



SAFETY DATA SHEET

1. Identification

Product identifier ULTRACAL® 30 Gypsum Cement
Other means of identification
SDS number 52000000118
Synonyms Tooling Cement
Recommended use Low expansion tooling cements.
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
Carcinogenicity Category 1A
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. May cause cancer.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/clothing and eye/face protection.

Response If exposed or concerned: Get medical advice/attention. 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 locked up.

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 | > 90 |
| Portland Cement | 65997-15-1 | < 10 |

Impurities

| Chemical name | CAS number | % |
|-----------------------------|------------|-------|
| Crystalline silica (Quartz) | 14808-60-7 | < 0.5 |

Composition comments

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

Raw materials in this product contain respirable crystalline silica as an impurity. The weight percent of respirable crystalline silica found in this product is 0.5%. Exposures to respirable crystalline silica during the normal use of this product must be determined by workplace hygiene testing.

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

Minimize dust production when mixing, or opening and closing bags. Avoid inhalation of dust. Wear appropriate personal protective equipment. Wash hands after handling. Observe good industrial hygiene practices and use appropriate lifting techniques.

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/m ³ | Respirable fraction. |
| Portland Cement (CAS 65997-15-1) | PEL | 15 mg/m ³ | Total dust. |
| | | 5 mg/m ³ | Respirable fraction. |
| | | 15 mg/m ³ | Total dust. |

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

| Components | Type | Value | Form |
|--|------|-----------------------|-------------|
| Portland Cement (CAS 65997-15-1) | TWA | 50 mppcf | |
| Impurities | Type | Value | Form |
| Crystalline silica (Quartz) (CAS 14808-60-7) | TWA | 0.3 mg/m ³ | Total dust. |
| | | 0.1 mg/m ³ | Respirable. |
| | | 2.4 mppcf | Respirable. |

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/m ³ | Inhalable fraction. |
| Portland Cement (CAS 65997-15-1) | TWA | 1 mg/m ³ | Respirable fraction. |
| Impurities | Type | Value | Form |
| Crystalline silica (Quartz) (CAS 14808-60-7) | TWA | 0.025 mg/m ³ | Respirable fraction. |

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/m ³ | Respirable. |
| Portland Cement (CAS 65997-15-1) | TWA | 10 mg/m ³ | Total |
| | | 5 mg/m ³ | Respirable. |
| | | 10 mg/m ³ | Total |
| Impurities | Type | Value | Form |
| Crystalline silica (Quartz) (CAS 14808-60-7) | TWA | 0.05 mg/m ³ | Respirable dust. |

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 | 11 - 13 |
| 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 2.32 (H₂O=1)

Solubility(ies)

Solubility (water) 0.21 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/ft ³ |
| Particle size | Varies. |
| VOC (Weight %) | 0 % |

10. Stability and reactivity

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|---|--|
| 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. Crystalline silica in contact with powerful oxidizing agents, such as fluorine, chlorine trifluoride and oxygen difluoride, may cause fires. Crystalline silica will dissolve in hydrofluoric acid and produce a corrosive gas, silicon tetrafluoride. |
| Hazardous decomposition products | Calcium oxides. Sulfur oxides. |

11. Toxicological information

Information on likely routes of exposure

| | |
|---------------------|---|
| Ingestion | Ingestion may cause irritation and stomach discomfort. |
| 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 \geq 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. |

| | |
|---|---|
| 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 serious eye irritation. |
| 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 | Repeated and prolonged exposures to high levels of respirable crystalline silica may cause cancer. |
| IARC Monographs. Overall Evaluation of Carcinogenicity | |
| Crystalline silica (Quartz) (CAS 14808-60-7) | 1 Carcinogenic to humans. |
| NTP Report on Carcinogens | |
| Crystalline silica (Quartz) (CAS 14808-60-7) | Known To Be Human Carcinogen. |
| 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 Prolonged and routine inhalation of high levels of respirable crystalline silica particles can lead to the lung disease known as silicosis. Some studies show excess numbers of cases of scleroderma, connective tissue disorders, lupus, rheumatoid arthritis, chronic kidney diseases and end-stage kidney disease in workers exposed to respirable crystalline silica. Pre-existing skin and respiratory conditions including dermatitis, asthma and chronic lung disease might be aggravated by exposure. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

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.

| Components | Species | Test Results |
|--|--|---|
| Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0) | | |
| Aquatic | | |
| Fish | LC50 | Fathead minnow (<i>Pimephales promelas</i>) > 1970 mg/l, 96 hours |
| 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.

US. 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

Crystalline silica (Quartz) (CAS 14808-60-7)
Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)
Portland Cement (CAS 65997-15-1)

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

Crystalline silica (Quartz) (CAS 14808-60-7)
Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)
Portland Cement (CAS 65997-15-1)

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

Crystalline silica (Quartz) (CAS 14808-60-7)
Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)
Portland Cement (CAS 65997-15-1)

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

Crystalline silica (Quartz) (CAS 14808-60-7)

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 05-May-2014

Revision date -

Version # 01

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.

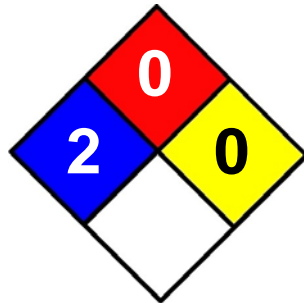
Crystalline silica: Raw materials in this product may contain respirable crystalline silica. Exposures to respirable crystalline silica are not expected during the normal use of this product. However, actual levels must be determined by workplace hygiene testing. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer.

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.