P/N 462

ÇİMSA

SAFETY DATA SHEET Date issued: 26.Aug.2011

1- IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1- Identification of the substance/mixture

Product Information : Çimsa Portland Cement

Product Identifiers : Cement, White Portland Cement, C150 TYPE 1

1.2- Use of the substance/mixture

White Cement is used as an hydraulic binder for the production of concrete, mortars, grouts, etc.

1.3- Company Identification

Manufacturer Name : Çimsa Çimento San. Ve Tic. A.Ş.

Address : Toroslar Mah. Tekke Cad. Yeni Taşkent

33013 Mersin /Turkey

Telephone Number : +90 (0) 324 454 00 60

Fax Number : +90 (0) 324 454 00 75
U.S. Contact info : +1 (972) 851 7880

Internet Address : www.cimsa.com.tr/US-EN

E-mail : cimsa@cimsa.com.tr

2- HAZARD IDENTIFICATION

When White Cement reacts with water, for instance when making concrete or mortar , or when the White Cement becomes damp, a strong alkaline solution is produced. When in contact with moist areas of the body or mixed with water, White Portland Cement may cause skin irritation, and, if in contact for sufficient duration, may damage or burn the exposed areas.

2.1- Primary Route(s) of entry

Inhalation : Yes
Skin- Eyes : Yes
Ingestion : No, except in accidental cases

2.2- Human Health

Inhalation: Frequent inhalation of large quantities of White Cement dust over a long period of time increases the risk of developing lung diseases.

Eyes: Eye contact with White Cement (dry or wet) may cause serious and potentially irreversible injuries.

Skin: White Cement may have an irritating effect on moist skin (due to transpiration or humidity) after prolonged contact.
Prolonged skin contact with wet White Cement or wet concrete may cause serious burns because they develop without pain without being felt (for example when kneeling in wet concrete even when wearing trousers).
Repeated skin contact with wet White Cement may cause contact dermatitis.

Carcinogenicity: White Portland Cement is not recognized as a carcinogen by NTP, OSHA, or IARC. However, it may contain trace amounts of substances listed as carcinogens by these organizations.
Crystalline silica, a trace constituent, is now classified by IARC as a known human carcinogen (Group I). NTP has characterized respirable silica as "reasonably anticipated to be a carcinogen".

For more details see Reference (1).

2.3- Enviroment

Under normal use, the product is not expected to be hazardous to the enviroment.

3-COMPOSITION/INFORMATION ON INGREDIENTS

3.1- Chemical Composition

Substance	Concentration range(by weight in cement)	CAS No	OSHA PEL-TWA	ACGIH TLV-TWA
Portland Cement Clinker	95-100 %	65997-15-1	5 mg/m3	10mg/m3
Limestone	0-5 %	1317-65-3	5mg/m3	3mg/m3
Gypsum	2-5 %	13397-24-5	5mg/m3	10mg/m3

EC Number of White Cement : 0086 – CPD – 458580

3.2- Components Presenting a Health Hazard

Component	%	CAS No	OSHA PEL-TWA(mg/m^3)	ACGIH TLV-TWA
Portland Cement	100	65997-15-1	15(T); 5(R)	10 mg(T)/m3
Calcium Sulphate	2-5	13397-24-5	15(T); 5(R)	10 mg(T)/m3
Calcium Carbonate	0-5	1317-65-3	15(T); 5(R)	10 mg(T)/m3
Calcium Oxide	0-3	1305-78-8	5(T)	2 mg(T)/m3
Magnesium Oxide	0-3	1309-48-4	15(T)	10 mg(T)/m3
Crystalline Silica	0-0,1	14808-60-7	(10/(%SiO2+2)) (R) (30/(%SiO2+2)) (T)	0.05 mg(R)quartz/m

White Cement may contain trace amounts of chemical compounds like free CaO, free MgO and Na compounds, chromium, nickel.

4- FIRST AID MEASURES

When contacting a physician, take this SDS with you.

4.1- After significant accidental inhalation

Move person to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or later develops or if discomfort, coughing or other symptoms persist.

4.2- After contact with eyes

Do not rub eye as additional cornea damage is possible as a result of mechanical stress. Remove any contact lenses and open the eyelid(s) widely to flush eye(s) immediately by thoroughly rinsing with plenty of clean water for at least 45 minutes to remove all particles. If possible, use isotonic water (0,9 % NaCl). Contact a specialist of occupational medicine or an eye specialist.

