: www.calpac.co.nz

Email Address: briang@calpac.nz

Phone Number: 0272407250

NZBN: 9429046427366

Relevant New Zealand Building Code Clauses:

Montania White Portland Cement whilst it complies with NZS3122 is NOT to be used in STRUCTURAL concrete. NZS3122 requires each batch to be tested in compliance with the standard and this is uneconomic to do so. Batch test certificates from the supplier in Thailand can be supplied on request.

The relevant NZBC clauses are:

- Structure B1

That the cement complies with NZS3122 and is referenced in the concrete design and construction NZS3101

- Durability: B2

That the cement complies with NZS3122. Others (designers) determine the appropriate mix design to determine durability.

- Fire Performance C

Montania White cement is non combustible.

- Hazardous Building Materials F2

Montania White cement complies with F2.3.1 of the NZBC

Statement on how the building product is expected to contribute to compliance:

The product is NON STRUCTURAL

Limitations on the use of the building product:

To be used in mortar or plastering mixes using good trade practices for mix design.

Design requirements that would support the appropriate use of the building product:

For uses as a structural Building product you would need to consult a building design engineer.

Maintenance Requirements:

Montania White Cement must be kept dry. Bags of cement that have hardened must be discarded. Cement to be consumed within 3 months of purchase, unless stored in dry, low humidity environments.

Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004?

Yes No

Legal Disclaimer: The information contained in this document is current as at published date and is based on data available to Caledonian Pacific Ltd at the time of going to print. Caledonian Pacific Ltd reserves the right to change the information contained in this document without prior notice. It is your responsibility to ensure that you have the most up to date information available. You can call 0272407250 or visit www.calpac.co.nz to obtain current information. Caledonian Pacific Ltd has used all reasonable endeavours to ensure the accuracy and reliability of the information contained in this document. However, to the maximum extent permitted by law, Caledonian Pacific Ltd assumes no responsibility or liability for any inaccuracies, omissions or errors in this information nor for any actions taken in reliance on this information.



Web Site : www.scg.com

Tel. : 662-586-2222

E-mail : pimpimos@scg.com

WHITE PORTLAND CEMENT "MONTANIA" BRAND

PHYSICAL PROPERTIES	ASTM Standard			Typical Test Result			
Whiteness (Hunter)	-			92 - 94			
Fineness specific surface							
Air permeability test	cm ² /g	Min. 2800		4000 - 4400			
Time of setting							
Vicat test : Initial set	minute	Min. 45		70 - 100			
Final set	minute	Max. 375		150 - 180			
Soundness : Autoclave expansion	%	Max. 0.8		(-0.03) - 0.05			
Air content of mortar	%	Max. 12.0		5.0 - 8.0			
False set	%	Min. 50		60 - 80			
Compressive strength (mortar cubes)		Kgf/cm ²	Mpa	psi	Kgf/cm ²	Mpa	psi
3 days	Min	122	12.0	1740	270 - 320	26.5 - 31.4	3840 - 4551
7 days	Min	194	19.0	2760	350 - 410	34.3 - 40.2	4978 - 5830
28 days	Min	285	28.0	4060	420 - 490	41.2 - 48.0	5973 - 6969
CHEMICAL PROPERTIES	ASTM Standard			Typical Test Result			
Silicon dioxide (SiO ₂)	%	-		22.6 - 23.6			
Aluminium oxide (Al ₂ O ₃)	%	-		4.0 - 5.0			
Ferric oxide (Fe ₂ O ₃)	%	-		0.15 - 0.3			
Calcium oxide (CaO)	%	-		65.5 - 67.5			
Magnesium oxide (MgO)	%	Max. 6.0		0.8 - 1.1			
Sulfur trioxide (SO ₃)	%	Max. 3.5					
when C ₃ A > 8.0		Max. 3.5		2.8 - 3.4			
Total Alkali as Na ₂ O	%	Max. 0.6		0.35 - 0.55			
Loss on ignition	%	Max. 3.0		2.0 - 3.0			
Insoluble residue	%	Max. 0.75		0.1 - 0.3			
Tricalcium silicate (C ₃ S)	%	-		55 - 70			
Dicalcium silicate (C ₂ S)	%	-		15 - 25			
Tricalcium aluminate (C ₃ A)	%	-		10 - 13			

ASTM C 150-12

Code : EL02

Construction Business Division Manager



(Authorized Signature)

4 January 2023

MATERIAL SAFETY DATA SHEET

FOR WHITE PORTLAND CEMENT/CEMENT CLINKER



The persons who use cement or to whom you have supplied cement must be aware of the information in this datasheet before handling, using or disposing of the products.

