

Material Safety Data Sheet

according 1907/2006/EG

CALCIUM CHLORIDE FLAKES

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

1.1 Product identifier

Productname:	CALCIUM CHLORIDE FLAKES		
Type:	Pure, hygroscopic substance.		
	Preventive measures apply to the substance in dry state only		
CAS no:	10035-04-8	Formula:	CaCl ₂ ·2H ₂ O
EINECS no:	233-140-8	Molecular weight:	147.01
CLP Index No.:	017-013-00-2	REACH Reg. No.:	01-2119494219-28-
NFPA-code:	1-0-0(*)		

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

Relevant identified uses:	De-icing salt; anti-dusting agent; cement: additive; desiccant; Chemical raw material; Fertilizer
Uses advised against:	None

1.3 Details of the supplier of the safety data sheet

Name:	Van Iperen International BV
Address:	Smidsweg 24
Postal code:	3273 LK
Residence:	Westmaas
Country:	The Netherlands
Telephone no:	+31 (0)186 57 88 88
Fax no:	+31 (0)186 57 34 52
e-Mail:	info@iperen.com
reach-contact:	reach-int@iperen.com

1.4 Emergency telephone number

UK	: +44 (0) 870 600 6266 (UK National poisons emergency number)
IR	: +353 (0) 1 837 99 64 (National Poisons Information Centre)

Exclusively intended to inform doctors at accidental poisonings

2. Hazards identification

2.1 Classification of the substance or mixture

CLASSIFICATION ACCORDING TO REGULATION (EC) 1272/2008 [CLP/GHS]

- Causes serious eye irritation Eye Irrit. 2 ; H319

CLASSIFICATION ACCORDING TO DIRECTIVE 67/548/EEC

- Irritating to eyes Xi, R36.

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2. Hazards identification (continue)

2.2 Label elements



Warning

Hazard statements

H319 Causes serious eye irritation.

Precautionary statements

P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection.
P305/351/338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P337/313 If eye irritation persists: Get medical advice/attention.

2.3 Other hazards

The product can cause minor skin irritation and dry skin.

The substance does not meet the criteria for PBT or vPvB according to REACH (No. 1907/2006, Annex XIII).

3. Composition/information on ingredients

Name	CAS no EINECS no	Concentration	Labeling 67/548/EEG	Labeling 1272/2008
CALCIUM CHLORIDE DIHYDRATE	10035-04-8 233-140-8	>98	Xi	07
	R phrases (1)	36		
	H phrases (1)	H319		

(1)_Complete text of R/H phrases: see chapter 16

3.1 Substances

According to the REACH regulation the product is a mono-constituent material.

Occupational exposure limits, if available, are listed in section 8.

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4. First aid measures

COMMONLY

In case of doubt always get medical attention and show the doctor this document.

4.1 Description of first aid measures

AFTER CONTACT WITH THE EYES:

- Rinse cautiously with water for several minutes.
- Remove contact lenses, if present and easy to do. Continue rinsing.
- If eye irritation persists: Get medical advice/attention.

AFTER SKIN-CONTACT:

- Remove contaminated clothing. Wash skin with warm water and soap.
- If skin irritation or rash occurs: Get medical advice/attention.
- Wash contaminated clothing before reuse.

AFTER INHALATION

- If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- In case of respiratory problems: consult a doctor/medical service.

AFTER INGESTION

- Rinse mouth with water. Give water to drink.
- Do not induce vomiting.
- Call a POISON CENTER or doctor/physician if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

AFTER CONTACT WITH THE EYES:

- Could cause severe irritation of the eye.
- If the eye is not washed thoroughly, there is a risk of irreversible eye damage.
- Symptoms may include: redness of the eye tissue lacrimation stinging eyes.

AFTER SKIN-CONTACT:

- Could cause moderate skin irritation.
- Symptoms may include: red skin tingling/irritation of the skin.
- The product will not give delayed symptoms.

AFTER INHALATION OF DUST:

- May cause Irritation to respiratory tract.
- For single exposure no irreversible effect is known.

