



Calcium chloride flakes

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

1.1. Product identifier

- * Chemical description : Calcium chloride , anhydrous .
- Type of product : Pure product .
- * Reach registration number : 01-2119494219-28

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

- * Identified use(s) : See table on the front page of the annex.
- * Use(s) advised against : This product is not recommended for any industrial, professional or consumer use other than identified in table on the front page of the annex.

1.3. Details of the supplier of the safety data sheet

Company identification : See footer of Material Safety Data Sheet.

1.4. Emergency telephone number

Emergency phone number (Belgium): 070/245.245

2. Hazards identification

2.1. Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC: Irritant (Xi; R36)

Classification according to Regulation (EC) No 1272/2008: * Eye irritation - Category 2 - Warning (Eye Irrit. 2; H319)

2.2. Label elements

Label in accordance with Regulation (EC) No 1272/2008

- * • Dangerous ingredient(s) : Calcium chloride anhydrous
- * • Hazard pictogram(s)



- * • Signal word : Warning
- * • Hazard statements : H319 - Causes serious eye irritation.
- * • Precautionary statements
- * - Prevention : P264 - Wash 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.

2.3. Other hazards

- * Physical/chemical hazards : Corrosive to metals.
- * Hazards for the health : Evaporates practically not at 20°C; will be as a powder quickly reach a dangerous concentration in the air.
- * Hazards for the environment : No significant danger. This product is no substance or contains no PBT or vPvB (in accordance with Annex XIII).
- * Hazards for the safety : Possible dust explosion when fine divided form of product is mixed with air.

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**3. Composition/information on ingredients**

3.1. Substances

Name component(s)	Weight %	CAS nr	EINECS nr	Index nr	REACH nr	CLASSIFICATION
* Calcium chloride anhydrous :	> 75 %	10043-52-4	233-140-8	017-013-00-2	01-2119494219-28	Xi; R36 Eye Irrit. 2; H319

* The full text of the R-phrases and (EU)H-statements is in section 16.

4. First aid measures

4.1. Description of first aid measures

General : In case of doubt or persistent symptoms, call a physician.

Never give anything by mouth to an unconscious person.

First Aid Measures

* - Inhalation : Remove victim into fresh air. Allow the affected person to rest. If not breathing, give artificial respiration. If persistent symptoms, consult doctor.

* - Skin Contact : Remove contaminated clothing. Rinse skin immediately with plenty of water. (shower if necessary). Consult doctor if irritation develops.

* - Eye Contact : Rinse immediately thoroughly and long (at least 15 min.) with plenty of water. Remove contact lenses. Consult eye doctor if irritation of eyes develops.

* - Ingestion : DO NOT INDUCE VOMITING. Rinse mouth with water. Give water to drink. If symptoms, consult doctor.

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

* See section 11.

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

* For specialist advice doctors should contact the NVCi or the Belgian Poison center (070/245.245).

5. Fire-fighting measures

5.1. Extinguishing media

Extinguishing Media

* - Suitable : Extinguishing powder , Foam , Carbon dioxide (CO₂) , Water spray .

* - Insuitable : Not known .

5.2. Special hazards arising from the substance or mixture

Special Exposure Hazards : Overheating may liberate irritating vapours.

5.3. Advice for firefighters

* Special Protective Equipment for Firefighters: Use self-contained breathing apparatus and wear protective clothes when in close proximity to fire.

Special Procedures : Apply water spray or fog to cool nearby equipment. Avoid fire-fighting water to enter environment.

**6. Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

* Personal Precautions : Evacuate all personnel immediately and ventilate area. Avoid breathing the product and contact with eyes and skin. Wear recommended personal protective equipment. (See section 8)

6.2. Environmental precautions

Environmental Precautions : Prevent entry of product in public water, sewers or soil. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

* Methods for Cleaning Up : Collect the product in closable, suitable disposal containers. Clean up any spills as soon as possible, using an inert absorbent material. Residue is to be washed down with plenty of water.

6.4. Reference to other sections

* For personal protection, see section 8.
For the removal of the waste product, see section 13.

7. Handling and storage**7.1. Precautions for safe handling**

* Handling : AVOID DUST CREATION ! PREVENT THE SPREAD OF DUST.

Avoid breathing the product and contact with eyes and skin.

Wear recommended personal protective equipment. (See section 8)

Wash hands before and after working with the product.

When using, do not eat, drink or smoke.

Emergency eye wash fountains and showers should be available in the immediate vicinity of any potential exposure.

7.2. Conditions for safe storage, including any incompatibilities

* Storage : Keep only in the original, safely locked container in a well-ventilated and dry place.

All dangerous products should be placed on a drip tray or should be barreled.

Keep away from : Oxidizing agents , Reducing agents .

* Packaging Material : Polyethylene , Polypropylene .