4.3- After skin contact

For dry White Cement, remove and rinse abundantly with water.
For wet White Cement, wash skin with water.
Remove contaminated clothing, footwear, watches, etc. and clean thoroughly before re-using them. Seek medical treatment in all cases of irritation or burns.

4.4- After significant accidental ingestion

Do not induce vomitting. If person is conscious, wash out mouth with water and give plenty of water to drink. Get immediate medical attention or contact the anti poison center.

5- FIRE FIGHTING MEASURES

5.1- Flashpoint and method

White Cements are non-combustible and non-explosive and will not facilitate nor support combustion of other materials.

5.2- Extinguishing media

All types of extinguishing media are suitable.

5.3- Fire fighting equipment

White Cement poses no fire-related hazards. No need for specialist protective equipment for fire fighters.

5.4- Combustion Products

None

5.5- Flammable limits:

Lower explosion limit (LEL) : Not applicable
Upper explosion limit (UEL) : Not applicable

6- ACCIDENTAL RELEASE MEASURES

6.1- Personal protective measures

Wear protective equipment as described under heading 8 and follow the advice for safe handling and use given under heading 7. Emergency procedures are not required.

6.2- Environment protection measures

Do not wash cement down sewage and drainage systems or into bodies of water (e.g. streams).

6.3- Methods for cleaning up

Recover the spillage in a dry state if possible.

Dry cement :

Use dry cleanup methods that do not cause airborne dispersion, e.g. :

- Vacuum cleaner (Industrial portable units, equipped with high efficiency particulate filters (HEPA fitler) or equivalent technique).
- Wipe-up the dust by mopping, wet brushing or by using water sprays or hoses (fine mist to avoid that the dust becomes airborn) and remove slurry.

If not possible, remove by slurrying with water (see wet cement).
When wet cleaning or vacuum cleaning is not possible and only dry cleaning with brushes can be done, ensure that the workers wear the appropriate personal protective equipment and prevent dust from spreading.
Avoid inhalation of White Cement and contact with skin. Place spilled materials into a container. Solidify before disposal as described under heading 13.

Wet cement:

Clean up wet cement and place in a container. Allow material to dry and solidify before disposal as described in heading 13.

7- HANDLING AND STORAGE

Do not handle or store near food and beverages or smoking materials.

7.1- Handling

Follow the recommendations as given under heading 8.
Avoid dust development:

- For (bagged) White cement used in open-ended mixers: first add the water and then carefully add cement. Keep the height of fall low. Start the mixing smoothly. Do not compress empty bags, except when contained in another clean bag.
- To clean up dry cement See heading 6.3

Carrying cement bags may cause sprains and strains to the back, arms, shoulders and legs. Handle with care and use appropriate control measures.

7.2- Storage

Bulk White cement should be stored in silos that are waterproof, dry (internal condensation minimised), clean and protected from contamination.

Engulfment hazard: To prevent burial or suffocation, do not enter a confined space, such as a silo, bin, bulk truck, or other storage container or vessel that stores or contains cement without taking the proper security measures. Cement can build-up or adhere to the walls of a confined space. The cement can release, collapse or fall unexpectedly.
Packed products should be stored in unopened bags clear of the ground in cool, dry conditions and protected from excessive draught in order to avoid degradation of quality.
Bags should be stacked in a stable manner.

8- EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1- Exposure Limit Values

Name	Limit Value For	Limit Value Type	Value (as 8h TWA)	Unit
Portland Cement		OEL total inhalable dust	5	mg/m³
Cement	General Dust	OEL inhable	10	mg/m³
		OEL alveolar fraction	3	mg/m³

8.2- Exposure Controls

8.2.1 Occupational exposure controls

General: During work avoid kneeling in fresh mortar or concrete wherever possible. If kneeling is absolutely necessary then appropriate waterproof personal protective equipment must be worn. Do not eat, drink or smoke when working with cement to avoid contact with skin or mouth.
Immediately after working with cement or cement- containing materials, workers should wash or shower or use skin moisturisers. Remove contaminated clothing, footwear, watches, etc. And clean thoroughly before re-using them.

