

# calcium chloride

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 10/20/2015

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance  
 Substance name : calcium chloride  
 CAS No : 10043-52-4  
 Formula : CaCl<sub>2</sub>  
 Synonyms : calcium chloride, granular / calciumchloride, anhydrous / calplus (=calciumchloride,anhydrous) / caltac / dowflake / liquidow / peladow / snomelt / superflake, anhydrous  
 BIG no : 10402

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Anti-dusting agent  
 Cement: additive  
 Desiccant  
 Chemical raw material  
 Fertilizer  
 Additive

#### 1.3. Details of the supplier of the safety data sheet

Five Star Chemicals & Supply Inc  
 4915 E 52nd Ave  
 Commerce City, CO 80022  
 (303) 287-0186

#### 1.4. Emergency telephone number

Emergency number : 800-535-5053  
 INFOTRAC

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

Not classified

#### 2.2. Label elements

##### GHS-US labeling

No labeling applicable

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS-US)

Not applicable

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Name	Product identifier	%	Classification (GHS-US)
calcium chloride (Main constituent)	(CAS No) 10043-52-4	100	Not classified

Full text of H-phrases: see section 16

#### 3.2. Mixture

Not applicable

#### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.  
 First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Allow victim to breathe fresh air. Allow the victim to rest.

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- First-aid measures after skin contact : Rinse with water. Soap may be used. Take victim to a doctor if irritation persists. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.
- First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do NOT induce vomiting. Consult a doctor/medical service if you feel unwell.

### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.
- Symptoms/injuries after inhalation : AFTER INHALATION OF DUST: EXPOSURE TO HIGH CONCENTRATIONS: Slight irritation. Coughing. Runny nose.
- Symptoms/injuries after skin contact : Dry skin. Red skin.
- Symptoms/injuries after eye contact : Visual disturbances. Irritation of the eye tissue.
- Symptoms/injuries after ingestion : Vomiting. Abdominal pain.
- Chronic symptoms : No effects known.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : EXTINGUISHING MEDIA FOR SURROUNDING FIRES: Water. Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : DIRECT FIRE HAZARD. Non combustible. INDIRECT FIRE HAZARD. Reactions involving a fire hazard: see "Reactivity Hazard".
- Explosion hazard : DIRECT EXPLOSION HAZARD. No direct explosion hazard.
- Reactivity : Reacts exothermically with water (moisture). Violent exothermic reaction with hot water. Reacts slowly on exposure to water (moisture) with (some) metals: release of highly flammable gases/vapours (hydrogen). On burning: release of toxic and corrosive gases/vapours (hydrogen chloride, chlorine). Reacts violently with (some) compounds.

### 5.3. Advice for firefighters

- Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
- Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

- Protective equipment : Gloves. Safety glasses. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. See "Material-Handling" to select protective clothing.
- Emergency procedures : Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes. On contact with moisture/water: keep upwind. On contact with moisture/water: consider evacuation. Evacuate unnecessary personnel.
- Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

#### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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### 6.3. Methods and material for containment and cleaning up

- For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Hazardous reaction: measure explosive gas-air mixture. Reaction: dilute combustible gas/vapour with water curtain.
- Methods for cleaning up : Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. See "Material-handling" for suitable container materials. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling. On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Avoid raising dust. Keep away from naked flames/heat. Observe normal hygiene standards. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight. Keep container closed when not in use.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Sources of ignition. Direct sunlight.
- Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources.
- Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: metals. water/moisture.
- Storage area : Store in a cool area. Store in a dry area. Keep container in a well-ventilated place. Meet the legal requirements.
- Special rules on packaging : SPECIAL REQUIREMENTS: hermetical. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
- Packaging materials : SUITABLE MATERIAL: polyethylene. polypropylene. MATERIAL TO AVOID: metal. stainless steel.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

calcium chloride (10043-52-4)	
ACGIH	Not applicable
OSHA	Not applicable

### 8.2. Exposure controls

- Personal protective equipment : Avoid all unnecessary exposure.
- Materials for protective clothing : GIVE EXCELLENT RESISTANCE: No data available. GIVE GOOD RESISTANCE: butyl rubber. neoprene. PVC. GIVE LESS RESISTANCE: No data available. GIVE POOR RESISTANCE: No data available.
- Hand protection : Gloves. Wear protective gloves.
- Eye protection : Safety glasses. In case of dust production: protective goggles. Chemical goggles or safety glasses.
- Skin and body protection : Protective clothing.
- Respiratory protection : Dust production: dust mask with filter type P1. Wear appropriate mask.
- Other information : Do not eat, drink or smoke during use.