1. PRODUCT / COMPANY IDENTIFICATION

Manufacturers Name and Address :

The Siam White Cement Company Limited
28 Moo 4 Tumbon Khao Wong ,Amphur Paputtabath ,Saraburi 18120 Thailand

Distributors Name and Address :

SCG Cement-Building Materials Company Limited
1 Siam Cement Road, Bangsue, Bangkok 10800 Thailand

Telephone Number for Information :

Tel : 662 586 2229-30
Fax : 662 586 4127

Chemical Family : Calcium Compounds

Chemical Name and Synonyms :

Portland Cement (CAS # 65997 - 15 - 1)

Trade Name and Synonyms :

Portland Cement Types I, II, I/II, III, V
Cement Clinker Types I, II, I/II, III, V
White Portland Cement Type I

2. EMERGENCY AND FIRST AID

EMERGENCY INFORMATION :

Portland cement is a light gray of white powder. When in contact with moisture in eyes or on skin, or when mixed with water, portland cement becomes highly caustic (pH >12) and will damage or burn (as severely as third-degree) the eyes of skin. Inhalation may cause irritation to the moist mucous membranes of the nose, throat and upper respiratory system or may cause or may aggravate certain lung diseases of conditions. Use exposure controls of personal protection methods describe in section 10.

EYES :

immediately flush eye 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 if irritation or inflammation develops or persists. Seek immediate medical treatment in the event of burns.

INHALATION :

Remove Person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek medical help if coughing and other symptoms do not subside. Inhalation of large amounts of portland cement require immediate medical attention.

INGESTION :

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

3. COMPOSITION INFORMATION

DESCRIPTION :

This product consists of finely ground portland cement clinker mixed with a small amount of gypsum (calcium sulfate dihydrate). The portland cement clinker is made by heating to a high temperature a mixture of substance such as limestone, sand, clay and shale. Portland cement is essentially hydraulic calcium silicates contained in a crystalline mass, not separable into individual components. Major compounds are :

3CaO-SiO ₂	Tricalcium Silicate	CAS # 12168-85-3
2CaO-SiO ₂	Dicalcium Silicate	CAS # 10034-77-2
3CaO-Al ₂ O ₃	Tricalcium Aluminate	CAS # 12042-78-3
4CaO-Al ₂ O ₃ -Fe ₂ O ₃	Tetracalcium Aluminoferrite	CAS # 12068-35-8
CaSO ₄ -2H ₂ O	Calcium Sulfate Dihydrate (Gypsum)	(CAS #13397-24-5)

4. HAZARDOUS INGREDIENT

Ingredients :

Portland cements are listed by OSHA in 26 CFR 1010.1000, Table Z-I-A. and require material safety data sheets (FR, January 19, 1989), MSRA (30CFR 55.5.-1. Ref. 2), ACGIH (TLV's for 1978. Appendix E) and ACGIH (TLV's for 1984-5. Appendix D) list portlan cements as nuisance dusts. Portland cements are NOT listed by NTF, LARC, or OSHA as carcinogens. However, since portland cement is manufactured from raw materials 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 0.78 percent insoluble residue. A fraction of these residues may be from crystalline silica.

5. HAZARD IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

NOTE : Potential health effects may vary depending upon the duration and degree of exposure. To reduce or eliminate health hazards associated with this product, use exposure controls or personal protection methods as described in Section 10.

EYE CONTACT :

(Acute/Chronic) Exposure to airborne dust may cause immediate or delayed irritation or inflammation of the cornea. Eye contact by larger amounts of dry powder or splashes of wet portland content may cause effects ranging from moderate eye irritation to chemical burns and blindness.

(1)

SKIN CONTACT :

(Acute) 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. Discomfort or pain cannot be relied upon to alert a person to a hazardous skin exposure. (Chronic) Dry portland cement coming in contact with wet skin or exposure to 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 chemical burns. (Acute/Chronic) Some individuals may exhibit an allergic response upon exposure to portland cement. The response may appear in a variety of forms ranging from a mild rash to severe skin ulcers.

