



# Safety Data Sheet

Cat. # RC-031

Calcium Chloride, Dihydrate (CaCl<sub>2</sub>.2H<sub>2</sub>O)

Size: 1kg





# calcium chloride, dihydrate

## Safety Data Sheet

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

Date of issue: 10/30/2015

Revision date: 05/11/2017

Version: 7.1

### SECTION 1: Identification

#### 1.1. Identification

Product form	: Substance
Substance name	: calcium chloride, dihydrate
CAS-No.	: 10035-04-8
Product code	: 003C_C003
Formula	: CaCl <sub>2</sub> ·2H <sub>2</sub> O
Synonyms	: cal plus (=calcium chloride, dihydrate) / calcium chloride, dihydrate / calcium chloride-2-hydrate / calcium dichloride, dihydrate / replenisher(calcium) / sinjarite
BIG No	: 20987

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture	: De-icing salt Anti-dusting agent Cement: additive
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#### 1.3. Supplier

Geno Technology, Inc./ G-Biosciences  
9800 Page Avenue  
Saint Louis, 63132-1429 - United States  
T 800-628-7730 - F 314-991-1504  
[technical@GBiosciences.com](mailto:technical@GBiosciences.com) - [www.GBiosciences.com](http://www.GBiosciences.com)

#### 1.4. Emergency telephone number

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

### SECTION 2: Hazard(s) identification

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

##### GHS US classification

Serious eye damage/eye irritation Category 2 H319 Causes serious eye irritation

Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Warning

Hazard statements (GHS US) :

H319 - Causes serious eye irritation

Precautionary statements (GHS US) :

P264 - Wash hands, forearms and face thoroughly after handling.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P337+P313 - If eye irritation persists: Get medical advice/attention.

#### 2.3. Other hazards which do not result in classification

No additional information available

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

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

Substance type : Mono-constituent

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Name	Common Name (Synonyms)	Product identifier	%	GHS US classification
calcium chloride, dihydrate (Main constituent)	cal plus (=calcium chloride, dihydrate) / calcium chloride, dihydrate / calcium chloride-2-hydrate / calcium dichloride, dihydrate / replenisher(calcium) / sinjarite	(CAS-No.) 10035-04-8	100	Eye Irrit. 2, H319

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
- First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
- First-aid measures after skin contact : Rinse with water. Take victim to a doctor if irritation persists.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. 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. Call Poison Information Centre ([www.big.be/antigif.htm](http://www.big.be/antigif.htm)). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

### 4.2. Most important symptoms and effects (acute and delayed)

- Potential Adverse human health effects and symptoms : Practically non-toxic if swallowed (LD50 oral 2000/5000 mg/kg). Non-toxic in contact with skin (LD50 skin > 5000 mg/kg). Not irritant to skin. Causes serious eye irritation.
- Symptoms/effects after inhalation : EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Slight irritation. Runny nose.
- Symptoms/effects after skin contact : Dry skin.
- Symptoms/effects after eye contact : Irritation of the eye tissue. Visual disturbances.
- Symptoms/effects after ingestion : AFTER INGESTION OF HIGH QUANTITIES: Nausea. Vomiting. Abdominal pain.
- Chronic symptoms : No effects known.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam.

### 5.2. Specific hazards arising from the chemical

- Fire hazard : DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: Reactions involving a fire hazard: see "Reactivity Hazard".
- Explosion hazard : INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard".

### 5.3. Special protective equipment and precautions for fire-fighters

- 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.
- Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.

## 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.
- 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.

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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 : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment.

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

For containment : Contain released product, pump into suitable 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. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Keep container tightly closed.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

Storage conditions : Store in a well-ventilated place. Keep cool.

Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: metals. water/moisture.

