CALCIUM SULFATE, DIHYDRATE

1. Product Identification

**Synonyms:** Alabaster; annaline; gypsum; gypsum stone; land plaster; magnesia white; mineral white; precipitated calcium sulfate

**CAS No.:** 10101-41-4

**Molecular Weight:** 172.1644

**Chemical Formula:** CaO4S.2H2O

**Product Codes:** C0080, C0081, C0082

2. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>10101-41-4</td>
<td>Calcium sulfate dihydrate</td>
<td>100</td>
<td>unlisted</td>
</tr>
</tbody>
</table>

3. Hazards Identification

**EMERGENCY OVERVIEW**
Appearance: white solid.

**Caution!** May cause eye, skin, and respiratory tract irritation.

**Target Organs:** None known.

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**Potential Health Effects**

**Eye:** May cause eye irritation.

**Skin:** May cause skin irritation.

**Ingestion:** Ingestion of large amounts may cause gastrointestinal irritation.

**Inhalation:** May cause respiratory tract irritation.

**Chronic:** Not available.

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**4. First Aid Measures**

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

**Ingestion:** If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

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**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.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: ; Flammability: ; Instability:
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. Reduce airborne dust and prevent scattering by moistening with water. Clean up spills immediately, observing precautions in the Protective Equipment section.

7. Handling and Storage

**Handling:** Wash thoroughly after handling. Use only in a well-ventilated area. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

**Storage:** Store in a cool, dry place. Keep container closed when not in use.

8. Exposure Controls, Personal Protection

**Engineering Controls:** Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**Exposure Limits**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium sulfate dihydrate</td>
<td>10 mg/m3 TWA (inhalable fraction, listed under Calcium sulfate)</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Calcium sulfate anhydrous</td>
<td>10 mg/m3 TWA (inhalable fraction)</td>
<td>10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable dust)</td>
<td>15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)</td>
</tr>
</tbody>
</table>

**OSHA Vacated PELs:** Calcium sulfate dihydrate: No OSHA Vacated PELs are listed for this chemical. Calcium sulfate anhydrous: 15 mg/m3 TWA; 5 mg/m3 TWA (respirable fraction)

**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 minimize contact with skin.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN14387.
9. Physical and Chemical Properties

**Physical State:** Solid  
**Appearance:** white  
**Odor:** None reported.  
**pH:** Not available.  
**Vapor Pressure:** Not available.  
**Vapor Density:** Not available.  
**Evaporation Rate:** Not available.  
**Viscosity:** Not available.  
**Boiling Point:** Not available.  
**Freezing/Melting Point:** Not available.  
**Decomposition Temperature:** Not available.  
**Solubility:** Slightly soluble in water.  
**Specific Gravity/Density:** 2.32  
**Molecular Formula:** CaO₄S.2H₂O  
**Molecular Weight:** 172.1644

10. Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.  
**Conditions to Avoid:** Dust generation.  
**Incompatibilities with Other Materials:** No significant incompatibilities identified with common materials and contaminants.  
**Hazardous Decomposition Products:** Oxides of sulfur, calcium oxide.  
**Hazardous Polymerization:** Has not been reported.

11. Toxicological Information

**RTECS#:**  
**CAS# 10101-41-4:** EW4150000  
**CAS# 7778-18-9:** WS6920000
LD50/LC50: Not available. Not available.

Carcinogenicity: CAS# 10101-41-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 7778-18-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No data available.
Teratogenicity: No data available.
Reproductive Effects: No data available.
Mutagenicity: No data available.
Neurotoxicity: No data available.

Other Studies:

12. Ecological Information

No information available.

13. Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.
RCRA U-Series: None listed.

14. Transport Information

<table>
<thead>
<tr>
<th>US DOT</th>
<th>Canada TDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping Name: Not regulated as a hazardous material</td>
<td>No information available.</td>
</tr>
<tr>
<td>Hazard Class:</td>
<td></td>
</tr>
<tr>
<td>UN Number:</td>
<td></td>
</tr>
<tr>
<td>Packing Group:</td>
<td></td>
</tr>
</tbody>
</table>
15. Regulatory Information

US FEDERAL

TSCA

CAS# 10101-41-4 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)).

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

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313  No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 10101-41-4 can be found on the following state right to know lists: Minnesota.

CAS# 7778-18-9 can be found on the following state right to know lists: Pennsylvania, Minnesota, Massachusetts.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.
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# 10101-41-4: 0
   CAS# 7778-18-9: 0

Canada - DSL/NDSL
   CAS# 7778-18-9 is listed on Canada’s DSL List.

Canada - WHMIS
   not available.

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.

16. Other Information

Product Use:
Laboratory Reagent.

Revision Information:

Disclaimer:
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