INHALATION :

(Acute) Exposure to portland cement may cause irritation to the moist mucous membranes of the nose, throat and upper respiratory system. Pre-existing upper respiratory and lung diseases may be aggravated by inhalation of portland cement.

INGESTION :

(Acute/Chronic) Internal discomfort or ill effects are possible if large quantities are swallowed.

CARCINOGENIC POTENTIAL :

Portland cement is not recognized as a carcinogen by NTP, SOHA, or IARC. However, it may contain trace amounts of heavy metals recognized as carcinogens by these organizations. In addition, IARC classifies crystalline silica, a trace constituent, as a known human carcinogen (Group I). NTP has characterized respirable silica as "reasonably anticipated to be a carcinogen." (See also Section 13.)

6. PHYSICAL / CHEMICAL DATA

APPEARANCE/ODOR : Gray, white or colored powder, odorless

PHYSICAL STATE : Solid (Powder)

BOILING POINT : > 10000C

MELTING POINT : Not applicable

VAPOR PRESSURE : Not applicable

VAPOR DENSITY : Not applicable

pH (IN WATER) (ASTM D 1293-95) : 12 to 13

SOLUBILITY IN WATER : Slightly soluble (0.1% to 1.0%)

SPECIFIC GRAVITY (H₂O=1.0): 3.15

EVAPORATION RATE : Not applicable

7. FIRE AND EXPLOSION

FLASH POINT : None

LOWER EXPLOSIVE LIMIT : None

AUTO IGNITION TEMPERATURE : Not combustible

UPPER EXPLOSIVE LIMIT : None

FLAMMABLE LIMITS : Not applicable

SPECIAL FIRE FIGHTING PROCEDURES : None

EXTINGUISHING MEDIA : Not combustible

UNUSUAL FIRE AND EXPLOSION HAZARDS : None

HAZARDOUS COMBUSTION PRODUCTS : None

8. STABILITY AND REACTIVITY DATA

STABILITY : Product is stable. Keep dry until used.

CONDITIONS TO AVOID :

Unintentional contact with water. Contact with water will result in hydration and produces (caustic) calcium hydroxide

INCOMPATIBILITY :

Wet portland cement is alkaline. As such, it is incompatible with acids, ammonium salts and aluminum metal.

HAZARDOUS DECOMPOSITION : Will not occur.

HAZARDOUS POLYMERIZATION : Will not occur.

9. PRECAUTIONS FOR HANDLING, STORAGE AND DISPOSAL

HANDLING AND STORAGE :

Keep dry until used. Handle and store in a manner so that airborne dust does not exceed applicable exposure limits. Use adequate ventilation and dust collection. Use exposure control and personal protection methods as described in Section 10.

SPILL :

Use dry clean-up methods that do not disperse dust into the air or entry into surface water. Material can be used if not contaminated. Place in an appropriate container for disposal or use. Avoid inhalation of dust and contact with skin and eyes. Use exposure control and personal protection methods as described in Section 10.

DISPOSAL :

Comply with all applicable local, state and federal regulations for disposal of unusable or contaminated materials. Dispose of packaging/containers according to local, state and federal regulations.

10. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION :

Use local exhaust or general dilution ventilation to control dusts levels below applicable exposure limits. Minimize dispersal of dust into the air. If local or general ventilation is not adequate to control dust levels below applicable exposure limits or when dust causes irritation or discomfort, use MSHA/NIOSH approved respirators.



RESPIRATORY PROTECTION

EYE PROTECTION :

Wear safety glasses with side shields or goggles to avoid contact with the eyes. In extremely dusty environments and unpredictable environments, wear tight-fitting invented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when handling cement or cement containing products.



EYE PROTECTION

SKIN PROTECTION :

Wear impervious abrasion and alkali resistant gloves, boots, long sleeved shirt, long pants or other protective clothing to prevent skin contact. Promptly remove clothing dusty with dry portland cement, and launder before reuse. If contact occurs, wash areas contacted by material with pH neutral soap and water.



Waterproof
Gloves



Waterproof
Boots

11. TRANSPORTATION DATA

Portland cement is not hazardous under U.S. DOT or TDG (required only if product sold into Canada) regulations.

12. TOXICOLOGICAL AND ECOLOGICAL INFORMATION

For a description of available, more detailed toxicological and ecological information, contact Siam Cement Public Company Limited.

