

# Safety data sheet

According to the Commission Regulation (EU) No. 453/2010

Date of issue: 1. 12. 1999  
Revision Date: 31. 5. 2015

## Calcium chloride solid

### 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Commercial name: Calcium chloride solid  
Registration number: 01-2119494219-28-0014

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

Profession application: as an additive into scattering materials for the winter road maintenance, for the protection of a powder materials against freezing, in the food industry as food and feed additives, for special purposes in chemical industry, as a dehydrating agent, as a desiccant

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

Producer/importer: **Vodní sklo, a. s.**, Krakovská 1346/15, 110 01 Praha 1 – Nové Město  
Address: Dornych 47, 656 16 Brno; U Tonasa 172/2, 403 31 Ústí nad Labem  
IČ: 279 21 662  
Telephone number: +420 530 530 000 (Brno), +420 475 245 362, +420 475 245 233 (Ústí)  
Fax number: +420 530 530 002 (Brno), +420 475 507 164 (Ústí)  
Competent person responsible for the SDS: Ing. Andrea Kudrová e-mail: andrea.kudrova@vodnisklo.cz

#### 1.4 Emergency telephone number

Toxikologické informační středisko (Poison center), Na Bojišti 1, 120 00 Praha 2;  
Telephone number (24 hours/day) +420 224 919 293; +420 224 915 402

### 2. Hazards identification

#### 2.1 Classification of the substance or mixture

According to the Regulation (EC) No. 1272/2008: Eye Irrit.2: H319  
The human health and environmental hazards: Causes serious eye irritation.  
Full text of the H, P phrases is listed in the section 16 of this safety data sheet.

#### 2.2 Label elements

Hazard pictogram:



Signal word: **Warning**

#### Hazard statement(s):

H319 – Causes serious eye irritation.

#### Precautionary statement(s) (prevention):

P262 – Do not get in eyes, on skin, or on clothing.  
P264 – Wash eyes and skin thoroughly after handling.  
P280 – Wear protective gloves/protective clothing/eye protection/face protection.

#### Precautionary statement(s) (response):

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


## Calcium chloride solid

The substance does not fulfill the criteria for PBT or vPvB substance.  
No additional hazards had been determined.

### 3. Composition/information on ingredients

#### 3.1 Substances

3.1.1 For substances classified according to the Regulation (EC) No. 1272/2008 is indicated

Chemical name:	Calcium chloride
Concentration in (%):	> 96 %
Hazard pictogram(s):	
Signal word:	<b>Warning</b>
Code of hazard class and hazard category:	Eye Irrit. 2
Hazard statement(s):	H319
Precautionary statement(s) according to the CLP regulation:	P262 P264 P280 P305+P351+P338 P337+P313
CAS number:	10043-52-4
EC (EINECS) number:	233-140-8
Index number:	017-013-00-2

Full text of the H, P phrases is listed in the section 16 of this safety data sheet.

#### 3.2 Mixtures

Not applicable - it is not a mixture.

### 4. First aid measures

#### 4.1 Description of first aid measures

First aid personnel must take care on their own safety. In case of accident or if you feel unwell, or in case of the occurrence of any symptoms or doubts, consult your health condition with a doctor and provide information from this safety data sheet. Ensure the functioning of the vital functions (artificial respiration, inhalation of oxygen, heart massage). In case of unconsciousness place the affected person into the stabilized position on the side and do not administer any oral products.

Following aspiration/inhalation:

Move affected person to fresh air, keep the person quiet and warm, in case of respiratory failure administer artificial respiration, seek out medical attention.

Following skin contact:

Immediately remove contaminated clothing and shoes and wash affected areas with plenty of water.

Following eye contact:

Remove contact lenses, if present and easy to do. Rinse eyes with pure fresh running water stream for at least 15 minutes while holding eyelids apart and seek out medical attention. Continue rinsing during the affected person transport.

After ingestion:

Rinse mouth with water, drink plenty of water. Do not induce vomiting! Seek out medical attention.

# Safety data sheet

According to the Commission Regulation (EU) No. 453/2010

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## Calcium chloride solid

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

Not applicable. Calcium chloride is not acutely toxic via the oral, dermal or inhalation route.

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

Follow the advice listed in section 4.1.

## 5. Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media: Water spray, foam or CO<sub>2</sub>. The product is not combustible. The type of extinguishing agent to adapt the surrounding area.

Unsuitable extinguishing media: An intense water stream.

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

Do not breathe combustion products. During the combustion toxic and corrosive fumes of hydrogen chloride can be released.