Respiratory Protection: When a person is exposed to dust levels above exposure limits, use appropriate respiratory protection. Avoid creating airbone dust conditons. Local exhaust ventillation is preferred since it prevents release of contaminants in to the work area by controlling it at the source. If local or general ventillation is not adequate to control dust levels below exposure limits, use MSHA/NIOSH approved respirators.

Eye Protection: Wear NIOSH approved glasses or safety goggles when handling dry or wet cement to prevent contact with eyes.

Skin Protection: Use impervious, abrasion and alkali resistant gloves (made of low soluble Cr(VI) containing material) internally lined with cotton, boots, closed long-sleeved protective clothing as well as skin care products (including barrier creams) to protect the skin from prolonged contact with wet cement. Particular care should be taken to ensure that wet cement does not enter the boots.
In some circumstances, such as when laying concrete or screed, waterproof trousers or kneepads are necessary.

8.2.2 Enviromental exposure controls

According to avaliable technology.

9- PHYSICAL AND CHEMICAL PROPERTIES

9.1- General Information

Dry White Cement is a finely ground inorganic material (odourless, white powder)

9.2- Physical Data

Main Particle Size : 7-25 µm

Solubility in Water (T= 20°C) : slight (0,1-1,5 g/l)

Density	: 3,05-3,20 g/cm^3
Apparent Density (ES)	: 0,9-1,3 g/cm^3
pH (T= 20°C in water)	: 11-13
Boiling/Melting Point	: >1000°C

Vapour pressure, vapour density, evaporation rate, freezing point, viscosity: Not relevant

10- STABILITY AND REACTIVITY

10.1- Stability

Dry White Cements are stable as long as they are stored properly (see Heading 7) and compatible with most other building materials. When mixed with water, cements will harden into a stable massthat is not reactive to normal enviroments.

10.2- Conditions to avoid

Humidity during storage may cause lump formation and loss of producty quality.

10.3- Materials to avoid

Uncontrolled use of aluminium powder in wet cement should be avoided as hydrogen is produced.

10.4- Hazardous decomposition products

Cements will not decompose into other hazardous by-products and do not polymerise.

11- TOXICOLOGICAL INFORMATION

11.1- Acute effects

Eye contact: Direct contact with cement may cause corneal damage by mechanical stress, immediate or delayed irritation or inflammation. Direct contact by larger amounts of dry cement or splashes of wet cement may cause effects ranging from moderate eye irritation (e.g. conjunctivitis or blepharitis) to chemical burns and blindness.

Skin contact: Dry cement in contact with wet skin or exposure to moist or wet cement may cause thickening, cracking or fissuring of the skin. Prolonged contact in combination with abrasion can cause severe burns.

Acute dermal toxicity: Limit test, rabbit, 24 hours contact, 2000 mg/kg body weight- no lethality [Reference (2)].

Ingestion: Swallowing large quantities may cause irritation to the gastrointestinal tract.

Inhalation: Cement may irritate the throat and respiratory tract. Coughing, sneezing, and shortness of breath may ocur following exposures in excess of occupational exposure limits.

11.2- Chronic effects

Inhalation: Chronic exposure to respirable dust in excess of occupational exposure limits may cause coughing, shortness of breath and may cause chronic obstructive lung disease (COPD).

Carcinogenicity: White Portland Cement is not recognized as a carcinogen by NTP, OSHA, or IARC. However, it may contain trace amounts of substances listed as carcinogens by these organizations.
Crystalline silica, a trace constituent, is now classified by IARC as a known human carcinogen (Group I). NTP has characterized respirable silica as "reasonably anticipated to be a carcinogen".
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Contact dermatitis/Sensitising effects: Some individuals may exhibit eczema upon exposure to wet cement, caused either by the high pH which induces irritant contact dermatitis, or by an immunological reaction to soluble Cr (VI) which elicits allergic contact dermatitis [Reference (4)]. The response may appear in a variety of forms ranging from a mild rash to severe dermatitis and is a combination of those two mechanisms. An exact diagnosis is often difficult to assess.

If the cement contains a soluble Cr (VI) reducing agent and as long as the mentioned period of effectiveness of the chromate reduction is not exceeded, a sensitising effect is not expected [Reference (3)].

11.3- Medical conditions aggravated by exposure

Inhaling cement dust may aggravate existing respiratory system disease(s) and/or medical conditions such as emphysema or asthma and/or existing skin and/o reye conditions.