AFTER INGESTIONS:

- Could cause irritation of oesophagus and the stomach.
- No delayed or irreversible symptoms are expected.

4.3 Indication of any immediate medical attention and special treatment needed

- Follow the advices in chapter 4.1.
- The product could be strengthened with heartburn and can cause irritation on oesophagus or it might irritate the respiratory system.

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5. Firefighting measures

GENERAL

The product isn't flammable.

5.1 Extinguishing media

SUITABLE EXTINGUISHING MEDIA

- Use fire extinguishing methods suitable to surrounding conditions.

UNSUITABLE EXTINGUISHING MEDIA

- Container may slop over if solid jet (water/foam) is applied.

5.2 Special hazards arising from the substance or mixture

- On burning: release of toxic and corrosive gases/vapours: chlorine , carbon monoxide - carbon dioxide, hydrogen chloride (hydrochloric acid).

5.3 Advice for firefighters

- Cool tanks/drums with water spray/remove them into safety if possible to do so without risk.
- Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
- Take account of environmentally hazardous firefighting water.
- Use water moderately and if possible collect or contain it.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Evacuate and stake out the danger area.
- Care for sufficient ventilation.
- Avoid contact with the eyes, skin and clothing.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Avoid inhaling the dust.

6.2 Environmental precautions

- Dam up the solid spill.
- Prevent spreading in sewers.
- Prevent soil and water pollution.
- In case of entry into waterways, soil or drains, inform the responsible authorities.

6.3 Methods and material for containment and cleaning up

- Any spillage should be cleaned up immediately.
- Collect as much as possible in a suitable clean container, preferably for re-use, otherwise for disposal.
- Stop dust cloud by covering with sand/earth.
- Scoop solid spill into closing containers.
- Clean contaminated surfaces with an excess of water.
- Do not wash out with water in a sensitive environment.
- Wash clothing and equipment after handling.

6.4 Reference to other sections

- See section 1 for emergency contact information.
- See section 8 for information on appropriate personal protective equipment.
- See section 13 for additional waste treatment information.

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7. Handling and storage

7.1 Precautions for safe handling

HANDLING:

- Do not breathe dust. Use sufficient ventilation.
- Avoid contact with the eyes, skin and clothing.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Empty containers retain product residue and can be hazardous.

GENERAL OCCUPATIONAL HYGIENE:

- Comply with the legal requirements.
- Do not eat, drink or smoke when using this product.
- Wash your hands thoroughly after handling.
- Take off contaminated clothing and wash before reuse.
- Take care that eye wash stations and security showers are available near the workplace.

7.2 Conditions for safe storage, including any incompatibilities

- Store in a dry, cool and well-ventilated place.
- After use close packing well.
- Keep out of direct sunlight.
- Keep away from heat, ignition sources, flammable substances and incompatible substances.

SUITABLE MATERIAL:

- synthetic material. Keep preferably in the original container.

SPECIAL OR ADDITIONAL REQUIREMENTS:

- correctly labelled.
- Meet the legal requirements.
- Secure fragile packagings in solid containers.

7.3 Specific end use(s)

- See Section 1 for identified uses.

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8. Exposure controls/personal protection

8.1 Control parameters

Recommended occupational and consumer exposure limit values (from CSA):

Short-term exposure -local effects

- DNEL (Inhalation., workers) 10 mg/m³
- DNEL (Inhalation, general population) 5 mg/m³

Long-term exposure -local effects

- DNEL (Inhalation., workers) 5 mg/m³
- DNEL (Oral, general population) 2.5 mg/m³

Long-term exposure -systemic effects

- No DNEL is derived. No long term effects are expected.