Storage 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: stainless steel. aluminium.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### calcium chloride, dihydrate (10035-04-8)

No additional information available

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Materials for protective clothing:

GIVE GOOD RESISTANCE: butyl rubber. neoprene. PVC

#### Hand protection:

Gloves

#### Eye protection:

Safety glasses. In case of dust production: protective goggles

#### Skin and body protection:

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Protective clothing

### Respiratory protection:

Dust production: dust mask with filter type P1

## SECTION 9: Physical and chemical properties

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

Physical state	: Solid
Appearance	: Crystalline solid. Crystalline powder. Grains. Scales.
Color	: Colourless to white
Odor	: Odourless
Odor threshold	: No data available
pH	: No data available
Melting point	: 176 °C
Freezing point	: Not applicable
Boiling point	: 1935 °C
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: Not applicable
Relative density	: 1.85
Specific gravity / density	: 1850 kg/m <sup>3</sup>
Molecular mass	: 147.02 g/mol
Solubility	: Soluble in water. Soluble in ethanol. Soluble in acetic acid. Soluble in acetone. Water: 83 g/100ml
Log Pow	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

VOC content	: Not applicable (inorganic)
Other properties	: Hygroscopic.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts violently with (some) compounds. Reacts exothermically with water (moisture).

### 10.2. Chemical stability

Unstable on exposure to moisture.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Hazardous decomposition products.

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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LD50 oral rat	2301 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral)
LD50 dermal rabbit	> 5000 mg/kg body weight (Other, 24 h, Rabbit, Male / female, Experimental value, Dermal)
ATE US (oral)	2301 mg/kg body weight

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
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
Viscosity, kinematic	: No data available
Potential Adverse human health effects and symptoms	: Practically non-toxic if swallowed (LD50 oral 2000/5000 mg/kg). Non-toxic in contact with skin (LD50 skin > 5000 mg/kg). Not irritant to skin. Causes serious eye irritation.
Symptoms/effects after inhalation	: EXPOSURE TO HIGH CONCENTRATIONS: Coughing. Slight irritation. Runny nose.
Symptoms/effects after skin contact	: Dry skin.
Symptoms/effects after eye contact	: Irritation of the eye tissue. Visual disturbances.
Symptoms/effects after ingestion	: AFTER INGESTION OF HIGH QUANTITIES: Nausea. Vomiting. Abdominal pain.
Chronic symptoms	: No effects known.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - general	: Not classified as dangerous for the environment according to the criteria of Directive 67/548/EEC. Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air	: Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Slightly harmful to crustacea. Not harmful to fishes. Not harmful to algae.

calcium chloride, dihydrate (10035-04-8)	
LC50 fish 1	10650 mg/l (96 h, Lepomis macrochirus, Literature study, Anhydrous form)
EC50 Daphnia 1	144 mg/l (48 h, Daphnia magna, Literature study, Anhydrous form)

#### 12.2. Persistence and degradability

calcium chloride, dihydrate (10035-04-8)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

#### 12.3. Bioaccumulative potential

calcium chloride, dihydrate (10035-04-8)	
Bioaccumulative potential	Not bioaccumulative.

#### 12.4. Mobility in soil

calcium chloride, dihydrate (10035-04-8)	
Ecology - soil	No (test) data on mobility of the substance available.

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### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

- Waste treatment methods : Waste treatment methods.
- Product/Packaging disposal recommendations : Treat using the best available techniques before discharge into drains or the aquatic environment. Remove waste in accordance with local and/or national regulations. Should not be landfilled with household waste. 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. Remove to an authorized dump (Class I). Precipitate/make insoluble.
- Additional information : Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Other information : No supplementary information available.

### Transportation of Dangerous Goods

### Transport by sea

### Air transport

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### calcium chloride, dihydrate (10035-04-8)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

#### calcium chloride, dihydrate (10035-04-8)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

### EU-Regulations

#### National regulations

No additional information available

### 15.3. US State regulations

## SECTION 16: Other information

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Full text of H-phrases:

H319	Causes serious eye irritation
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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.*