13. OTHER REGULATORY INFORMATION

Status under US OSHA Hazard Communication Rule 29 CFR 1910.1200 :
Portland cement is considered a hazardous chemical under this regulation and should be included in the employer's hazard communication program.

Status under CERCLA/Superfund, 40 CFR 117 and 302 : Not listed.

Hazard Category under SARA (Title III), Sections 311 and 312 :
Portland cement qualifies as a hazardous substance with delayed healthy 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 inventor, 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 :
(Required if product sold into California)
This product contains crystalline silica, a substance known to the State of California to cause cancer. This product also many contain trace amounts of heavy metals known to the state of California to cause cancer, birth defects or other reproductive harm.

Status under Canadian Environmental Protection ACT. :
(Required only if product sold into Canada)
Not listed.

Status under Canadian WHMIS :
(Required only if product sold into Canada)
Portland cement is considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations (Class DZA, E-Corrosive Material) and subject to the requirements of WHMIS.

14. OTHER INFORMATION

This MSDS provides information on various types of portland cement products. A particular product's compositions may vary from sample to sample. The information provided herein is believed by Siam Cement Public Company Limited to be accurate at the time of preparation or prepared from sources believed to be reliable. Health and safety precautions in this data sheet may not be adequate for all individuals or situations. Users have the responsibility to comply with all laws and procedures applicable to the safe handling and use of the product, to determine the suitability of the product for its intended use, and to understand possible hazards associated with mixing portland cement with other materials SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THERE OF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY SIAM CEMENT PUBLIC COMPANY LIMITED.

ABBREVIATIONS

ACGIH	American Conference of Governmental Industrial Hygienists
ASTM	American Society for Testing and Materials
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
ft ³	Cubic foot
IARC	International Agency for Research on Cancer
m ³	Cubic Meter
mg	Milligram
MSHA	Mine Safety and Health Administration
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
REL	Recommended Exposure Limit
SARA	Superfund Amendments and Reauthorization Act
TDG	Transportation of Dangerous goods (Required only if product sold into Canada)
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
TWA	Time Weighted Average
WHMIS	Workplace Hazardous Materials Information System (Required only if product sold into Canada)

SAFETY DATA SHEET (SDS)

The persons who use cement or to whom you have supplied cement must be aware of the information in this datasheet before handling, using or disposing of the products.

1. Identification of Substance or mixture and of the supplier

Identification of Products:

GHS product identifier: White Portland Cement

Other means of identification: White Clinker, White Cement, Decorative Cement

1.1 Trade name

SCG White Clinker for produce White Portland Cement

SCG WHITE PORTLAND CEMENT (EL01)

MONTANIA WHITE PORTLAND CEMENT (EL02)

SCG WHITE MIXED CEMENT F1

SCG WHITE MIXED CEMENT F2

Tiger Decor Easymix Marble Render

Tiger Decor Easymix Terrazzo

Tiger Decor Color Skim Coat

Tiger Decor Fine White Plaster

Tiger Decor Texture Render

Tiger Decor Loft Wall

1.2 Relevant Identified Uses of The Substance or Mixture and Uses Advised

Against

White Portland cement, White cement and Decorative cement are used in combination with natural and artificially aggregates, such as limestone, sand, gravel and pebble to produce decorative and architectural mortar, Terrazzo floor, Gravel washed floor, plaster, concrete and produce technical mortar. Up to appropriate of each product.

1.3 Company Identification Manufacturers Name and Address

Manufacturers: Siam Cement (Ta Luang) Co., Ltd.

Distributor: SCG INTERNATIONAL CORPORATION CO., LTD.

1 Siam Cement Road, Bang sue, Bangkok 10800 Thailand

1.4 Emergency Telephone Number

Tel: +662-586-2222

Email : scginternational@scg.com

www.scginternational.com

2. Hazards Identification

2.1 Classification of The Substance or Mixture

White Portland cement, White cement and Decorative cement are mixture, white color-yellow shade (for some products, it's up to color series), no smell.

Classification of The Mixture

Skin corrosion/irritation – Category 1 corrosion





Serious eye damage/ eye irritation – Category 2A irritation

Skin sensitization – Category 1

Respiratory sensitizer - Category 1

2.2 Label element and Precautionary statements

Cement contacts with moisture in eyes or on skin, or when mixed with water will become highly caustic (pH>11) when exposure to skin will cause irritation or whom with allergies may cause dermatitis or burns. When exposure to eyes will cause irritation or serious eye damage. Airborne dust may cause respiratory irritation. The effect will increase according to the amount and duration of contact.

