



# Calcium Chloride Flake 77%

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## Pictograms

GHS07



## Hazard statements

**H319** Causes serious eye irritation.

## Precautionary statements

**P264** Wash face and hands 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

### Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

**Name of substance** calcium chloride, dihydrate

#### Identifiers

CAS No 10035-04-8

**Molecular formula** CaCl<sub>2</sub>·(H<sub>2</sub>O)<sub>2</sub>

**Molar mass** 147 g/mol

The specific exact percentage (concentration) of composition has been withheld as a trade secret.

## SECTION 4: First-aid measures

### 4.1 Description of first-aid measures

#### General notes

Take off immediately all contaminated clothing.

In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following inhalation

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

#### Following skin contact

Rinse skin with water/shower.

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## **Following eye contact**

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Remove contact lenses, if present and easy to do. Continue rinsing.

## **Following ingestion**

Let water be drunk in little sips (dilution effect).  
Call a physician immediately.

## **Notes for the doctor**

None.

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

Irritant effects, Gastrointestinal complaints.

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

None.

## **SECTION 5: Fire-fighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

Non-combustible, coordinate firefighting measures to the fire surroundings

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

Hazardous decomposition products: Section 10.  
Hydrogen chloride (HCl).  
Calcium oxide.

### **5.3 Advice for firefighters**

Keep containers cool with water spray.  
In case of fire and/or explosion do not breathe fumes.  
Coordinate firefighting measures to the fire surroundings.  
Do not allow firefighting water to enter drains or water courses.  
Collect contaminated firefighting water separately.  
Fight fire with normal precautions from a reasonable distance.

#### **Special protective equipment for firefighters**

Wear self-contained breathing apparatus

## **SECTION 6: Accidental release measures**

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

#### **For non-emergency personnel**

Follow emergency procedures such as the need to evacuate the danger area or to consult an expert.  
Remove persons to safety.  
Ventilate affected area.  
Do not breathe dust.  
Do not get in eyes, on skin, or on clothing.

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Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

## **For emergency responders**

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

## **6.2 Environmental precautions**

Keep away from drains, surface and ground water.  
Retain contaminated washing water and dispose of it.

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

### **Advice on how to contain a spill**

Take up mechanically

### **Advice on how to clean up a spill**

Collect spillage.

### **Other information relating to spills and releases**

Place in appropriate containers for disposal.  
Ventilate affected area.

## **6.4 Reference to other sections**

Personal protective equipment: see section 8.  
Incompatible materials: see section 10.  
Disposal considerations: see section 13.

## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

#### **Measures to prevent fire as well as aerosol and dust generation**

Use local and general ventilation.

#### **Specific notes/details**

Dust deposits may accumulate on all deposition surfaces in a technical room.

#### **Measures to protect the environment**

Avoid release to the environment.

#### **Advice on general occupational hygiene**

Do not eat, drink and smoke in work areas.  
Remove contaminated clothing and protective equipment before entering eating areas.  
Do not breathe dust.  
Do not get in eyes, on skin, or on clothing.  
Wash hands after use.  
Preventive skin protection (barrier creams/ointments) is recommended.

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

#### **Flammability hazards**

None.

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## Incompatible substances or mixtures

Incompatible materials: see section 10.

## Protect against external exposure, such as

heat, humidity

## Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

Store in a dry place. Store in a closed container.

## Ventilation requirements

Provision of sufficient ventilation.

## Packaging compatibilities

Keep only in original container.

## 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Human health values

Relevant DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	5 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects
DNEL	2.5 mg/m <sup>3</sup>	human, inhalatory	consumer (private households)	chronic - local effects

### 8.2 Exposure controls

#### Appropriate engineering controls

General ventilation.

#### Individual protection measures (personal protective equipment)

##### Eye/face protection

Wear eye/face protection.

##### Hand protection

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<b>Protective gloves</b>		
<b>Material</b>	<b>Material thickness</b>	<b>Breakthrough times of the glove material</b>
NBR: acrylonitrile-butadiene rubber	≥ 0,5 mm	>480 minutes (permeation: level 6)
CR: chloroprene (chlorobutadiene) rubber	≥ 0,5 mm	>480 minutes (permeation: level 6)
PVC: polyvinyl chloride	≥ 0,5 mm	>480 minutes (permeation: level 6)

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

## **Body protection**

Protective clothing for use against solid particulates.

## **Respiratory protection**

In case of inadequate ventilation wear respiratory protection.

Particulate filter device (EN 143).

P2 (filters at least 94 % of airborne particles, color code: White).

## **Environmental exposure controls**

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

## **SECTION 9: Physical and chemical properties**

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

#### **Appearance**

<b>Physical state</b>	solid flakes
<b>Color</b>	white
<b>Odor</b>	odorless
<b>Odor threshold</b>	not applicable
<b>Other safety parameters</b>	
<b>pH (value)</b>	not determined
<b>Melting point/freezing point</b>	782 °C
<b>Boiling point or initial boiling point and boiling range</b>	1,600 °C
<b>Flash point</b>	not applicable

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<b>Evaporation rate</b>	not determined
<b>Flammability (solid, gas)</b>	non-combustible
<b>Explosive limits</b>	not relevant (non-combustible)
Explosion limits of dust clouds	not applicable
<b>Vapor pressure</b>	not determined
Density	2.15 g/cm <sup>3</sup> at 25 °C
Vapor density	this information is not available
Relative density	information on this property is not available
<b>Solubility(ies)</b>	
Water solubility	813 g/l at 20 °C
<b>Partition coefficient</b>	
n-octanol/water (log KOW)	not relevant (inorganic)
Auto-ignition temperature	not determined
<b>Decomposition temperature</b>	this information is not available
<b>Viscosity</b>	not relevant (solid)
<b>Explosive properties</b>	none
<b>Oxidizing properties</b>	none
<b>Information for relevant hazard classes according to GHS</b>	hazard classes acc. to GHS (physical hazards): not relevant
<b>9.2 Other information</b>	there is no additional information

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Solution. (Heat)

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

Dangerous/dangerous reactions with: Dangerous substance (Gases and vapors): Metals, Zinc.  
Liberation of excessive heat with: Water.  
May be corrosive to metals.