Environmental limits (to CSA):

- Deposition onto soil and plants*): NE_{dep} 150 g/m².
If the product is used for de-icing or dust control, see ES7.
- Sensitive terrestrial plants: 215 mg chloride/kg.
If the product is used for de-icing or dust control, see ES7.
- PNEC water/marine: because the calcium and chloride concentration varies between aquatic ecosystems (0.06-210 mg/L), it is not considered useful to derive a generic PNEC water or PNEC marine (neither added or intermittent values).
- PNEC fresh water/marine sediment: no toxicity data on fresh water or marine sediment organisms are available. Calcium chloride is present in the environment as calcium and chloride ions, which implies that it will not adsorb on particulate matter. It is not considered useful to derive a PNEC fresh water or PNEC marine sediment.
- PNEC terrestrial: no toxicity data on terrestrial organisms are available. Calcium chloride is present in the environment as calcium and chloride ions, which implies that it will not adsorb on particulate matter. It is not considered useful to derive a PNEC terrestrial.
- PNEC sewage treatment plant (STP): no toxicity data on sewage treatment plant organisms are available. because the calcium and chloride concentration varies between aquatic ecosystems, it is not considered useful to derive a generic PNEC STP or PNEC STP-added.
- PNEC oral: in view of the nutritional aspects, the metabolism and the mechanisms of action of calcium and chloride ions, it is not considered useful to derive a PNEC oral (secondary poisoning).

**) A tentative PNEC, a so-called "no-effect deposition" (NE_{dep}) was derived for the exposure route for deposition of calcium chloride via road salts or dust suppressors. It should be noted that although the units refer to exposure via air, this value reflects effects caused by calcium chloride from air into soil or onto plants' surface.*

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8. Exposure controls/personal protection (continue)

8.2 Exposure controls

OCCUPATIONAL EXPOSURE CONTROLS:

- Carry operations in the open air/under local exhaust or at sufficient ventilation to keep airborne levels below recommend exposure levels.
- Dust production: dust mask with filter type P2.

HAND PROTECTION

- Gloves.
- Take advice to gloves' supplier.

EYE PROTECTION

- Protective goggles.
- Safety glasses with side protection shield or face shield.

SKIN PROTECTION

- Protective clothing.

GENERAL OCCUPATIONAL HYGIENE:

- Take off contaminated clothing and shoes immediately.
- Wash contaminated clothing before reusing.
- Wash your hands, poor and face after use.
- Care for eyewashstations and security showers at the workplace.



9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form:	Solid (Flakes)
Colour:	White to grey
Odour:	Odourless
Odour threshold:	-
pH value:	8 - 9 (5% solution in water)
Melting point/melting range:	± 782 °C
Boiling point/boiling range:	± 1670 °C
Flammability	unflammable
Relative density:	± 2,15
Solubility:	Water ± 745 g/l (20°C)

9.2 Other information

Bulk Density:	750 - 900 kg/m³
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10. Stability and reactivity

10.1 Reactivity

- Stable under recommended storage and treatment circumstances (heading 7).

10.2 Chemical stability

- Stable under recommended storage and treatment circumstances (heading 7).

10.3 Possibility of hazardous reactions

- This product can react violently with strong reducing or oxidizing agents.

10.4 Conditions to avoid

- High temperatures.
- Hygroscopic.
- Contamination by incompatible materials.

10.5 Incompatible materials

- Keep substance away from: oxidizing agents, reducing agents, metals, sulphuric acid, phosphorous pentoxide, fluorine, lithium, 2,4,6-trinitrotoluene, trichloroethylene, aluminium, water/moisture.
- This product can cause pitting of and corrosion of some grades of stainless steel.
- High temperature and stress conditions can promote stress corrosion cracking.

10.6 Hazardous decomposition products

- Reacts exothermically with water (moisture).
- Violent exothermic reaction with hot water.
- On burning: release of toxic and corrosive gases/vapours; chlorine hydrogen chloride.
- Reacts slowly on exposure to water (moisture) with (some) metals: release of highly flammable gases/vapours hydrogen.
- Reacts violently with (some) compounds : (BrF3).