Effect to health	Signal	Signal word	Hazard statements
Skin corrosion/irritation		Danger	Causes severe skin burn
Serious eye damage/ eye irritation		Caution	Causes severe eye damage
Skin sensitizer		Caution	May cause an allergic skin reaction
Respiratory sensitizer		Danger	May cause respiratory irritation

Precautionary statements:

- This product is not a consumer product. Do not eat
- Should be kept away from children
- Read and follow instructions, safety precautions before use.
- Avoid direct contact with cement by wearing personal protective equipment while working s safety glass, long sleeved shirt and long pants, gloves, boots, respiratory protection

- **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor

- **If on skin:** Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse.

- **If swallowed:** Rinse mouth. Do NOT induce vomiting. Immediately call a poison center/doctor

- **If inhaled:** Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor.

2.3 Other hazard

- Dust generation in closed area with spark may be risk of explode (Dust explosion hazard of powder)

- Cement may contain trace amount of Chromium(VI) when mix with water and exposure to skin may cause dermal sensitization. Avoid direct contact with cement by wearing personal protective equipment.

3. Composition/Information on Ingredients

Substance: Mixture

Chemical Identity: Calcium Silicate Compound, Calcium Compound, Calcium Sulphate Compound, Silica Compound

Chemical Name and Synonyms:

Ingredients	Content (%)*	CAS Number
1. White Portland Cement Clinker	A – B %	65997-15-1
2. Gypsum	C – D %	13397-24-5
3. Limestone	E – F %	1317-65-3
4. Calcium Oxide	G – H %	1305-78-8

- Content shown as a range is up to formula of any products and protect confidentiality. Other ingredient is not hazardous substance.
- White Portland cement may contain trace elements such as Crystalline Silica, Potassium and Sodium Compound and Heavy Metal (Chromium including Chromium (VI), Nickel, Lead and Cadmium)

4. First-Aid Measures

4.1 Description of First-Aid Measures

Eyes:

Immediately flush eye 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 if irritation or inflammation develops or persists. Seek immediate medical treatment in the event of burns.

Ingestion:

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

Inhalation:

Remove Person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek medical help if coughing and other symptoms do not subside. Inhalation of large amounts of cement require immediate medical attention.

4.2 Most important symptoms/effects, acute and delayed

Eyes: Causes eye irritation. If contact with large amounts and long time of dry powder or with wet cement can cause serious eye damage.

Skin: May cause skin irritation. Whom with allergies may cause dermatitis or burns.

Ingestion: Causes burns or irritation to mouth, throat and gastrointestinal

Inhalation: May cause respiratory irritation. If contact with large amounts and long time of dry powder may cause respiratory disease

4.3 Indication of immediate medical attention and special treatment needed

If exposed and serious damage should see a doctor with this safety data sheet (SDS).

5. Fire Fighting Measures

Cement are non-combustible and non-explosive.

5.1 Extinguishing media

Use fire extinguishing media suitable for surrounding fire.

5.2 Special Hazards Arising From The Substance Or Mixture

Water used for fire extinguishing, wet cement may be corrosive and irritation from high pH

5.3 Precautions for Fire-Fighters

- Fire-fighters should wear appropriate protective equipment include respirator mask, safety glasses or goggle, abrasion and alkali resistant gloves, boots, long sleeved shirt, long pants or other protective clothing to avoid skin contact.
- Dust generation in closed area with spark may be risk of explode (Dust explosion hazard of powder)

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

- Avoid inhalation of dust with respirator mask. Avoid contact with eyes and skin contact safety glasses or goggles, abrasion and alkali resistant gloves, boots, long sleeved shirt, long pants or other protective clothing.
- Use work methods that minimize dust production.
- Evacuate unnecessary personnel.

6.2 Environmental precautions

Use dry clean-up methods that do not disperse dust into the air or entry into water or sewer and should not be dumped in nature but collected and delivered according to agreement with the local authorities.

6.3 Methods and materials for containment and cleaning up

Remove spillage with vacuum cleaner fitted with HEPA filter. If cannot, should collect spillage with shovel and place in closed container.

7. Handling and Storage

7.1 Precautions for safe handling

Protective measures:

Put on appropriate personal protective equipment (see Section 8.3).

Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure by obtaining and following special instructions before use. Do not handle until all safety precautions have been read and understood. Use only with adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Keep dry until used:

Bag cement keep on pallet, Store in a dry and cool place which do not close to wall and floor. Should be stored separately by the date of receipt and first in, first out

Bulk cement should be stored in silos that are waterproof, dry.

Safe storage:

Bag cement: do not stack more than 2 pallet layer.

Bulk cement: do not enter a confined space that stores or contains portland cement unless appropriate procedures and protection are available. Portland cement in silo can build up or adhere to the walls of a confined space and then release or fall suddenly

Dust generation in closed area with spark may be risk of explode (Dust explosion hazard of powder).

Incompatibility:

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

8. Exposure Controls/Personal Protection

8.1 Control parameters

Occupational Exposure Limits: OSHA PEL- Portland Cement

TWA: 5mg/m³. 8 hours. Form: Repearable fraction

TWA: 10 mg/m³. 8 hours. Form: Total dust

8.2 Appropriate engineering controls

Provide adequate ventilation. Observe occupational exposure limits and minimize the risk of inhalation of dust by using vacuum cleaner fitted with HEPA filter

8.3 Individual protection measures

Eye Protection: Wear safety glasses with side shields or goggles to keep away from contact with the eyes. In extremely dusty or unpredictable environments, wear tight-fitting invented or indirectly vented goggles to avoid eye irritation or injury. Whilst handling cement do not wear contact lenses.



Eye Protection

Skin Protection: Wear abrasion and alkali resistant gloves, boots, long sleeved shirt, long pants or other protective clothing to avoid skin contact. Promptly remove cement-contaminated clothing and launder before reuse. If contact occurs, wash contacted areas by material with pH neutral soap and water. Heat-resistant gloves, clothing, footwear required.



Waterproof Gloves



Waterproof Boots

Respiratory Protection: Avoid actions that cause dust to become airborne. Use local exhaust or general dilution ventilation to control dusts levels below applicable exposure limits. If ventilation is insufficient to control dust levels below applicable exposure limits or when dust causes irritation or discomfort, use HSE approved respirators.



Respiratory Protection

Information on general occupational hygiene:

Eating, drinking and smoking in work areas of cement handled, stored used is prohibited. After contact to cement, worker should clean hands, face and clothing before eating, drinking and smoking.

9. Physical and Chemical Properties

9.1 Physical properties:

Physical properties (Cement powder)	
State	Solid state (Powder)
Particle Size	5 – 30 micron
Odor	N/A
pH	N/A (mix with water pH >11)
Viscosity	N/A
Freezing point	N/A
Boiling point	N/A
Melting point	>1,000 °C
Flash point	None
Explosion	N/A
True Density	2,800 – 3,200 kg/m ³
Dry Bulk Density	1,100 – 1,600 kg/m ³
Water solubility	N/A

9.2 Chemical properties:

Main Composition:

- 3CaO – SiO₂ - Tricalcium silicate
- 2CaO – SiO₂ - Dicalcium silicate
- 3CaO – Al₂O₃ - Tricalcium aluminate
- 4CaO – Al₂O₃ - Fe₂O₃ - Tetracalcium aluminoferrite
- CaSO₄·2H₂O - Calcium sulphate dehydrate
- CaCO₃ - Calcium carbonate
- CaO - Calcium oxide

10. Stability and Reactivity

10.1. Reactivity: Reacts with water forming hydrated compounds, releasing heat and producing a strong alkaline solution pH>11 until reaction is complete.

10.2. Chemical Stability: Product is stable. Keep dry until used. (see section 7)

10.3. Possibility of Hazardous Reactions: Under normal conditions of storage and use, cement will not occur hazardous reactions.

10.4. Conditions to Avoid: Humid conditions during storage may cause lump formation and loss of product quality.

10.5. Incompatible Materials: Acids. Oxidizers. Ammonium salts. Aluminum powder in wet cement should be avoided.

10.6. Hazardous Decomposition Products: Under normal conditions of storage and use, cement will not decompose into any hazardous products.

11. Toxicological Information

Information on toxicological effects:

Acute toxicity: Cement LD50/LC50 = Not available

Irritation/Corrosion:

Skin: May cause skin irritation and serious burns in the presence of moisture.

Eyes: Causes serious eye damage. May cause burns in the presence of moisture.

