

# Material Safety Data Sheet

## Calcium chloride dihydrate

ACC# 03901

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Calcium chloride dihydrate

**Catalog Numbers:** AC123350025, AC207780010, AC423520250, AC423525000, S799421, S799423, BP510-100, BP510-250, BP510-500, C69500, C69500LC, C70-500, C79-3, C79-500, C793LC, NC9266557, NC9329494, NC9353950, NC9354438, NC9848545

**Synonyms:** Calcium dichloride dihydrate.

**Company Identification:**

Fisher Scientific  
1 Reagent Lane  
Fair Lawn, 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

CAS#	Chemical Name	Percent	EINECS/ELINCS
10035-04-8	Calcium chloride, dihydrate	100	unlisted

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: white solid.

**Warning!** May be harmful if swallowed. May cause severe respiratory and digestive tract irritation with possible burns. May cause severe eye and skin irritation with possible burns. May cause cardiac disturbances. Hygroscopic (absorbs moisture from the air).

**Target Organs:** Eyes.

#### 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. May be harmful if swallowed. In very severe cases, seizures, rapid respiration, slow heartbeat, or death, may

**Inhalation:** May cause severe irritation of the upper respiratory tract with pain, burns, and inflammation.

**Chronic:** Effects may be delayed.

### Section 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:** Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**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.

**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. Do NOT use mouth-to-mouth resuscitation.

**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.

**Extinguishing Media:** Use extinguishing media most appropriate for the surrounding fire.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

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

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 0; Instability: 0

### 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.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Keep container tightly closed. Do not get on skin or in eyes. Do not ingest or inhale. Wash clothing before reuse. Always use cool water when dissolving calcium chloride. Heat evolved is significant.

**Storage:** Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.

## Section 8 - Exposure Controls, Personal Protection

**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

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Calcium chloride, dihydrate	none listed	none listed	none listed
Calcium chloride anhydrous	none listed	none listed	none listed

**OSHA Vacated PELs:** Calcium chloride, dihydrate: No OSHA Vacated PELs are listed for this chemical. Calcium chloride anhydrous: 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. 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

**Appearance:** white

**Odor:** odorless

**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:** 175 deg C

**Decomposition Temperature:** Not available.

**Solubility:** Soluble.

**Specific Gravity/Density:** Not available.

**Molecular Formula:** CaCl<sub>2</sub>·2H<sub>2</sub>O

**Molecular Weight:** 147.01

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable.

**Conditions to Avoid:** Dust generation, excess heat, exposure to moist air or water.

**Incompatibilities with Other Materials:** Bromine trifluoride, Furan-2-peroxycarboxylic acid, Solutions attack some metals..

**Hazardous Decomposition Products:** Hydrogen chloride, calcium oxide.

**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

### RTECS#:

**CAS#** 10035-04-8: EV9810000

**CAS#** 10043-52-4: EV9800000

### LD50/LC50:

Not available.

**CAS#** 10043-52-4:

Oral, mouse: LD50 = 1940 mg/kg;

Oral, rabbit: LD50 = 1384 mg/kg;

Oral, rat: LD50 = 1 gm/kg;

### Carcinogenicity:

**CAS#** 10035-04-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**CAS#** 10043-52-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information found  
**Teratogenicity:** No information found  
**Reproductive Effects:** No information found  
**Mutagenicity:** Mutagenic effects have occurred in experimental animals.  
**Neurotoxicity:** No information found  
**Other Studies:**

## Section 12 - Ecological Information

No information available.

## Section 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.

## Section 14 - Transport Information

	US DOT	Canada TDG
<b>Shipping Name:</b>	Not Regulated	Not Regulated
<b>Hazard Class:</b>		
<b>UN Number:</b>		
<b>Packing Group:</b>		

## Section 15 - Regulatory Information

### US FEDERAL

**TSCA**  
CAS# 10035-04-8 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# 10043-52-4 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.

**SARA Codes**  
CAS # 10035-04-8: immediate.  
CAS # 10043-52-4: immediate, delayed, reactive.

**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.  
CAS# 10043-52-4 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

### 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:**

XI

**Risk Phrases:**  
R 36 Irritating to eyes.

**Safety Phrases:**

- S 22 Do not breathe dust.
- S 24 Avoid contact with skin.

**WGK (Water Danger/Protection)**

- CAS# 10035-04-8: No information available.
- CAS# 10043-52-4: 0

**Canada - DSL/NDSL**

- CAS# 10043-52-4 is listed on Canada's DSL List.

**Canada - WHMIS**

- This product has a WHMIS classification of D2B.

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.

**Canadian Ingredient Disclosure List**

Section 16 - Additional Information
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**MSDS Creation Date:** 12/03/1998

**Revision #4 Date:** 10/06/2005

*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 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.*