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11. Toxicological information

11.1 Information on toxicological effects

ACUTE TOXICITY

- Acute oral toxicity	not classified
LD ₅₀ oral rat:	2301 mg/kg bw
- Acute dermal toxicity	not classified
LD ₅₀ dermal rabbit:	5000 mg/kg bw
- Acute inhalation toxicity	not classified
LC ₅₀ inhalation rat:	-

CORROSION/IRRITATION

AFTER CONTACT WITH THE EYES:

Causes serious eye irritation.

Eye Irrit. 2

Symptoms may include: pain, redness of the eye tissue, lacrimation.

AFTER SKIN-CONTACT:

Not irritant to skin.

AFTER INHALATION OF DUST:

May cause Irritation to respiratory tract.

Symptoms may include: irritation of mucos membranes of pharinx and throat an unpleasant sensation in mouth.

RESPIRATORY OR SKIN SENSITISATION

This product is not sensitizing to skin and respiratory tract.

GERM CELL MUTAGENICITY

Not classified.

CARCINOGENICITY

Not classified.

REPRODUCTIVE TOXICITY

Not classified.

STOT-SINGLE EXPOSURE

No data available.

STOT-REPEATED EXPOSURE

No data available.

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12. Ecological information

12.1 Toxicity

Classification concerning the environment: not applicable.

LC ₅₀ (for fish):	4630 mg/l (96h)
EC ₅₀ (for crustacea):	2400 mg/l (48h)
ErC ₅₀ (for algae):	2900 mg/l (72h)

12.2 Persistence and degradability

In accordance with column 2 of REACH Annex VII, the ready biodegradability test does not need to be conducted as the substance is inorganic.

12.3 Bioaccumulative potential

Bioaccumulation: not applicable.

12.4 Mobility in soil

Soluble in water.

12.5 Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No 1907/2006, no PBT and vPvB assessment has been conducted; inorganic product.

12.6 Other adverse effects

May cause eutrophication.

13. Disposal considerations

Name:	CALCIUM CHLORIDE
Waste code:	02 01 08* agrochemical waste containing dangerous substances 15 01 10* packaging containing residues of or contaminated by dangerous substances

13.1 Waste treatment methods

PACKAGE WASTE DISPOSAL:

The generation of waste should be avoided or minimized wherever possible.

Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Empty and rinsed containers can be disposed as non-hazardous material or be returned for recycling.

PROVISIONS RELATING TO WASTE

The generation of waste should be avoided or minimized wherever possible.

Do not discharge into drains or the environment. Do not discharge into surface water. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Remove according to local and rural regulations. Detritus disposal according to government provisions.

SPECIAL PRECAUTIONS

This material and its container must be disposed of in a safe way.

Care should be taken when handling emptied containers that have not been cleaned or rinsed out.

14. Transport information

Not dangerous for transport under UN, ADR/RID/IMG or IATA.

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15. Regulatory information

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

- Classification and labelling according to directive (EC) No. 1272/2008.
- Substance is listed in Annex I of directive 67/548/EEC and Annex VI of directive (EG) nr. 1272/2008.
- Regulation (EC) No 1272/2008 (CLP). Regulation (EC) 1907/2006 (REACH).

15.2 Chemical safety assessment

- In accordance with REACH article 14, a Chemical Safety Assessment has been carried out for this substance.

16. Other information

The complete text of the H phrases mentioned in chapter 3:

R36 Irritating to eyes

H319 Causes serious eye irritation.

Additional information

Calcium oxide (CaO) 39% water-soluble.

Used abbreviations:

n.a. = not applicable
n.d. = not determined
n.r. = not relevant.
CLP (EU-GHS) = Classification, labelling and packaging (Globally Harmonised System in Europe).
REACH = Registration, evaluation and autorisation of chemicals.

Training advice:

Before using/handling the product one must read carefully present MSDS.

Literature references and sources for data

ECHA Website: Information on Registered Substances.
Supplier Information.

Version –information

Date of mutation : 12-dec-2011
Version: : 02.01

Information for the reader

The information provided in this safety data sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any proceed, unless specified in the text.

ANNEXES: Exposure scenarios are available on request at your supplier

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