



SAFETY DATA SHEET

1. Identification

Product identifier	HYDROCAL® Tooling Gypsum Cements
Other means of identification	
SDS number	52000000014
Additional Products	HYDROCAL® A-11 Gypsum Cement, HYDROCAL® B-11 Gypsum Cement
Synonyms	Gypsum Cement
Recommended use	Low expansion tooling.
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	> 90



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.
Portland Cement (CAS 65997-15-1)	PEL	15 mg/m3 5 mg/m3	Total dust. Respirable fraction.
		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.

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.
Portland Cement (CAS 65997-15-1)	TWA	10 mg/m3 5 mg/m3 10 mg/m3	Total Respirable. 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 11 - 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 - 3.15 (H₂O=1)

Solubility(ies)

Solubility (water) 0.15 - 1 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

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	This material is not classified as a carcinogen by IARC, ACGIH, NTP or OSHA.
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.
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Components	Species	Test Results
Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)		
Aquatic		
Fish	LC50	Fathead minnow (Pimephales promelas) > 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.

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)

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)

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)

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

Not listed.

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	31-March-2014
Revision date	06-August-2014
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. 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
HMIS® ratings	Health: 3 Flammability: 0 Physical hazard: 0
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.