

# Material Safety Data Sheet

## Calcium chloride dihydrate

ACC# 03901

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Calcium chloride dihydrate**Catalog Numbers:** AC123350000, AC123350025, AC207780000, AC207780010, AC423520000, AC423520250, AC423525000, BP510-100, BP510-250, BP510-500, C69-50, C69-500, C69-500LC, C70-500, C79-3, C79-3LC, C79-500, NC9354438, NC9616165, NC9657251, NC9715099**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 | 99+     | unlisted      |

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: slightly beige solid.

**Warning!** Causes eye irritation. May cause skin and respiratory tract irritation. Hygroscopic (absorbs moisture from the air).**Target Organs:** Blood, central nervous system, eyes, skin.**Potential Health Effects****Eye:** Causes eye irritation.**Skin:** May cause skin irritation. May cause dermatitis. 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:** Laboratory experiments have resulted in mutagenic effects. Chronic exposure may cause blood effects. Exposure to high concentrations may cause central nervous system depression. Animal studies have reported the development of tumors.

## 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:** Immediately 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:** Do not induce vomiting. Get medical aid if irritation or symptoms occur.

**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 if cough or other symptoms appear.

**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. Substance is noncombustible.

**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: 2; 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. Avoid generating dusty conditions. Provide ventilation. Do not let this chemical enter the environment.

## Section 7 - Handling and Storage

**Handling:** Use with adequate ventilation. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale.

**Storage:** Store in a cool, dry place. Store in a tightly closed container.

## 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 appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

## Section 9 - Physical and Chemical Properties

**Physical State:** Solid

**Appearance:** white - slightly beige

**Odor:** odorless

**pH:** 4.5 - 6.5 (100 g/L aq.sol.)

**Vapor Pressure:** 0.01 mm Hg @ 20 deg C

**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:** 1000 g/L (0°C)

**Specific Gravity/Density:** 0.830

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

**Molecular Weight:** 147.02

## 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:** Bromine trifluoride, water, strong acids, zinc, polymerizable compounds (e.g. butadiene, methyl acrylate, styrene, vinyl chloride).

**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:** Tumorigenic effects have been reported in experimental animals.

**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

**Ecotoxicity:** No data available. No information available.

**Environmental:** No information available.

**Physical:** No information available.

**Other:** Do not empty into drains.

## 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 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# 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**

|  |
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| <b>Section 16 - Additional Information</b> |
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**MSDS Creation Date:** 12/03/1998

**Revision #7 Date:** 2/28/2008

*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.*