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### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Crystalline solid. Crystalline powder. Grains.
Molecular mass	: 110.99 g/mol
Color	: White to grey
Odor	: Odourless
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: < 1
Melting point	: 772 °C
Freezing point	: No data available
Boiling point	: 1670 °C
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 2.2
Specific gravity / density	: 2152 kg/m <sup>3</sup>
Solubility	: Exothermically soluble in water. Soluble in ethanol. Soluble in acetone. Soluble in acetic acid. Water: 75 g/100ml Ethanol: soluble Acetone: soluble
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

#### 9.2. Other information

Minimum ignition energy	: Not applicable
SADT	: Not applicable
VOC content	: Not applicable
Other properties	: Hygroscopic.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Reacts exothermically with water (moisture). Violent exothermic reaction with hot water. Reacts slowly on exposure to water (moisture) with (some) metals: release of highly flammable gases/vapours (hydrogen). On burning: release of toxic and corrosive gases/vapours (hydrogen chloride, chlorine). Reacts violently with (some) compounds.

#### 10.2. Chemical stability

Unstable on exposure to moisture. Not established.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials

Strong acids. Strong bases.

#### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Not classified

calcium chloride ( 1f )10043-52-4	
LD50 oral rat	> 1000 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Literature study; 2301 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	> 5000 mg/kg body weight (Rabbit; Experimental value; Other)
LC50 inhalation rat (mg/l)	> 0.16 mg/l/4h (Rat; Literature study)

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : AFTER INHALATION OF DUST: EXPOSURE TO HIGH CONCENTRATIONS: Slight irritation. Coughing. Runny nose.

Symptoms/injuries after skin contact : Dry skin. Red skin.

Symptoms/injuries after eye contact : Visual disturbances. Irritation of the eye tissue.

Symptoms/injuries after ingestion : Vomiting. Abdominal pain.

Chronic symptoms : No effects known.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general : Classification concerning the environment: not applicable.

Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006). TA-Luft Klasse 5.2.1.

Ecology - water : For Flanders: maximum concentration in drinking water: 270 mg/l (calcium)(M.B. 28/1/2003). Maximum concentration in drinking water: 250 mg/l (chloride) (Directive 98/83/EC). Not harmful to fishes (LC50(96h) >1000 mg/l). Not harmful to invertebrates (Daphnia). Not harmful to algae (EC50 (72h) >1000 mg/l).

calcium chloride (10043-52-4)	
LC50 fish 1	13400 mg/l (96 h; Gambusia affinis; Lethal)
EC50 Daphnia 1	144 mg/l (48 h; Daphnia magna)
LC50 fish 2	10650 mg/l (96 h; Lepomis macrochirus)
EC50 Daphnia 2	383 mg/l (48 h; Daphnia magna)
TLM fish 1	2400 ppm (48 h; Pisces)
Threshold limit algae 1	3130 mg/l (120 h; Diatomeae)
Threshold limit algae 2	27000 mg/l (72 h; Selenastrum capricornutum; GLP)

#### 12.2. Persistence and degradability

calcium chloride (10043-52-4)	
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the substance available. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

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### 12.3. Bioaccumulative potential

#### calcium chloride (10043-52-4)

Bioaccumulative potential	Bioaccumulation: not applicable. Not established.
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### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Effect on ozone layer :

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Should not be landfilled with household waste. Recycle/reuse. Precipitate/make insoluble. Remove to an authorized dump (Class I). Do not discharge into the sewer. Do not discharge into surface water. Dispose in a safe manner in accordance with local/national regulations.

Additional information : LWCA (the Netherlands): KGA category 06. Hazardous waste according to Directive 2008/98/EC.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with DOT

Not regulated for transport

### Additional information

Other information : No supplementary information available.

### ADR

No additional information available

### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### calcium chloride (10043-52-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
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### 15.2. International regulations

#### CANADA

No additional information available

#### EU-Regulations

No additional information available

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Eye Irrit. 2 H319

Full text of H-phrases: see section 16

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xi; R36

Full text of R-phrases: see section 16

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### 15.2.2. National regulations

### 15.3. US State regulations

No additional information available

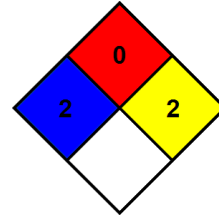
## SECTION 16: Other information

Other information : None.

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 2 - Normally unstable and readily undergo violent decomposition but do not detonate. Also: may react violently with water or may form potentially explosive mixtures with water.



SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*