Respiratory: May cause respiratory tract irritation.

Sensitization: May cause sensitization due to the potential presence of trace amounts of hexavalent chromium.

Mutagenicity: There are no data available

Carcinogenicity: The epidemiological literature does not support the designation of cement as a suspected human carcinogen
cement is not classifiable as a human carcinogen. Based on available data, the classification criteria are not met.

Information on the likely routes of exposure

Eyes: Causes eye irritation. If contact with large amounts and long time of dry powder or with wet cement can cause serious eye damage.

Skin: May cause skin irritation. Whom with allergies may cause dermatitis or burns.

Ingestion: Causes burns or irritation to mouth, throat and gastrointestinal

Inhalation: May cause respiratory irritation. If contact with large amounts and long time of dry powder may cause respiratory disease

Delayed and immediate effects and also chronic effects from short and long term exposure:

Potential immediate effects: No known significant effects or critical hazards.

Potential delayed effects: No known significant effects or critical hazards.

Numerical measures of toxicity:

Reacts with water producing a strong alkaline solution pH11-13

12. Ecological Information

12.1 Toxicity-ecology

The product is not hazardous to the environment.

12.2 Persistence and Degradability

Not relevant. After hardening, cement presents no toxicity risks.

12.3 Bioaccumulative Potential

Not relevant. After hardening, cement presents no toxicity risks.

12.4 Mobility in Soil

Not relevant. After hardening, cement presents no toxicity risks.

12.5 Other Adverse

Not relevant.

13. Disposal Considerations

Waste treatment methods

Comply with all applicable local, state and federal regulations for disposal of unusable or contaminated materials. Dispose of packaging/containers according to local, state and federal regulations.

Product - unused residue or dry spillage

Pick up dry unused residue or dry spillage as is and place in closed container. Possibly reuse depending upon contamination and shelf life considerations and the requirement to avoid dust exposure. In case of disposal, harden with water and dispose according to “Product - after addition of water, hardened”

Product - slurries Wait to harden and dispose of as explained below under “Product - after addition of water, hardened”. Do not dispose into sewage and drainage systems or water resource

Product - after addition of water, hardened Dispose of according to the local legislation. Avoid entry into the sewage water system. Dispose of the hardened product as concrete waste. Concrete waste is not a dangerous waste.

Packaging Completely empty the packaging and process it according to local legislation.

14. Transport Information

The product is not covered by international regulation on the transport of dangerous goods

During transportation must cover cement bag with canvas to prevent moisture or rain

15. Regulatory Information

- **Status under US OSHA Hazard Communication Rule 29 CFR 1910.1200 :**

Portland cement is considered a hazardous chemical under this regulation and should be included in the employer's hazard communication program.

- **Status under CERCLA/Superfund, 40 CFR 117 and 302 :**

Not listed.

- **Hazard Category under SARA (Title III), Sections 311 and 312 :**

Portland cement qualifies as a hazardous substance with delayed healthy 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 cement are on the TSCA inventor 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 : (Required if product sold into California)**

This product contains crystalline silica, a substance known to the State of California to cause cancer. This product also many contain trace amounts of heavy metals known to the state of California to cause cancer, birth defects or other reproductive harm.

- **Status under Canadian Environmental Protection ACT. : (Required only if product sold into Canada)** Not listed.

- **Status under Canadian WHMIS : (Required only if product sold into Canada)**

Portland cement is considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations (Class DZA, E-Corrosive Material) and subject to the requirements of WHMIS.

16. Others Information

- This SDS provides information on various types of cement products. A particular product's compositions may vary from sample to sample.

- The information provided herein is believed by SCG Cement and Building Material Company Limited to be accurate at the time of preparation or prepared from sources believed to be reliable.
- Health and safety precautions in this data sheet may not be adequate for all individuals or situations.
- Users have the responsibility to comply with all laws and procedures applicable to the safe handling and use of the product, to determine the suitability of the product for its intended use, and to understand possible hazards associated with mixing cement with other materials
- In the case that the product is supplied to other persons, the responsibility of informing consumers about the information in this datasheet before handling, using or disposing of the products shall fall upon your party.
- Seller makes no warranty, express or implied, concerning the product or the merchantability or fitness thereof for any purpose or concerning the accuracy of any information provided by SCG Cement and Building Material Company Limited.

Revision

Version: 1

Approve Date or Revision Date: 1 Aug 2020