### 5.3 Advice for firefighters

Firefighters equip with breathing apparatus, adequate to environmental conditions, independent of the surrounding atmosphere and adequate protective clothing. Use protective means against acid gases.

## 6. Accidental release measures

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

#### 6.1.1 For non-emergency personnel

Avoid direct contact with the leaking substance. Avoid contact with eyes and skin and dust formation, do not breathe dust. Follow the instruction in section 8. Wear protective clothing, protective gloves, a container with pure water for washing out eyes should be placed in the workplace.

#### 6.1.2 For emergency responders

See section 6.1.1.

### 6.2 Environmental precautions

Prevent a penetration into soil, drainage, surface waters or groundwater.

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

#### 6.3.1 Advices how to contain a spilled substance or mixture

Prevent a leakage; place the damaged packaging in the emergency containers. In case of a bigger amount of leakage, to create barriers, cover drains.

#### 6.3.2 Advices how to clean-up a spilled substance or mixture

Sweep up the leaked substance carefully (without creating dust) or preferably to suck and collect in suitable labelled containers. Rinse the contaminated area with a bigger amount of water. Ensure a disposal in accordance with the waste legislation as stated in section 13.

#### 6.3.3 Any other information relating to spills and releases

Not applicable.

### 6.4 Reference to other sections

Personal protective means are listed in section 8. Disposal instructions are listed in section 13.

## 7. Handling and storage

### 7.1 Precautions for safe handling

Follow working instructions. Read the label (etiquette) before using. Avoid contact with eyes, skin and clothing and dust formation, do not breathe dust. Wash hands and face thoroughly after the work. Beware of smoking, eating and drinking at the place of usage and storage of material. Prevent spills and penetration into drains. Employees shall wear protective working clothing, shoes, gloves, goggles, respirator.

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

## Calcium chloride solid

Store in well-closed original undamaged containers, in dry and well-ventilated rooms. Keep out of the reach of children. Do not store together with food, beverages and feed. Time period of workability is 2 years in case of compliance with storage and transport conditions.

### 7.3 Specific end use(s)

Is listed in section 1.2.

## 8. Exposure controls/personal protection

### 8.1 Control parameters

**DNEL:** workers: Long-term exposure - local effects, Inhalation: 5 mg/m<sup>3</sup>  
workers: Acute / short-term exposure - local effects, Inhalation: 10 mg/m<sup>3</sup>  
general population: Long-term exposure - local effects, Inhalation: 2,5 mg/m<sup>3</sup>  
general population: Acute / short-term exposure - local effects, Inhalation: 5 mg/m<sup>3</sup>

### Occupational exposure limits in the working environment

Czech Republic (Government Regulation No. 361/2007 Coll., as amended by valid act): **Permissible exposure limit (PEL)** = 2 mg/m<sup>3</sup>, **The maximum permissible concentration (NPK-P)** = 4 mg/m<sup>3</sup>.  
European Union (Directive No. 2006/15/EC and No. 2009/161/EU): not determined.

### 8.2 Exposure controls

#### 8.2.1 Appropriate engineering controls

Work in a well-ventilated room. Minimize dust formation when handling. Follow the usual measures of health protection while working with chemical substances and mixtures, especially avoid ingestion and contact with the respiratory organs, eyes and skin. I.e. do not eat, drink and smoke while working. Wash your hands with warm water and soap before and after working. Treat your skin with appropriate protection creams. Personal protective equipment is recommended.

#### 8.2.2 Individual protection measures, such as personal protective equipment

- Eye/face protection – safety goggles or face-shield
- Skin protection
  - Hand protection – protective rubber, nitrile or plastic gloves,
  - Other – protective working clothing, protective shoes,
- Respiratory protection – respirator capturing dust,
- Thermal hazards – not applicable (substance does not represent thermal hazard).

The manufacturer's instructions for using of personal protective equipment must be fulfilled.

#### 8.2.3 Environmental exposure controls

Proceed in accordance with the valid legislation for the air and water protection. Avoid release into the environment, capture the leakage.

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) appearance	white powder or granules, hygroscopic
b) odour	odourless
c) odour threshold	not determined
d) pH	8,0 –10,0 (30% solution)
e) melting point/freezing point	782°C/not determined
f) initial boiling point and boiling range	> 1 600°C
g) flash point	not determined
h) evaporation rate	not determined
i) flammability (solid, gas)	not flammable
j) upper/lower flammability or explosive limits	not determined
k) vapour pressure	not determined
l) vapour density	not determined

## Calcium chloride solid

m) relative density	2 150 kg/m <sup>3</sup> , bulk density 300 –500 kg/m <sup>3</sup>
n) solubility(ies)	in water: 745 g/l (20°C), 1 590 g/l (100°C), insoluble in fats
o) partition coefficient n-octanol/water	not determined
p) auto-ignition temperature	not determined
q) decomposition temperature	not determined
r) viscosity	not determined
s) explosive properties	not determined
t) oxidising properties	not determined

### 9.2 Other information

Not determined.

