

# SAFETY DATA SHEET

## 1. Identification

**Product Name** Calcium chloride

**Cat No. :** C77-212; C77-500; C614-3; C614-10; C614-500

**CAS No** 10043-52-4

**Synonyms** Dowflake; Calpus; Caltac (Anhydrous; Pellets; Certified; Desiccant; 4-20 MeshandFiner)

**Recommended Use** Laboratory chemicals.

**Uses advised against** Food, drug, pesticide or biocidal product use.

## 2. Hazard(s) identification

### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious Eye Damage/Eye Irritation Category 2 Combustible dust Yes

### Label Elements

#### **Signal Word**

Warning

#### **Hazard Statements**

May form combustible dust concentrations in air

Causes serious eye irritation



#### **Precautionary Statements**

##### **Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Wear eye/face protection

##### **Inhalation**

Call a POISON CENTER or doctor/physician if you feel unwell

##### **Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing if eye irritation persists: Get medical advice/attention

##### **Storage**

Store in a well-ventilated place. Keep container tightly closed

Store locked up

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

None identified

**3. Composition/Information on Ingredients**

Component	CAS No	Weight %
Calcium	10043-52-4	<=100

**4. First-aid measures**

**Eye Contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.

**Inhalation** Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.

**Ingestion** Do NOT induce vomiting. Get medical attention.

No information available.

**Most important symptoms and effects**

**Notes to Physician** Treat symptomatically

**5. Fire-fighting measures**

**Suitable Extinguishing Media** Substance is nonflammable; use agent most appropriate to extinguish surrounding fire. **Unsuitable**

**Extinguishing Media** No information available

**Flash Point** No information available

**Method -** No information available

**Autoignition Temperature** No information available

**Explosion Limits**

**Upper** No data available

**Lower** No data available

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

**Specific Hazards Arising from the Chemical**

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

**Hazardous Combustion Products**

Chlorine. Hydrogen chloride gas.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

Health

## Flammability

2

0

1

N/A

## Instability Physical hazards

### 6. Accidental release measures

**Personal Precautions** Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.  
**Environmental Precautions** Should not be released into the environment. See Section 12 for additional Ecological Information.

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

#### Methods for Containment and Clean Up

### 7. Handling and storage

**Handling** Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

**Storage.** Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible Materials. Strong oxidizing agents. Metals.

### 8. Exposure controls / personal protection

#### Exposure Guidelines

**Engineering Measures** Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

#### Personal Protective Equipment

**Eye/face Protection** 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 and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure. **Respiratory**

**Protection** No protective equipment is needed under normal use conditions. Handle in accordance with good industrial hygiene and safety practice.

#### Hygiene Measures

### 9. Physical and chemical properties

**Physical State** Solid

**Appearance** Beige

**Odor** Odorless

**Odor Threshold** No information available **pH** 8-10 100 g/L aq.sol

**Melting Point/Range** 782 °C / 1439.6 °F **Boiling Point/Range** > 1600 °C / > 2912 °F @ 760 mmHg **Flash Point** No information available

**Evaporation Rate** Not applicable

**Flammability (solid,gas)** No information available **Flammability or explosive limits**

**Upper** No data available

**Lower** No data available  
**Vapor Pressure** No information available **Vapor Density** Not applicable  
**Specific Gravity** No information available **Solubility** Soluble in water  
**Partition coefficient; n-octanol/water** No data available **Autoignition Temperature** No information available  
**Decomposition Temperature** No information available **Viscosity** Not applicable  
**Molecular Formula** Ca Cl<sub>2</sub>  
**Molecular Weight** 110.99

## 10. Stability and reactivity

**Reactive Hazard** None known, based on information available **Stability** Stable under recommended storage conditions. Hygroscopic.  
**Conditions to Avoid** Incompatible products. Exposure to moist air or water. Excess heat. Avoid dust formation. **Incompatible Materials**  
 Strong oxidizing agents, Metals  
**Hazardous Decomposition Products** Chlorine, Hydrogen chloride gas  
**Hazardous Polymerization** Hazardous polymerization does not occur.  
**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Product Information Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Calcium chloride	2301 mg/kg ( Rat )	LD50 > 5000 mg/kg ( Rabbit )	Not listed

No information available

#### Toxicologically Synergistic Products

**Delayed and immediate effects as well as chronic effects from short and long-term exposure** Irritation Severe eye irritant

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as acarcinogen.

Component	CAS No	IARC	NT	ACGIH	OSI	Mexico
Calcium chloride	10043-52-4	Not listed	Not listed	Not listed	Not listed	Not listed

**Mutagenic Effects** Mutagenic effects have occurred in experimental animals. **Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known  
**STOT - repeated exposure** None known

**Aspiration hazard** No information available

No information available

**Symptoms / effects, both acute and delayed**

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** Tumorigenic effects have been reported in experimental animals. See actual entry in RTECS for complete information.

## 12. Ecological information

### Ecotoxicity

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Calcium chloride	Not listed	Lepomis macrochirus: LC50: 10650 mg/L/96h	Not listed	EC50: 52 mg/L/48h

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available. **Bioaccumulation/**

**Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT** Not regulated

**TDG** Not regulated

**IATA** Not regulated

**IMDG/IMO** Not regulated

## 15. Regulatory information

### United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
Calcium chloride	10043-52-4	X	ACTIVE	-

**Legend:**

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)  
X - Listed  
'-' - Not Listed

Not applicable

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)**

TSCA 12(b) - Notices of Export Not applicable

**International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea(KECL).

Component	CAS No		DSL	NDSL	EINECS	P	E	AIC	IECSCKE
Calcium chloride	10043-52-4		X	233-140-					XKE-0449 6

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**U.S. Federal Regulations**

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

Not applicable

OSHA - Occupational Safety and Health Administration

CERCLA Not applicable

California Proposition 65 This product does not contain any Proposition 65 chemicals. Not applicable

**U.S. State Right-to-Know Regulations**

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

This product does not contain any DHS chemicals.

**U.S. Department of Homeland Security**

**Other International Regulations**

Mexico - Grade No information available

**Authorisation/Restrictions according to EU REACH**

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) -Annex XVII - Restrictions on Certain  Substances	REACH Regulation (EC1907/2006) article 59 - Candidate List of  Substances of Very High Concern (SVHC)
Calcium chloride	10043-52-4	-	Use restricted. See item 75. (see link for restriction details)	-

**REACH links**

<https://echa.europa.eu/substances-restricted-under-reach>

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Pot ential	Restriction of Hazardous Substances (RoHS)
Calcium chloride	10043-52-4	Listed	Not applicable	Not applicable	Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)? Not applicable

Other International Regulations

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Calcium chloride	10043-52-4	Not applicable	Not applicable	Not applicable	Not applicable