* Unsuitable Packaging Material : Metals .

7.3. Specific end use(s)

* For identified uses, see subsection 1.2 and/or exposure scenarios.

8. Exposure controls/personal protection**8.1. Control parameters**

Occupational Exposure Limits : Not established.

* Biological limit values : They will be included when available.

* DNELs :

• Calcium chloride anhydrous : Worker, acute - local effects, inhalation : 10 mg/m³

• Calcium chloride anhydrous : Worker, long-term - local effects, inhalation : 5 mg/m³

• Calcium chloride anhydrous : Consumer, acute - local effects, inhalation : 5 mg/m³

• Calcium chloride anhydrous : Consumer, long-term - local effects, inhalation : 2,5 mg/m³

* PNECs : • Calcium chloride anhydrous : Not applicable

**8. Exposure controls/personal protection (continued)****8.2. Exposure controls**

* Engineering Measures : Ventilation , Local exhaust .

Personal Protection Equipment

* - Respiratory protection : CE-approved dust respirator (Filter type P2).

- Skin protection : Suitable protective clothing .

* - Hand protection : Suitable material for safety gloves (EN 374): Neoprene .

- Eye/Face protection : Chemical goggles .

* Environmental exposure controls : See sections 6, 7, 12 en 13.

9. Physical and chemical properties**9.1. Information on basic physical and chemical properties**

* See technical data sheet for detailed information.

Physical State (20°C) : Solid .

Form/Colour : White .

Odour : Odourless .

* Odour threshold : Not applicable .

* pH value : 7 - 11 (10% solution , 20°C)

* Melting/Freezing point : 782 °C

* Boiling Point/Range (1013 hPa) : > 1600 °C

Flash point : Not applicable.

* Fire hazard : Not applicable.

* Evaporation rate : Not applicable.

* Explosion limits in air : Not applicable.

* Vapour pressure : Not applicable.

* Relative density : 2,15

* Solubility in water : 74,5 g/100 ml

* Soluble in : Alcohol , Acetic acid , Acetone .

* Log P Octanol/Water (20°C) : Not applicable.

Auto-ignition temperature : Not applicable.

* Minimum ignition energy : Not applicable.

* Decomposition temperature : > 772 °C

* Viscosity : Not applicable.

* Explosive properties : No chemical groups associated with explosive properties .

* Oxidizing properties : No chemical groups associated with oxidizing properties .

9.2. Other information

* Others : Hygroscopic .

10. Stability and reactivity**10.1. Reactivity**

* Reactivity : Reacts with : Oxidizing agents . Reducing agents , Water .

10.2. Chemical stability

Stability : Stable at normal circumstances .

10.3. Possibility of hazardous reactions

* Hazardous reactions : Possible dust explosion when fine divided form of product is mixed with air.

Contact with water may cause strong warmth development.

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**10. Stability and reactivity (continued)**

10.4. Conditions to avoid

Conditions to avoid : Moisture .

10.5. Incompatible materials

* Materials to avoid : Oxidizing agents , Reducing agents , Water .

10.6. Hazardous decomposition products

Hazardous Decomposition Products : Overheating may liberate irritating vapours.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity

- Inhalation : May cause irritation of respiratory tract. Symptoms include: Cough , Shortness of breath

* - Skin contact : May be irritating for the skin. Symptoms include: Redness .

• Calcium chloride anhydrous : LD50 (Rabbit, dermal) : > 5000 mg/kg

- Eye contact : Irritating to eyes. Symptoms include: Redness , Pain .

* - Ingestion : Symptoms include: Abdominal cramps , Nausea .

• Calcium chloride anhydrous : LD50 (Rat, oral) : 2301 mg/kg

* Skin corrosion/irritation : Prolonged eye contact may cause irritation.

* Serious eye damage/irritation : Severe eye irritant .

* Aspiration hazard : Not considered hazardous.

* Respiratory or skin sensitisation : Not sensitive .

* Carcinogenicity : Not listed as carcinogenic .

* Mutagenicity : Not listed as mutagenic .

* Reproductive toxicity : Not listed for reproductive toxicity .

* Specific target organ toxicity – single exposure :

To human : Listed not for organ toxicity .

For animals : No effects known.

* Specific target organ toxicity - repeated exposure:

To human : Listed not for organ toxicity .

For animals : No effects known.

12. Ecological information

12.1. Toxicity

* Ecotoxicity : • Calcium chloride anhydrous : EC50 (Daphnia magna, 48 h) : 2400 mg/l

• Calcium chloride anhydrous : EC50 (Algae, 72 h) : 2900 mg/l (*Pseudokirchneriella subcapitata*)

• Calcium chloride anhydrous : LC50 (Fish, 96 h) : 4630 mg/l (*Primephales promelas*)

12.2. Persistence and degradability

Persistence and degradability : • Calcium chloride anhydrous : Persistence and degradability :

Inorganic product .