12- ECOLOGICAL INFORMATION

12.1- Ecotoxicity

The product is not expected to be hazardous to the environment (LC50 aquatic toxicity not determined). The addition of large amounts of cement to water may, however, cause a rise in pH and may, therefore, be toxic to aquatic life under certain

circumstances.

12.2- Mobility

Dry cement is not volatile but might become airborne during handling operations.

12.3- Persistence and degradability/Bio accumulative potential/Results of PBT assessment/Other adverse effects

Not relevant as cement is an inorganic material. After hardening, cement presents no toxicity risks.

13- DISPOSAL CONSIDERATIONS

Dispose of waste in compliance with all applicable local, state and federal regulations. Dispose of packaging/containers/bags in approved landfill or incinerator according to local, state and federal regulations.

14- TRANSPORT INFORMATION

Portland Cement is not hazardous under U.S.DOT regulations.

15-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 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 and 312:

Portland Cement qualifies as a "hazardous substance" with delayed health defects.

Status under SARA (Title III), Section 313:

Not subject to reporting requirements under section 313.

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 up to 0.05% of chemicals (trace elements) known to the State of California to cause cancer, birht defects or other reproductive harm. California las

requires manufacturer to give the above warning in the absence of definitive testing to prove the defined risks do not exist.

16- OTHER INFORMATION

Abbreviations:

- ACGIH: American Conference of Governmental Industrial Hygieniests
- 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 Averages
- vPvB: very persistent and very bio accumulative

References:

(1) Portland Cement Dust- Hazard assessment document EH75/7, UK Health and Safety Executive, 2006. Available from:

http://www.hse.gov.uk/pubns/web/portlandcement.pdf

(2) Observations on the effects of skin irritation caused by cement, Kietzman et al, Dermatosen, 47, 5, 184-189 (1999).

(3) European Commission's Scientific Committee on Toxicology, Ecotoxicology and the Environment (SCTEE) opinion of the risks to health from Cr (VI) in cement (European Commission, 2002).

(4) Epidemiological assessment of the occurrence of allergic dermatitis in workers in the construction industry related to the content of Cr (VI) in cement, NIOH, Page 11, 2003.

The information on this data sheet reflects the currently available knowledge and is believed to be accurate provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product, including the use of product in combination with any other product or any other process, is the responsibility of the user. It is implicit that the user is responsible for determining appropriate safety measures and for applying the legislation covering his/her own activities. Any party using this product should review all such laws, rules or regulations prior to use, including but not limited to US Federal, local and State reguations.

SELLER MAKES NO WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY CIMSA. Except as set forth herein and the packaging buyer assumes all risks. Liability of manufacturer is limited exclusively to a refund of product price, and will not include consequential or incidental damages.

SAFETY DATA SHEET

1. Identification

Product identifier HYDRO-STONE® Gypsum Cements

Other means of identification

SDS number 52000000012

Additional Products HYDRO-STONE® TB Gypsum Cement, HYDRO-STONE® LF, HYDRO-STONE® DL, HYDRO-STONE® HD Cement, HYDRO-STONE® SDCT, HYDRO-STONE® Super Fast Set, HYDRO-STONE® ME Special Gypsum Cement, HYDRO-STONE® DL Plus Smoke, HYDROSTONE® QR Gypsum Cement, HYDROSTONE® QR Plus Gypsum Cement

Synonyms Statuary

Recommended use Statuary or anchoring cement.

Recommended restrictions Use in accordance with manufacturer's recommendations.

Manufacturer/Importer/Supplier/Distributor information

Company name United States Gypsum Company

Address 550 West Adams Street
Chicago, Illinois 60661-3637

Telephone 1-800-874-4968

Website www.usg.com

Emergency phone number 1-800-507-8899

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Sensitization, skin	Category 1

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage.

Precautionary statement

Prevention Avoid breathing dust. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/eye protection/face protection.

Response If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Storage Store as indicated in Section 7.

Disposal Dispose of in accordance with local, state, and federal regulations.

Hazard(s) not otherwise classified (HNOC) None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1)	26499-65-0	> 95
Portland Cement	65997-15-1	< 5
Titanium dioxide	13463-67-7	< 1

Composition comments All concentrations are in percent by weight unless ingredient is a gas.

4. First-aid measures

Inhalation Dust irritates the respiratory system, and may cause coughing and difficulties in breathing. Move injured person into fresh air and keep person calm under observation. Get medical attention if symptoms persist.

