

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form	: Substance
Trade name	: Calcium chloride 77%
EC Index-No.	: 017-013-00-2
EC-No.	: 233-140-8
CAS-No.	: 10035-04-8
REACH registration No	: 01-2119494219-28
Product code	: 15303
Type of product	: Pure substance, Hygroscopic substance. Preventive measures apply to the substance in dry state only
Formula	: CaCl ₂ ·2H ₂ O

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Main use category	: Industrial use, Professional use
Use of the substance/mixture	: Cement: additive; Anti-dusting agent; Road salt

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Breustedt Chemie B.V.
Ijsseldijk 28
7325 WZ Apeldoorn - Nederland
T 055-5332844
productinfo@breustedt.nl - www.breustedt.nl

1.4. Emergency telephone number

Emergency number	: +31(0)30-2748888 Nationaal Vergiftigingen Informatie Centrum (NVIC) (uitsluitend bestemd om artsen te informeren bij accidentele vergiftigingen)
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SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Serious eye damage/eye irritation, Category 2	H319
Full text of H statements : see section 16	

Adverse physicochemical, human health and environmental effects

Causes serious eye irritation.

2.2. Label elements**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



GHS07

Signal word (CLP)	: Warning
Hazard statements (CLP)	: H319 - Causes serious eye irritation.
Precautionary statements (CLP)	: 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

No additional information available

SECTION 3: Composition/information on ingredients**3.1. Substances**

Name	: Calcium chloride 77% TG flakes
CAS-No.	: 10035-04-8
EC-No.	: 233-140-8

Calcium chloride 77%

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

EC Index-No. : 017-013-00-2

Name	Product identifier	%
calcium chloride	(CAS-No.) 10043-52-4 (EC-No.) 233-140-8 (EC Index-No.) 017-013-00-2 (REACH-no) 01-2119494219-28	76 - 77
Calcium dihydroxide	(CAS-No.) 1305-62-0 (EC-No.) 215-137-3 (REACH-no) 01-2119475151-45	< 1

Full text of 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	: In all cases of doubt, or when symptoms persist, seek medical attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: 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.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

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

Methods for cleaning up : Mechanically recover the product.
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 : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store in a well-ventilated place. Keep cool.
Incompatible products	: Oxidizing agent. Strong acids. reducing materials.
Storage temperature	: ≈ 18 °C
Storage area	: Store in a dry area.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Calcium dihydroxide (1305-62-0)	
EU - Occupational Exposure Limits	
IOELV TWA (mg/m ³)	1 mg/m ³ (Respirable fraction)
IOELV STEL (mg/m ³)	4 mg/m ³ (Respirable fraction)
Belgium - Occupational Exposure Limits	
Limit value (mg/m ³)	1 mg/m ³
Short time value (mg/m ³)	4 mg/m ³
France - Occupational Exposure Limits	
VME (mg/m ³)	5 mg/m ³
Netherlands - Occupational Exposure Limits	
Grenswaarde TGG 8H (mg/m ³)	1 mg/m ³
Grenswaarde TGG 15MIN (mg/m ³)	4 mg/m ³
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m ³)	5 mg/m ³ 1 mg/m ³
WEL STEL (mg/m ³)	4 mg/m ³
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m ³)	5 mg/m ³

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DNEL/DMEL (Workers)	
Acute - local effects, inhalation	10 mg/m ³
Long-term - local effects, inhalation	5 mg/m ³
DNEL/DMEL (General population)	
Acute - local effects, inhalation	5 mg/m ³
Long-term - local effects, inhalation	2.5 mg/m ³

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment:

Protective clothing. Gloves. Safety glasses. Dust formation: dust mask.

Materials for protective clothing:		
Protective clothing		
Condition	Material	Standard
Wear suitable protective clothing		EN 14605
Hand protection:		
Protective gloves		

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Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR), Polyvinylchloride (PVC), Natural rubber, neoprene	6 (> 480 minutes)	0.7		EN ISO 374

Eye protection:

Chemical goggles or safety glasses

Type	Use	Characteristics	Standard
Safety glasses		Protective goggles	EN 166

Respiratory protection:

In case of inadequate ventilation wear respiratory protection.

Device	Filter type	Condition	Standard
Breathing equipment	Type P2	Dust protection	

Personal protective equipment symbol(s):



Other information:

Do not eat, drink or smoke when using this product. Wash hands before break and at end of works. Wash clothing before re-using.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Flakes.
Molecular mass	: 147.02 g/mol
Colour	: white.
Odour	: odourless.
Odour threshold	: No data available
pH	: No data available
pH solution	: 100 (7 - 11) g/l @20°C
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 782 °C
Freezing point	: Not applicable
Boiling point	: 1600 °C
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 2150 kg/m ³ @25°C
Solubility	: Water: 745 g/l @20°C
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: Not applicable

9.2. Other information

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

Do not allow contact with water.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

The product can react with strong reducing and oxidizing agents.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Water, humidity.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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

Calcium chloride 77% (10035-04-8)

LD50 oral rat	2301 mg/kg OESO 401
LD50 dermal rabbit	> 5000 mg/kg

Calcium dihydroxide (1305-62-0)

LD50 oral rat	> 2000 mg/kg bodyweight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 2500 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 inhalation rat (mg/l)	> 6.04 mg/l (OECD 436: Acute inhalation toxicity-acute toxic class method, 4 h, Rat, Male / female, Experimental value, Inhalation (dust), 15 day(s))

Skin corrosion/irritation : Not irritating to rabbits on cutaneous application

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

Calcium chloride 77% (10035-04-8)

LC50 fish 1	4630 mg/l Thick-headed zipper
EC50 Daphnia 1	2400 mg/l Daphnia magna, OESO 202
EC50 72h algae (1)	2900 mg/l Selenastrum capricornutum, OESO 201

calcium chloride

ErC50 (algae)	> 4000 mg/l
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Calcium dihydroxide (1305-62-0)	
LC50 fish 1	50.6 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, GLP)
EC50 Daphnia 1	49.1 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
EC50 72h algae (1)	184.57 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)

12.2. Persistence and degradability

Calcium dihydroxide (1305-62-0)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

Calcium dihydroxide (1305-62-0)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Calcium dihydroxide (1305-62-0)	
Ecology - soil	Adsorbs into the soil.

12.5. Results of PBT and vPvB assessment

Component	
Calcium dihydroxide (1305-62-0)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

No supplementary information available

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

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Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Calcium chloride 77% is not on the REACH Candidate List

Calcium chloride 77% is not on the REACH Annex XIV List

Calcium chloride 77% TG flakes is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Calcium chloride 77% TG flakes is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 1, Slightly hazardous to water (Classification according to VwVwS, Annex 1 or 2; ID No. 220)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

ABM category : B(4) - low hazard for aquatic organisms

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
DPD	Dangerous Preparations Directive 1999/45/EC
DSD	Dangerous Substances Directive 67/548/EEC
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose

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LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
STP	Sewage treatment plant
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
TLM	Median Tolerance Limit
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative

Full text of H- and EUH-statements:

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

SDS EU (REACH Annex II)

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.