## 10. Stability and reactivity

### 10.1 Reactivity

Beware of following conditions: In case of compliance with storage requirements the substance is stable. While working is necessary to follow the standards of safety and health protection at work.

Beware of following materials: strong oxidising agents, strong acids, metals – corrosion, boric oxide, bromine trifluoride – a violent exothermic reaction.

### 10.2 Chemical stability

In case of compliance with standard storage and handling conditions the substance is stable.

### 10.3 Possibility of hazardous reactions

It must not come into contact with strong acids, strong oxidising agents, water, boric oxide, bromine trifluoride, zinc – an exothermic reaction. It creates an explosive mixture with furan-2-peroxycarboxylic acid. An exothermic polymerization with methylvinylether.

### 10.4 Conditions to avoid

Do not expose the substance to influence of humidity.

### 10.5 Incompatible materials

It must not come into contact with strong acids, strong oxidising agents, water, boric oxide, calcium oxide, zinc, bromine trifluoride, furan-2-peroxycarboxylic acid and methylvinylether.

### 10.6 Hazardous decomposition products

Danger of releasing of toxic hydrogen chloride and chlorine oxides during the thermal decomposition.

## 11. Toxicological information

### 11.1 Information on toxicological effects

#### 11.1.1 Substances (calcium chloride)

- acute toxicity – LD<sub>50</sub>, oral, rat: > 2 301 mg/kg; LD<sub>50</sub>, dermal, rabbit: > 5 000 mg/kg;
- skin corrosion/irritation – undetected;
- serious eye damage/irritation – an acute eye irritation;
- respiratory or skin sensitisation – undetected;
- germ cell mutagenicity – undetected;
- carcinogenicity – undetected;
- reproductive toxicity – undetected;
- STOT - single exposure – undetected;
- STOT - repeated exposure – undetected;
- aspiration hazard – undetected.

#### 11.1.2 Mixtures

## Calcium chloride solid

- a) acute toxicity – it is not a mixture;
- b) irritation – it is not a mixture;
- c) corrosivity – it is not a mixture;
- d) sensitisation – it is not a mixture;
- e) repeated dose toxicity – it is not a mixture;
- f) carcinogenicity – it is not a mixture;
- g) mutagenicity – it is not a mixture;
- h) toxicity for reproduction – it is not a mixture.

11.1.3 Undetected.

11.1.4 Calcium chloride causes serious eye irritation.

11.1.5 Undetected.

11.1.6 The substance is classified as an eye irritant.

11.1.7 Information on likely routes of exposure

Skin/eye exposure, aspiration, ingestion (by swallowing) – for effects see section 11.1.4.

11.1.8 Symptoms related to the physical, chemical and toxicological characteristics

For effects see section 11.1.4.

11.1.9 Delayed and immediate effects and also chronic effects from short and long-term exposure

For effects see section 11.1.4 - serious eye irritation.

11.1.10 Interactive effects

Undetected.

11.1.11 Absence of specific data

If some of the information are not listed in section 11, they were not available.

11.1.12 Mixture versus substance information

Undetected.

11.1.13 Other information

Not applicable.

## 12. Ecological information

### 12.1 Toxicity

Ecotoxicity	
LC <sub>50</sub> (96 h, <i>Pimephales promelas</i> ) for freshwater fishes:	4 630 mg/l
LC <sub>50</sub> (96 h, <i>Lepomis macrochirus</i> ) for freshwater fishes:	9 500 –11 300 mg/l
NOEC (48 h, <i>Daphnia magna</i> ) for freshwater invertebrates:	2 000 mg/l
LC <sub>50</sub> (48 h, <i>Daphnia magna</i> ) for freshwater invertebrates:	2 400 mg/l
EC <sub>50</sub> (21 d, <i>Daphnia magna</i> ) for freshwater invertebrates:	610 mg/l
EC <sub>50</sub> (72 h, <i>Pseudokirchnerella subcapitata</i> ) for freshwater algae:	2 900 mg/l

### 12.2 Persistence and degradability

Not applicable to the inorganic substances - cannot be removed from the water by biological cleaning processes.  
CHSK and BSK not determined.

### 12.3 Bioaccumulative potential

For inorganic substances is irrelevant.

### 12.4 Mobility in soil

## Calcium chloride solid

Not determined.