Skin contact Contact with wet or dry product: Wash area with cold running water immediately. Open sores or cuts should be thoroughly flushed and covered with suitable dressings.

Eye contact Dust in the eyes: Do not rub eyes. Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion Plaster of Paris hardens and if ingested may result in stomach and intestinal blockage. Drinking gelatin solutions or large volumes of water may delay setting.

Most important symptoms/effects, acute and delayed Dust may irritate throat and respiratory system and cause coughing. May cause serious chemical burns to the skin. May cause chemical eye burns. Permanent eye damage including blindness could result.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved.

5. Fire-fighting measures

Suitable extinguishing media Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media Not applicable.

Specific hazards arising from the chemical Not a fire hazard.

Special protective equipment and precautions for firefighters Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Use standard firefighting procedures and consider the hazards of other involved materials.

Specific methods Cool material exposed to heat with water spray and remove it if no risk is involved.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures See Section 8 of the SDS for Personal Protective Equipment.

Methods and materials for containment and cleaning up Vacuum up the spilled material. Vacuums used for this purpose should be equipped with HEPA filters. Containers must be labeled. Collect in approved containers and seal securely. For waste disposal, see Section 13 of the SDS.

Environmental precautions Avoid discharge to drains, sewers, and other water systems.

7. Handling and storage

Precautions for safe handling Do not get in eyes and avoid contact with skin and clothing. Wear appropriate personal protective equipment (See Section 8). Avoid inhalation of dust. Minimize dust production when mixing, or opening and closing bags. Use with adequate dust control and local ventilation. Wear appropriate NIOSH respirator when ventilation is inadequate and occupational exposure limits are exceeded. Wash hands thoroughly after handling. Use a non-alkaline soap such as Neutralite Safety Solution or Mason's Hand Rinse.

Conditions for safe storage, including any incompatibilities Store in a cool, dry, well-ventilated place. Store away from incompatible materials. Avoid contact with acids, water, and moisture.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Portland Cement (CAS 65997-15-1)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Titanium dioxide (CAS 13463-67-7)	PEL	15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value
Portland Cement (CAS 65997-15-1)	TWA	50 mppcf

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)	TWA	10 mg/m3	Inhalable fraction.
Portland Cement (CAS 65997-15-1)	TWA	1 mg/m3	Respirable fraction.
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Portland Cement (CAS 65997-15-1)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Provide sufficient ventilation for operations causing dust formation. Observe occupational exposure limits and minimize the risk of exposure.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear approved safety goggles.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Normal work clothing (long sleeved shirts and long pants) is recommended.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.

Thermal hazards None.

General hygiene considerations	During work avoid kneeling in fresh mortar or concrete wherever possible. If kneeling is absolutely necessary, then appropriate waterproof personal protective equipment must be worn. Do not eat, drink or smoke when working with cement to avoid contact with skin or mouth. Immediately after working with cement or cement-containing materials, workers should wash or shower. Remove contaminated clothing, footwear, watches, etc, and clean thoroughly before re-use.

9. Physical and chemical properties

Appearance	
Physical state	Solid.
Form	Powder.
Color	White to off-white.
Odor	Low to no odor.
Odor threshold	Not applicable.
pH	6 - 12
Melting point/freezing point	Not applicable. Not applicable.
Initial boiling point and boiling range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Explosive limit - lower (%)	Not applicable.
Explosive limit - upper (%)	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	2.96 (H2O=1)
Solubility(ies)	
Solubility (water)	0.15 - 0.4 g/100 g (H2O)
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	2642 °F (1450 °C)
Viscosity	Not applicable.
Other information	
Bulk density	55 - 70 lb/ft³
Particle size	Varies.
VOC (Weight %)	0 %