12.3. Bioaccumulative potential

* Bioaccumulation : • Calcium chloride anhydrous : Bioaccumulation : Bioaccumulation not expected .

**12. Ecological information (continued)**

12.4. Mobility in soil

* Mobility : • Calcium chloride anhydrous : Mobility : Good soluble in water .

12.5. Results of PBT and vPvB assessment

* Evaluation : • Calcium chloride anhydrous : PBT/vPvB : No

12.6. Other adverse effects

WGK class (DE) : 1 (Weak water pollutant).

Water damaging (NL) : 12

Decontamination exertion (NL) : C

* Photochemical ozone creation potential : No data available.

* Ozone depletion potential : No data available.

* Endocrine disrupting potential : No data available.

* Global warming potential : No data available.

13. Disposal considerations

13.1. Waste treatment methods

Waste from residues/Unused products : The product has to be destroyed according to national or local legislation, by a company specialised in handling hazardous waste products.

* European list of waste products : XXXXXX - European waste product code. This code is assigned on the basis of the most current applications and cannot be representative for pollutions which are arisen at the effective use of the product. The producer of the waste has to evaluate its process himself and has to grant the appropriate waste coding. See Decision 2001/118/EC.

Removal contaminated packaging : Packing is to be used exclusively for the packing of this product. After use, empty and close the packing very carefully.

14. Transport information

14.1. UN number

UN Number : -

14.2. UN proper shipping name

ADR Name : -

* ADN Name : -

IMDG Name : -

14.3. Transport hazard classe(s)

Class : -

14.4. Packing group

Packaging Group : -

14.5. Environmental hazards

* Environmentally hazard : No

Marine pollutant : No

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**14. Transport information (continued)**

14.6. Special precautions for user

Danger number : -

Hazard Label(s) : -

EmS-N° : -

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

* Type ship : Not applicable.

* Pollution category : Not applicable.

15. Regulatory information

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

* Inventories : Australian inventory (AICS): Listed in inventory.

Canadian inventory (DSL): Listed in inventory.

Chinese inventory (IECS): Listed in inventory.

European inventory (EINECS): Listed in inventory.

Japanese inventory (ENCS): Listed in inventory.

Korean inventory (KECI): Listed in inventory.

Philippine inventory (PICCS): Listed in inventory.

Inventory of the United States (TSCA): Listed in inventory.

* Relevant EU Rule(s) :

Directive 98/24/EC of the Council of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work

Decision 2001/118/EC of the Commission of 16 January 2001 amending Decision 2000/532/EC as regards the list of wastes

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 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

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)

15.2. Chemical Safety Assessment

* A chemical safety assessment has been carried out for the substance(s) that make up this material or for the material itself.

16. Other information

* This safety data sheet has been drawn up in accordance with Regulation (EU) No 453/2010.

This safety data sheet is exclusively made for industrial/professional use.

* Has changed compared to previous revision.

Changes : General revision .

* Sources of used key data : The information contained herein is based on the present state of our knowledge (Producer(s) , Chemical cards , ...).

See also on the webaddress:

<http://apps.echa.europa.eu/registered/registered-sub.aspx#search>

**16. Other information**

R-phrases(s) : R36 - Irritating to eyes.

* (EU)H-statement(s) : H319 - Causes serious eye irritation.

* List of abbreviations and acronyms :

ADN (Accord européen relatif au transport international des marchandises Dangereuses par voie de Navigation interieur) : European agreement concerning the international carriage of dangerous goods by inland waterways.

ADR (Accord européen relatif au transport international des marchandises Dangereuses par Route) : European agreement concerning the international carriage of dangerous goods by road.

DNEL (Derived No Effect Level) : an estimated safe exposure level

EmS (Emergency Schedule) : the first code refers to the relevant fire schedule and the second code refers to the relevant spillage schedule.

IMDG (International Maritime Dangerous Goods code).

NVCI : National Poisoning Information Center.

PBT : persistent, bioaccumulative and toxic.

PNEC (Predicted No Effect Concentration) : concentration below which exposure to a substance is not expected to cause adverse effects.

REACH : Registration, Evaluation, Authorisation and restriction of Chemicals.

vPvB : very persistent and very bioaccumulative.

WGK (Wassergefährdungsklasse) : a German classification of substances that indicates the environmental hazard for surface water.

This information is to our knowledge correct and complete on the date of issue of this safety data sheet. The information only concerns the product and does not give any guarantee for the quality and the completeness of the properties of the product, or in case of mixing or using in any other process. It remains the responsibility of the user to assure himself that the information is

suitable and complete concerning the special use he makes of the product.

BROUWLAND denies all responsibility for loss or damage resulting from the use of these data.

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