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.

3. Composition/information on ingredients

Mixtures:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1)</td>
<td>26499-65-0</td>
<td>&gt; 90</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)</td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td>Portland Cement (CAS 65997-15-1)</td>
<td>PEL</td>
<td>15 mg/m³</td>
<td>Total dust.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mg/m³</td>
<td>Total dust.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland Cement (CAS 65997-15-1)</td>
<td>TWA</td>
<td>50 mppcf</td>
</tr>
</tbody>
</table>

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Inhalable fraction.</td>
</tr>
<tr>
<td>Portland Cement (CAS 65997-15-1)</td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
</tbody>
</table>

US. NIOSH: Pocket Guide to Chemical Hazards

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

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.
- 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.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plaster of Paris (Calcium Sulfate Hemihydrate CAS 10034-76-1) (CAS 26499-65-0)</td>
<td>Aquatic</td>
<td>Fathead minnow (Pimephales promelas)</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td></td>
</tr>
</tbody>
</table>

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.
  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

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*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.