10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials. Exposure to moisture. When mixed with water this product can become very hot. Encasing or making moulds of any body part can cause serious burns that may require surgical removal of affected tissue and even amputation of encased body part.
Incompatible materials	Acids. Exposure to water and acids must be supervised because the reactions are vigorous and produce large amounts of heat.
Hazardous decomposition products	Calcium oxides. Sulfur oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Inhalation of dusts may cause respiratory irritation.
Skin contact	Exposure to dry product may cause drying of the skin and mild irritation, or more significant effects from the aggravation of other conditions. Wet product is caustic (pH ≥ 12) and dermal exposure 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. Some individuals who are exposed to wet or dry product may exhibit an allergic response, which can result in symptoms ranging from mild rashes to severe skin ulcers.
Eye contact	Exposure to airborne dust may cause immediate or delayed irritation of the eyes. Depending on the level of exposure, effects may range from redness to chemical burns and blindness.
Ingestion	Ingestion may cause irritation and stomach discomfort.
Symptoms related to the physical, chemical and toxicological characteristics	Dust may irritate eyes and mucous membranes of the nose, throat and upper respiratory system causing sneezing and/or coughing. May cause serious chemical burns to the skin. May cause chemical eye burns. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity	Not expected to be a hazard under normal conditions of intended use.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes severe eye damage.

Respiratory or skin sensitization

Respiratory sensitization	Not classified but possible due to skin sensitization effect.
Skin sensitization	Trace amounts of Cr(VI) compounds from Portland Cement may cause allergic skin reaction even after one exposure.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Titanium Dioxide is listed by IARC as possibly carcinogenic to humans (Group 2B). This listing is based on inadequate evidence of carcinogenicity in humans and sufficient evidence in experimental animals.

IARC Monographs. Overall Evaluation of Carcinogenicity

Titanium dioxide (CAS 13463-67-7) 2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	Not expected to be a reproductive hazard.
Specific target organ toxicity - single exposure	No data available, but none expected.
Specific target organ toxicity - repeated exposure	No data available, but none expected.
Aspiration hazard	Due to the physical form of the product it is not an aspiration hazard.
Chronic effects	Some individuals may exhibit eczema upon exposure to wet cement. The response may appear in a variety of forms ranging from a mild rash to severe dermatitis.

12. Ecological information

Ecotoxicity	This product is not expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems. Large amounts of the product may affect the pH-factor in water with possible risk of harmful effects to aquatic organisms.
Persistence and degradability	Calcium sulfate dissolves in water forming calcium and sulfate ions.
Bioaccumulative potential	Bioaccumulation is not expected.
Mobility in soil	No data available.
Other adverse effects	None expected.

13. Disposal considerations

Disposal instructions	Dispose in accordance with applicable federal, state, and local regulations. Recycle responsibly.
Local disposal regulations	Dispose of in accordance with local regulations.
Hazardous waste code	Not regulated.

Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Dispose of in accordance with local regulations.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable. This product is a solid. Therefore, bulk transport is governed by IMSBC code.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200 (OSHA) and 8 CCR § 5194 (Cal/OSHA).

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)
Portland Cement (CAS 65997-15-1)
Titanium dioxide (CAS 13463-67-7)

US. New Jersey Worker and Community Right-to-Know Act

Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)
Portland Cement (CAS 65997-15-1)
Titanium dioxide (CAS 13463-67-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)
Portland Cement (CAS 65997-15-1)
Titanium dioxide (CAS 13463-67-7)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Titanium dioxide (CAS 13463-67-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 11-March-2015

Revision date 11-March-2015

Version # 02

Further information

Plaster of Paris: Is classified as a hazardous substance but is generally considered a safe material for routine use. When plaster of Paris is used responsibly it is not considered as a dangerous material. However, when mixed with water this product can become very hot. DO NOT attempt to make a cast enclosing any part of the body. Encasing any body part can cause serious burns and even amputation of the encased body part.

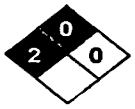
Titanium dioxide: This product may contain titanium dioxide. The International Agency for Research on Cancer (IARC) has determined that titanium dioxide is possibly carcinogenic to humans (Group 2B) based on inadequate evidence in humans and sufficient evidence in experimental animals. This conclusion relates to long-term inhalation exposure to high concentrations of pigmentary (powdered) or ultrafine titanium dioxide. However, no significant exposure to primary particles of titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as in paints. The available human studies do not suggest an association between occupational exposure to titanium dioxide and risk for cancer (1). The American Conference of Governmental Industrial Hygienists (ACGIH) has designated this chemical as not classifiable as a human carcinogen (A4). The US National Toxicology Program (NTP) has not listed this chemical in its report on carcinogens.

OSHA's "Preventing Skin Problems from Working with Portland Cement" provides excellent guidance and can be downloaded at: https://www.osha.gov/dsg/guidance/cement-guidance.html

NFPA Ratings:
Health: 2
Flammability: 0
Physical hazard: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

NFPA ratings



Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.