

**MATERIAL SAFETY DATA SHEET
FOR
WHITE PORTLAND CEMENT**

ISSUED DATE : 12.05.2014

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Supplier:

JK Cement Works (Fujairah) FZC
P.O. Box: 5325, Fujairah (U.A.E.)
Tel: + 971 7 244 0600
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Chemical Family: Calcium Compounds

Chemical Name and Synonyms:

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

Trade Name and Synonyms:

JK White Cement Type-1

2. COMPOSITION/INFORMATION ON INGREDIENTS

DESCRIPTION: This product consists of finely ground Portland cement clinker mixed with a small amount of gypsum (calcium sulfate dehydrate). The Portland cement clinker is made by heating to a high temperature a mixture of substances such as limestone, sand and Clay. 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
2CaO•SiO ₂	Dicalcium Silicate
3CaO•Al ₂ O ₃	Tricalcium Aluminate
4CaO•Al ₂ O ₃ •Fe ₂ O ₃	Tetracalcium Aluminoferrite
CaSO ₄ •2H ₂ O	Calcium Sulphate dyhydrate



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3.HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS:

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 8.

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 cement may cause effects ranging from moderate eye irritation to chemical burns and blindness.

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 (caustic) 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. (Chronic) Inhalation exposure to free crystalline silica may cause delayed lung injury including silicosis, a disabling and potentially fatal lung disease, and/or cause or aggravate other lung diseases or conditions.

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, OSHA, 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 15.)

4. 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.

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.

ACCIDENTIAL RELEASE MEASURES:

Clean up spilled material without causing it to become airborne or mixed with water to limit potential harm. Wear appropriate personal protective equipment. Dispose of waste material according to local, state or federal regulations.



5. FIRE FIGHTING MEASURES

FLASH POINT: None

AUTO IGNITION TEMPERATURE: Not combustible

FLAMMABLE LIMITS: Not applicable

EXTINGUISHING MEDIA: Not combustible

HAZARDOUS PRODUCTS: None

COMBUSTION

LOWER EXPLOSIVE LIMIT: None

UPPER EXPLOSIVE LIMIT: None

SPECIAL FIRE FIGHTING PROCEDURES: None

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

6. ACCIDENTAL RELEASE MEASURES

EMERGENCY INFORMATION: Portland cement can be a light gray, green or white nodule. When in contact with moisture in eyes or on skin, or when mixed with water, Portland cement dust becomes highly caustic (pH > 12) and will damage or burn (as severely as third-degree) the eyes or 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 or conditions.

7. HANDLING AND STORAGE

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.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

RESPIRATORY PROTECTION:

Use local exhaust or general dilution ventilation to control dust 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.



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 unvented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when handling cement or cement containing products.

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 or clothing dampened with moisture mixed with Portland cement, and launder before re-use. If contact occurs, wash areas contacted by material with pH neutral soap and water.

9. PHYSICAL AND CHEMICAL PROPERTIES

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

PHYSICAL STATE: Solid (Powder)

BOILING POINT: > 1000°C

MELTING POINT: Not applicable

VAPOR PRESSURE: Not applicable

VAPOR DENSITY: Not applicable

PH (IN WATER) (ASTM D1293-95) : 12 to 13

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

SPECIFIC GRAVITY (H₂O=1.0) : 3.06-3.08

EVAPORATION RATE: Not applicable

10. STABILITY AND REACTIVITY

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



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11. TOXICOLOGICAL INFORMATION

For a description of available, more detailed toxicological information, contact JK Cement Works (Fujairah) FZC.

12. ECOLOGICAL INFORMATION

For a description of available, more detailed ecological information, contact JK Cement Works (Fujairah) FZC.

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

Portland cement is non hazardous under U.S./U.A.E. DOT regulations in same not classified as hazardous under IATA / ICAO regulations.

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 health effects.



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Status under SARA (Title III), Section 313:

Maybe subject to reporting requirements under Section 313. Contact sales office for further information.

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:

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 Environment Protection Act:

Not Listed

Status under Canadian WHMIS:

Portland Cement is considered to be hazardous material under the Hazardous Product Act as defined by the controlled Product Regulation(Class D2A,E-Corrosive Material) & subject to the requirement of WHMIS.

16. OTHER INFORMATION

Portland Cement should be used by knowledgeable persons. The information provided herein is believed by JK Cement Works (Fujairah) 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 THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY JK Cement Works (Fujairah) FZC.



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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
ft3:	Cubic foot
IARC:	International Agency for Research on Cancer
m3:	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
TLV:	Threshold Limit Value
TSCA:	Toxic Substance Control Act
TWA:	Time Weighted Average



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