### 12.5 Results of PBT and vPvB assessment

Calcium chloride is not classified as a PBT or vPvB substance.

### 12.6 Other adverse effects

Not applicable, it does not cause additional adverse effects.

## 13. Disposal considerations

### 13.1 Waste treatment methods

Dispose the material by sweeping in accordance with valid legislation related to waste.

Recommended classification according to the catalogue: 06 03 14 (solid salts and solutions not included under numbers 06 03 11 and 06 03 13)

Recommended disposal methods for a contaminated packaging:

When disposal the valid legislation for the hazardous waste treatment according to the categorization and the Waste Catalogue shall be followed.

Waste code:

150106 - composite packaging category "O" (paper bags with PE filling),

15 01 02 - plastic packaging category "O" (PE bags).

Measures for the exposure control for the waste treatment:

Disposal of the substance and packaging should be proceed in accordance with valid legislation for personal, atmosphere and water precaution. The used packing is only meant for packing this product; it should not be reused for other purposes. After usage, empty the packing completely.

The legislation on the waste:

Czech Republic

Act No. 185/2001 Coll., on waste and amending some other Acts, as amended by valid act.

Decree of the Ministry of Environment No. 381/2001 Coll., which determines the Waste Catalogue, as amended by valid act.

European Union

Directive No. 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Text with EEA relevance).

Council Directive No. 91/689/EEC of 12 December 1991 on hazardous waste as amended by Directives No. 94/31/EC of 27 June 1994 and No. 2008/98/EC of the European Parliament and of the Council of 19 November 2008 and Regulation (EC) No. 166/2006 of the European Parliament and of the Council of 18 January 2006.

## 14. Transport information

### 14.1 UN number

It is not. Calcium chloride solid is not classified as hazardous for transport (ADR (road), RID (rail), IMDG / GGVSea (sea transport)).

### 14.2 UN proper shipping name

It is not. Calcium chloride solid is not classified as hazardous for transport (ADR (road), RID (rail), IMDG / GGVSea (sea transport)).

### 14.3 Transport hazard class(es)

It is not. Calcium chloride solid is not classified as hazardous for transport (ADR (road), RID (rail), IMDG / GGVSea (sea transport)).

### 14.4 Packing group

It is not. Calcium chloride solid is not classified as hazardous for transport (ADR (road), RID (rail), IMDG / GGVSea (sea transport)).

### 14.5 Environmental hazards

None. Calcium chloride solid is not classified as hazardous for transport (ADR (road), RID (rail), IMDG / GGVSea (sea transport)).

## Calcium chloride solid

### 14.6 Special precautions for user

Not determined.

### 14.7 Transport in bulk according to Annex II MARPOL 73/78 and the IBC code

Not regulated.

## 15. Regulatory information

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

#### Czech Republic

Act No. 258/2000 Coll., on the protection of public health and amending some related Acts, as amended by valid act.

Government Regulation No. 361/2007 Coll., which stipulates the conditions of health protection at work, as amended by valid act.

Act No. 350/2011 Coll., on the chemical substances and chemical mixtures and amending some Acts (chemical Act), as amended by valid act.

Act No. 185/2001 Coll., on waste and amending some other Acts, as amended by valid act.

Decree of the Ministry of Environment No. 383/2001 Coll., on details of waste disposal, as amended by valid act.

Act No. 477/2001 Coll., on packaging and amending some related Acts (Act on Packaging), as amended by valid act.

#### European union

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive No. 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive No. 76/769/EEC and Commission Directives No. 91/155/EEC, No. 93/67/EEC, No. 93/105/EC and No. 2000/21/EC, as amended by valid act.

Regulation (EC) No. 689/2008 of the European Parliament and of the Council of 17 June 2008 concerning the export and import of dangerous chemicals, as amended by valid act.

Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives No. 67/548/EEC and No. 1999/45/EC, and amending Regulation (EC) No. 1907/2006 (Text with EEA relevance), as amended by valid act.

Council Regulation (EC) No. 440/2008 of 30 May 2008 laying down test methods pursuant to Regulation (EC) No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (Text with EEA relevance), as amended by valid act.

Directive No. 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Text with EEA relevance).

Council Directive No. 91/689/EEC of 12 December 1991 on hazardous waste as amended by Directives No. 94/31/EC of 27 June 1994 and No. 2008/98/EC of the European Parliament and of the Council of 19 November 2008 and Regulation (EC) No. 166/2006 of the European Parliament and of the Council of 18 January 2006.

Council Directive No. 94/55/EC of 21 November 1994 on the approximation of the laws of the Member States with regard to the transport of dangerous goods by road.

