Material Safety Data Sheet
Calcium Chloride Dihydrate

ACC# 03901

Section 1 - Chemical Product and Company Identification

MSDS Name: Calcium Chloride Dihydrate
Catalog Numbers: AC423520030, BP520-100, BP510-250, BP510-500,
BP510100, BP510250, BP510500, C70 500, C70-500, C70500, C79 3, C79 500,
C79-3, C79-500, C793, C793LC, C79500, NC9468548
Synonyms:
Company Identification:
Fisher Scientific
1 Reagent Lane
Fairlawn, NJ 07410
For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 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>10035-04-8</td>
<td>Calcium Chloride, Dihydrate</td>
<td>100.0</td>
<td>unlisted</td>
</tr>
</tbody>
</table>

Hazard Symbols: XI
Risk Phrases: 36

Section 3 - Hazards Identification
EMERGENCY OVERVIEW

Appearance: white. **Warning!** May cause central nervous system depression. Harmful if swallowed. May cause kidney damage. May cause cardiac disturbances. Contact with skin causes irritation and possible burns, especially if the skin is wet or moist. May cause severe eye irritation and possible injury. Causes severe respiratory tract irritation.
**Target Organs:** Heart.

**Potential Health Effects**

**Eye:** Contact with eyes may cause severe irritation, and possible eye burns.
**Skin:** Contact with skin causes irritation and possible burns, especially if the skin is wet or moist.
**Ingestion:** May cause severe gastrointestinal tract irritation with nausea, vomiting and possible burns. May cause cardiac disturbances. In very severe cases, may result in seizures, rapid respiration, slow heartbeat, or death.
**Inhalation:** May cause severe irritation of the upper respiratory tract with pain, burns, and inflammation.
**Chronic:** No information found.

**Section 4 - First Aid Measures**

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately.
**Skin:** Get medical aid immediately. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.
**Ingestion:** Do NOT induce vomiting. 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 immediately.
**Inhalation:** Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
**Notes to Physician:** Treat symptomatically and supportively.
**Antidote:** None reported.

**Section 5 - Firefighting Measures**

**General Information:** Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products.
**Extinguishing Media:** Do NOT use water directly on fire. Use dry chemical, carbon dioxide, or alcohol-resistant foam.
**Autoignition Temperature:** Not applicable.
**Flash Point:** Not applicable. (estimated) Health: ; Flammability: ; Reactivity: Explosion Limits, Lower: Not available. Upper: Not available.

**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. Avoid generating dusty conditions.

### Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Do not get on skin or in eyes. Do not ingest or inhale. Wash clothing before reuse. 
**Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances.

### Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. 
**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 Chloride, Dihydrate</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

**OSHA Vacated PELs:** Calcium Chloride, Dihydrate: No OSHA Vacated PELs are listed for this chemical. 
**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 impervious gloves. 
**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 EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

### Section 9 - Physical and Chemical Properties

**Physical State:** Solid 
**Appearance:** white 
**Odor:** odorless 
**pH:** 4.5-8.5: 5% solution 
**Vapor Pressure:** Not available. 
**Vapor Density:** Not available. 
**Evaporation Rate:** 
**Viscosity:** Not available. 
**Boiling Point:** 2912 deg F
Freezing/Melting Point: 500 deg F
Decomposition Temperature: Not available.
Solubility: Soluble in water.
Specific Gravity/Density: 1.85 (water = 1)
Molecular Formula: CaCl2·2H2O
Molecular Weight:

Section 10 - Stability and Reactivity

Chemical Stability: Stable.
Conditions to Avoid: Incompatible materials, contact with water.
Incompatibilities with Other Materials: Incompatible with boric oxide + calcium oxide, and bromine trifluoride; react with zinc to form explosive hydrogen gas; catalyzes exothermic polymerization of vinyl ether; explodes at room temperature when added to furan-2-peroxycarbolic acid; and undergoes an exothermic (heat-producing) reaction with water.
Hazardous Decomposition Products: Chlorine.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#: 
CAS# 10035-04-8: EV9810000
LD50/LC50: Not available.

Carcinogenicity:
CAS# 10035-04-8: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology: No data available.
Teratogenicity: No data available.
Reproductive Effects: No data available.
Neurotoxicity: No data available.
Mutagenicity: No data available.
Other Studies: No data available.

Section 12 - Ecological Information

Ecotoxicity: Not available.
Environmental Fate: Not available.
Physical/Chemical: Not available.
Other: Not available.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.
RCRA D-Series Maximum Concentration of Contaminants: None listed.
RCRA D-Series Chronic Toxicity Reference Levels: None listed.
RCRA F-Series: None listed.
RCRA P-Series: None listed.
RCRA U-Series: None listed.
Section 14 - Transport Information

<table>
<thead>
<tr>
<th>US DOT</th>
<th>IATA</th>
<th>RID/ADR</th>
<th>IMO</th>
<th>Canada TDG</th>
</tr>
</thead>
<tbody>
<tr>
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<td>No information available.</td>
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</tbody>
</table>

Hazard Class:

UN Number:

Packing Group:

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 10035-04-8 is not on the TSCA Inventory. It is a hydrate and exempt from TSCA Inventory requirements (40CFR720.3(u)(2)).

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.

SARA

Section 302 (RQ)
None of the chemicals in this material have an RQ.

Section 302 (TPQ)
None of the chemicals in this product have a TPQ.

SARA Codes
CAS # 10035-04-8: acute.

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 depleters. This material does not contain any Class 2 Ozone depleters.

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# 10035-04-8 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
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:
XI
Risk Phrases:
R 36 Irritating to eyes.
Safety Phrases:
S 22 Do not inhale dust. S 24 Avoid contact with skin.
WGK (Water Danger/Protection)
CAS# 10035-04-8: No information available.

Canada

None of the chemicals in this product are listed on the DSL/NDSL list. This product has a WHMIS classification of D2B.
CAS# 10035-04-8 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

Section 16 - Additional Information

MSDS Creation Date: 1/13/1995
Revision #7 Date: 12/12/1997
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 way shall Fisher 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 Fisher has been advised of the possibility of such damages.

Need help with a product? Send email to Fisher's customer service or call us at 1-800-766-7000.