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## 10.4 Conditions to avoid

Protect from moisture.

## 10.5 Incompatible materials

strong oxidizer

## 10.6 Hazardous decomposition products

Hydrogen chloride (HCl).

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

If not otherwise specified the classification is based on:

Animal studies; Evidence from any other toxicity tests; Expert judgment (weight of evidence determination).

#### Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

##### Acute toxicity

Shall not be classified as acutely toxic (oral).

Shall not be classified as acutely toxic (dermal).

May be harmful if swallowed.

Exposure route	Endpoint	Value	Species	Method	Notes
oral	LD50	2,301 mg/kg	rat	OECD Guideline 401	anhydrous
dermal	LD0	>5,000 mg/kg	rabbit	-	anhydrous

##### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

(ECHA, OECD Guideline 404)

##### Serious eye damage/eye irritation

Causes serious eye irritation.

(ECHA, OECD Guideline 405)

##### Respiratory or skin sensitization

###### Skin sensitization

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

###### Respiratory sensitization

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

##### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

(ECHA, OECD Guideline 471)



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## Carcinogenicity

### IARC Monographs

not listed

### National Toxicology Program (United States)

not listed

### OSHA Carcinogens

Not listed.

## Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Specific target organ toxicity - single exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

### Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## 11.2 Other information

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity (acute)

Based on available data, the classification criteria are not met.

Endpoint	Value	Species	Method	Exposure time
LC50	4,630 mg/l	fathead minnow (Pimephales promelas)	-	96 h
LC50	2,400 mg/l	daphnia magna	OECD Guideline 202	48 h
ErC50	>4,000 mg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	72 h
EbC50	2,900 mg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	48 h

#### Aquatic toxicity (chronic)

Based on available data, the classification criteria are not met.

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Endpoint	Value	Species	Method	Exposure time
EC50	900 mg/l	daphnia magna	OECD Guideline 211	21 d
NOEC	230 mg/l	rainbow trout (Oncorhynchus mykiss)	OECD Guideline 210	25 d
NOEC	481 mg/l	daphnia magna	OECD Guideline 211	21 d
LOEC	860 mg/l	rainbow trout (Oncorhynchus mykiss)	OECD Guideline 210	25 d
LOEC	240 mg/l	daphnia magna	OECD Guideline 211	21 d
growth (EbCx) 20%	1,000 mg/l	algae (pseudokirchneriella subcapitata)	OECD Guideline 201	72 h

## 12.2 Persistence and degradability

### Biodegradation

The study does not need to be conducted because the substance is inorganic.

### Persistence

The study does not need to be conducted because the substance is inorganic.

## 12.3 Bioaccumulative potential

No data available.

## 12.4 Mobility in soil

No data available.

## 12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

## 12.6 Other adverse effects

This information is not available.

### Remarks

Wassergefährdungsklasse, WGK (water hazard class): 1 (Slightly hazardous to water)

Do not empty into drains.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packages

Completely emptied packages can be recycled.

Handle contaminated packages in the same way as the substance itself.

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## Remarks

Please consider the relevant national or regional provisions.

## SECTION 14: Transport information

14.1	UN number	not assigned
14.2	UN proper shipping name	-
14.3	Transport hazard class(es)	-
14.4	Packing group	-
14.5	Environmental hazards	-
14.6	Special precautions for user	-
14.7	Transport in bulk according to Annex II of MARPOL and the IBC Code	-

## 14.8 Information for each of the UN Model Regulations

**Transport of dangerous goods by road or rail (49 CFR US DOT) Additional information**

Not subject to transport regulations.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations specific for the product in question

#### National regulations (United States)

**Toxic Substance Control Act (TSCA)** substance is listed

#### Superfund Amendment and Reauthorization Act (SARA TITLE III )

**The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)**

not listed

#### Specific Toxic Chemical Listings (EPCRA Section 313)

not listed

#### Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

**List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)**

not listed

#### Clean Air Act

not listed

#### Right to Know Hazardous Substance List

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## Hazardous Substance List (NJ-RTK)

not listed

## California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

not listed

## Industry or sector specific available guidance(s)

### NPCA-HMIS® III

Hazardous Materials Identification System.  
American Coatings Association.

Category	Rating	Description
Chronic	/	none
Health	2	temporary or minor injury may occur
Flammability	0	material that will not burn under typical fire conditions
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	-

### NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	0	material that will not burn under typical fire conditions
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard	-	-

## 15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has been carried out.

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## SECTION 16: Other information, including date of preparation or last revision

Date of preparation: 2021-05-20

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EbC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IARC Monographs	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LOEC	Lowest Observed Effect Concentration
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NOEC	No Observed Effect Concentration
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
vPvB	Very Persistent and very Bioaccumulative

### Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

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Transport of dangerous goods by road or rail (49 CFR US DOT).  
International Maritime Dangerous Goods Code (IMDG).  
Dangerous Goods Regulations (DGR) for the air transport (IATA).

## List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H319	Causes serious eye irritation.

## Responsible for the safety data sheet

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## Disclaimer

This information is based upon the present state of our knowledge.  
This SDS has been compiled and is solely intended for this product.