Council Directive No. 96/49/EC of 23 July 1996 on the approximation of the laws of the Member States with regard to the transport of dangerous goods by rail.

Council Directive No. 89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work.

Council Directive No. 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive No. 89/391/EEC).

Commission Directive No. 2006/15/EC of 7 February 2006 establishing a second list of indicative occupational exposure limit values in implementation of Council Directive No. 98/24/EC and amending Directives No. 91/322/EEC and No. 2000/39/EC (Text with EEA relevance).



## Calcium chloride solid

Commission Directive No. 2009/161/EU of 17 December 2009 establishing a third list of indicative occupational exposure limit values in implementation of Council Directive No. 98/24/EC and amending Commission Directive No. 2000/39/EC (Text with EEA relevance).

Council Directive No. 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances.

Commission Regulation (EU) No. 453/2010 of 20 May 2010 amending Regulation (EC) No. 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (Text with EEA relevance).

### 15.2 Chemical safety assessment

Chemical safety assessment for the substance has been carried out by the producer.

## 16. Other information

### Statement:

Safety Data Sheet has been prepared in accordance with Regulations (EC) of the European Parliament and of the Council No. 1907/2006 and No. 1272/2008 and Commission Regulation (EU) No. 453/2010. This product shall be stored, handled and used with good hygiene practices of industry and in accordance with valid legislation. These information does not substitute the quality specification and cannot be considered as a guarantee of the suitability and applicability of this product for a specific application. The mentioned information correspond to a current state of knowledge and experiences and are in accordance with valid legislation. The customer is responsible for compliance with the valid regional legislation.

### Sources of data used to compile the safety data sheet:

Safety Data Sheet for Calcium chloride solid, Chemical safety report: Calcium chloride, Koma, s.r.o.

### Danger, Warning:

GHS07 warning

### Wording of H-phrases, P-phrases:

### Hazard statement(s) according to sections 2 and 3:

H319 – Causes serious eye irritation.

### Precautionary statement(s) according to sections 2 and 3:

#### Prevention:

P262 – Do not get in eyes, on skin, or on clothing.

P264 – Wash eyes and skin thoroughly after handling.

P280 – Wear protective gloves/protective clothing/eye protection/face protection.

#### Response:

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.

Eye Irrit.2: eye irritation, hazard category 2

BL	Safety Data sheet SDS
DNEL	Derived no-effect level
EC <sub>50</sub>	median effective concentration
LD <sub>50</sub>	median lethal dose
LC <sub>50</sub>	median lethal concentration
NOEC	no observable effect concentration
NPK-P	maximum permissible concentration
PBT	Persistent, bioaccumulative and toxic
PEL	permissible exposure limit
STOT	Specific Target Organ Toxicity
vPvB	Very persistent, very bioaccumulative

Instructions for training:

# Safety data sheet

According to the Commission Regulation (EU) No. 453/2010

Date of issue: 1. 12. 1999

Revision Date: 31. 5. 2015

## Calcium chloride solid

Persons who handling the product shall be instructed about the handling hazards and requirements for the health and environment precaution (see the appropriate provisions of the Labour Code).

### Access to information:

Each employer shall in accordance with Article 35 of the Regulation (EC) of the European Parliament and of the Council No. 1907/2006 to provide access to the information from the safety data sheet to all personnel who use this product or are exposed to its effects at work, as well as to their representatives.

**Revision:** 12. 8. 2012 – supplement to section 1. (use, Competent person responsible for the SDS), correction of sections 2., 3. and 16. (classification of substance according to Chemical safety report: Calcium chloride, Koma, s.r.o.), supplement to section 8. (DNEL, correction of PEL and NPK-P), 11. (acute toxicity) and 12. (ecotoxicity) and correction of section 13. (the reclassification of waste according to the Waste Catalogue, correction of packaging disposal) and 15. (the valid legislation update)

**Revision:** 5. 3. 2013 – change of person responsible for the SDS

**Revision:** 31. 5. 2015 – remove the classification according to the Directives No. 67/548/EEC and No. 1999/45/EC

### The extent of responsibility:

Responsibilities of safety data sheet recipients (customers, users, distributors, etc.) is to ensure that the information contained therein are well understood by all personnel who may use, handle, dispose or in any way come into contact with the product. Information and instructions given in this safety data sheet are reliable, provided that the product is used under the prescribed conditions and in accordance with the designated uses listed on the packaging or in the Product Data Sheets. User is responsible for any other application of this product, including the application of this product in combination with any another product or any other processes. Hence the user is responsible for determination of appropriate safety measures and the implementation of legislation covering his own activities. This version of the safety data sheet replaces all previous versions.