



Material Safety Data Sheet  
Calcium Sulfate Hemihydrate

MSDS# 04084

Section 1 - Chemical Product and Company Identification

MSDS Name: Calcium Sulfate Hemihydrate  
Catalog Numbers: AC385350000, AC385351000, AC385355000, C138-10  
Synonyms: Sulfuric acid calcium salt hemihydrate  
  
Company Identification: Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
  
For information in the US, call: 201-796-7100  
Emergency Number US: 201-796-7100  
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

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Risk Phrases:

CAS#: 10034-76-1  
Chemical Name: Calcium sulfate hemihydrate  
%: 100  
EINECS#: unlisted  
Hazard Symbols:

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Text for R-phrases: see Section 16

Hazard Symbols: None listed  
Risk Phrases: None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution! The toxicological properties of this material have not been fully investigated. May cause eye, skin, and respiratory tract irritation. Target Organs: No data found.

Potential Health Effects

Eye: May cause eye irritation.  
Skin: May cause skin irritation. May be harmful if absorbed through the skin.  
Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed.  
Inhalation: May cause respiratory tract irritation. May be harmful if inhaled.  
Chronic: No information found.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.  
Skin: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.  
Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.  
Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.  
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

|                           |                                                                                                                                                                                                                                                        |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General Information:      | As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. |
| Extinguishing Media:      | Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.                                                                                                                                                                |
| Autoignition Temperature: | Not applicable.                                                                                                                                                                                                                                        |
| Flash Point:              | Not applicable.                                                                                                                                                                                                                                        |
| Explosion Limits: Lower:  | Not available                                                                                                                                                                                                                                          |
| Explosion Limits: Upper:  | Not available                                                                                                                                                                                                                                          |
| NFPA Rating:              | health: 1; flammability: 0; instability: 1;                                                                                                                                                                                                            |

#### Section 6 - Accidental Release Measures

|                      |                                                                                                                                                                                                                                                                           |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General Information: | Use proper personal protective equipment as indicated in Section 8.                                                                                                                                                                                                       |
| Spills/Leaks:        | Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Do not let this chemical enter the environment. |

#### Section 7 - Handling and Storage

|           |                                                                                                                                                                                                                                                             |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Handling: | Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid breathing dust, mist, or vapor. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. |
| Storage:  | Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.                                                                                                                                                |

#### Section 8 - Exposure Controls, Personal Protection

| Chemical Name               | ACGIH                                                       | NIOSH                                                    | OSHA - Final PELs                                            |
|-----------------------------|-------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------|
| Calcium sulfate             | 10 mg/m3 (inhalable fraction)                               | 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust) | 15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction) |
| Calcium sulfate hemihydrate | 10 mg/m3 (inhalable fraction, listed under Calcium sulfate) | none listed                                              | none listed                                                  |

OSHA Vacated PELs: Calcium sulfate: 15 mg/m3 TWA; 5 mg/m3 TWA (respirable fraction) Calcium sulfate hemihydrate: None listed

#### Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

#### Exposure Limits

#### Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

#### Section 9 - Physical and Chemical Properties

Physical State: Solid

Color: white

Odor: odorless

pH: 6-7.6 for 20% soln.

Vapor Pressure: Not applicable.

Vapor Density: Not available

Evaporation Rate: Not applicable.

Viscosity: Not available

Boiling Point: Not applicable.

Freezing/Melting Point: 1450 deg C ( 2,642.00°F)

Decomposition Temperature: Not available

Solubility in water: 0.3% in water.

Specific Gravity/Density: Not available.

Molecular Formula: CaSO4. 0.5 H2O

Molecular Weight: 145.15

#### Section 10 - Stability and Reactivity

Chemical Stability: Hygroscopic: absorbs moisture or water from the air.

Conditions to Avoid: Incompatible materials, dust generation, excess heat, exposure to moist air or water.

Incompatibilities with Other Materials Strong oxidizing agents.

Hazardous Decomposition Products Oxides of sulfur, calcium oxide.

Hazardous Polymerization Has not been reported.

#### Section 11 - Toxicological Information

RTECS#: CAS# 7778-18-9: WS6920000

CAS# 10034-76-1: None listed

LD50/LC50: RTECS: Not available. RTECS: Not available.

Carcinogenicity: Calcium sulfate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Calcium sulfate hemihydrate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: The toxicological properties have not been fully investigated.

#### Section 12 - Ecological Information

Not available

#### Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

#### Section 14 - Transport Information

US DOT

Shipping Name: Not Regulated

Hazard Class:

UN Number:

Packing Group:

Canada TDG

Shipping Name: Not available

Hazard Class:

UN Number:

Packing Group:

#### Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:Not available

Risk Phrases:

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 7778-18-9: 0

CAS# 10034-76-1: 0

Canada

CAS# 7778-18-9 is listed on Canada's DSL List

Canadian WHMIS Classifications: Not controlled.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 7778-18-9 is not listed on Canada's Ingredient Disclosure List.

CAS# 10034-76-1 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 7778-18-9 is listed on the TSCA Inventory.

CAS# 10034-76-1 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the Inventory (40CFR720.3(u)(2)).

Section 16 - Other Information

MSDS Creation Date: 9/11/1997

Revision #6 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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