

SAFETY DATA SHEET

FOR WHITE PORTLAND CEMENT/WHITE CEMENT/ WHITE 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

1.1 Identification of Products :

- White Cement Clinker Types I
- White Portland Cement Type I : White Elephant Cement, Montania Brand, Tiger Décor Portland Cement
- White Cement : White Tiger Cement, Montania II

Chemical Name and Synonyms :

Portland Cement (CAS # 65997 - 15 - 1)

Chemical Family : Calcium Compounds

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

White Portland cement is used in combination with natural and artificially aggregates, such as limestone, sand, gravel and pebble to produce decorative and architectural mortar, plaster and concrete.

1.3 Company Identification

Manufacturers Name and Address :

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

Distributors Name and Address :

SCG Trading Company Limited
1 Siam Cement Road, Bangsue, Bangkok 10800 Thailand

1.4 Emergency Telephone Number

(Inside US/Canada)

Tel : 310-323-2194
Fax : 310-324-9528

(Out of US./Canada)

Tel : (+66) 2 586 1888
Fax : (+66) 2 586 6271
Website : www.scg-trading.com
E-Mail : scg-trading@scg.co.th

2. Hazard Identification

2.1 Classification of The Substance or Mixture

White portland cement, white cement is a light white powder. When exposed to moisture in eyes or on skin, or when mixed with water, portland cement becomes highly caustic (pH > 12) and will cause tissue destruction to skin or eyes.

White portland cement, white cement is not recognized as a carcinogen by NTP, SOHA, or IARC.

Serious eye damage/eye irritation – Category 1

Skin irritation – Category 1

Skin sensitization – Category 1

Specific target organ toxicity single exposure respiratory tract irritation - Category 3

2.2 Label Elements

Hazard Pictograms



Signal Word : Danger

Hazard Statements :

- Causes severe skin burn and eye damage
- May cause an allergic skin reaction
- May cause respiratory irritation

3. Composition/Information on Ingredients

Substance : Mixture

Chemical Family : Calcium Compounds

Chemical Name and Synonyms :

White Portland Cement, White Cement (CAS # 65997-15-1)

This product consists of finely ground white portland cement clinker mixed with a small amount of gypsum (calcium sulfate dihydrate). The white portland cement clinker is made by heating to a high temperature a mixture of substance such as limestone, sand, clay and shale. White portland cement, white 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. First Aid Measures

4.1 Description of first aid measure

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 cement require immediate medical attention.

Ingestion :

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

4.2 Most important symptoms/effects, acute and delayed

Eyes : Cause serious eye damage.

Skin : Causes severe burns. May cause an allergic skin reaction.

Inhalation : May cause respiratory irritation.

Ingestion : May cause burns to mouth, throat and stomach

4.3 Indication of immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : Not applicable.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. See Toxicological information(Section 11)

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, may be corrosive.

5.3 Advice for Fire-Fighters

Fire-fighters should wear respirator mask for protect cement dust.

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 with protective clothing. Use work methods which minimize dust production.

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. If cannot, should collect spillage with shovel or bloom and place in closed container.

Note : See section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and Storage

Precautions for safe handling**Protective measures :**

Put on appropriate personal protective equipment (see Section 8). 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. Do not get in eyes or on skin or clothing. Do not breathe dust. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material and keep the container tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

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.

Conditions for safe storage, including any incompatibilities :

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 8.

8. Exposure Controls/Personal Protection

8.1 Control Parameters

Ingredient name	Exposure limits
Cement, portland, chemicals	OSHA PEL (United States, 6/2010). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust
Calcium sulfate (gypsum)	OSHA PEL Z-1 (United States, 2/2006) TWA 5 mg/m ³ 8 hours. Form: Respirable fraction TWA 15 mg/m ³ 8 hours. Form: Total dust
Limestone	OSHA PEL (United States, 6/2010). TWA: 5 mg/m ³ 8 hours. Form: Respirable fraction TWA: 15 mg/m ³ 8 hours. Form: Total dust

8.2 Exposure Controls

8.2.1 Appropriate Engineering Controls

Provide adequate ventilation. Observe occupational exposure limits and minimise the risk of inhalation of dust.

8.2.2 Individual Protection measure

Clean water should always be readily available for skin and (emergency) eye washing. Periodically wash areas contacted by cement with a pH neutral soap and clean, uncontaminated water. If clothing becomes saturated with cement, garments should be removed and replaced with clean, dry clothing.

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 cement, and launder before reuse. If contact occurs, wash areas contacted by material with pH neutral soap and water.



Waterproof Gloves



Waterproof Boots

9. Physical and Chemical Properties

Physical State : Solid (Powder)

Color : White powder

Odor : Odorless

Odor Threshold : No odor threshold, Odorless

pH (in water) (ASTM D 1293-95) : 11 to 13

Solubility in Water : Slightly soluble (0.1% to 1.0%)

Relative Density : 2.8-3.2

Melting Point : > 1,250 °C

Boiling Point : Not applicable

Flash Point : None

Evaporation Rate : Not applicable

Flammable Limits : Not applicable

Lower and Upper Explosive Limit : None

Auto Ignition Temperature : Not combustible

Vapor Pressure : Not applicable

Vapor Density : Not applicable

Partition coefficient: n-octanol/water : Not applicable

Decomposition temperature : Not applicable

Viscosity : Not applicable

Explosive properties : Not applicable.

Oxidising properties : Not applicable

10. Stability and Reactivity

10.1 Reactivity :

Reacts with water forming hydrated compounds, releasing heat and producing a strong alkaline solution 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 Condition to Avoid :

Humid conditions during storage may cause lump formation and loss of product quality.

10.5 Incompatible Material :

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

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

Based on available data, the classification criteria are not met.

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.

Reproductive toxicity :

Based on available data, the classification criteria are not met.

STOT-single exposure :

May cause respiratory irritation

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard :

Not applicable as cements are not used as an aerosol.

Based on available data, the classification criteria are not met.

12. Ecological Information

12.1 Toxicity

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 Results of PBT and vPvB Assessment

Not relevant. This product does not contain any PBT or vPvB substances.

12.6 Other Adverse

Not relevant.

13. Disposal Consideration

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 (IMDG, IATA, ADR/RID)

14.1 UN number

Not relevant

14.2 UN proper shipping name

Not relevant

14.3 Transport hazard class(es)

Not relevant

14.4 Packing group

Not relevant

14.5 Environmental hazards

Not relevant-

14.6 Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not relevant.

15. Regulatory Information

Status under US OSHA Hazard Communication Rule 29 CFR 1910.1200 :

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 :

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 :

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 may 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)

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 The Siam White Cement 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 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 The Siam White Cement 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)
TVL	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)

Revision

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