SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

CALCIUM CHLORIDE 34% (E509) FOOD

Version 3.0 Print Date 10.03.2023

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name	:	CALCIUM CHLORIDE 34% (E509) FOOD
UFI	:	TNQ3-30E7-E00F-3PS7
UFI code notified in	:	Belgium, Germany, Denmark, Estonia, Spain, France, Croatia, Ireland, Iceland, Lithuania, Latvia, Malta, Netherlands, Norway, Portugal, Sweden

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

Use of the Substance/Mixture	:	Identified use: See table in front of appendix for a complete overview of identified uses.
Uses advised against	:	At this moment we have not identified any uses advised against
Remarks	:	Before referring to any Exposure Scenario attached to this Safety Data Sheet please check the grade of the product: the Exposure Scenarios presented are not related to all product grade

1.3. Details of the supplier of the safety data sheet

Company	:	Brenntag N.V. Nijverheidslaan 38 BE 8540 Deerlijk
Telephone	:	+32 (0)56 77 6944
Telefax	:	+32 (0)56 77 5711
E-mail address	:	info@brenntag.be
Responsible/issuing person	:	Master Data Administration
Company	:	Brenntag Nederland B.V. Donker Duyvisweg 44 NL 3316 BM Dordrecht
Telephone	:	+31 (0)78 65 44 944
Telefax	:	+31 (0)78 65 44 919
E-mail address	:	info@brenntag.nl
Responsible/issuing person	:	Master Data Administration

1.4. Emergency telephone number

Emergency telephone number	:	Belgium: Antipoison Center - Brussels TEL: +32(0)70 245 245

Netherland: National Poisoning Information Center - Bilthoven
TEL: +31(0) 88 755 8000 (Only for the purpose of informing medical personnel in cases of acute intoxications)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

REGULATION (EC) No 1272/2008			
Hazard class	**Hazard category**	**Target Organs**	**Hazard statements**
Eye irritation	Category 2	---	H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

Most important adverse effects

Human Health	:	See section 11 for toxicological information.
Physical and chemical hazards	:	See section 9/10 for physicochemical information.
Potential environmental effects	:	See section 12 for environmental information.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard symbols :

Signal word	:	Warning	
Hazard statements	:	H319	Causes serious eye irritation.
Precautionary statements			
Prevention	:	P264	Wash skin thoroughly after handling.
		P280	Wear 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.

Hazardous components which must be listed on the label:

• calcium chloride

2.3. Other hazards

The PBT or vPvB criteria of Annex XIII to the REACH Regulation does not apply to inorganic substances.

Ecological information: No information available about endocrine disruption properties for environment.

Toxicological information: No information available about endocrine disruption properties for human health.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical nature : Aqueous solution

Hazardous components	Amount [%]	Classification (REGULATION (EC) No 1272/2008)	
		Hazard class / Hazard category	Hazard statements
calcium chloride Index-No. : 017-013-00-2 CAS-No. : 10043-52-4 EC-No. : 233-140-8 EU REACH-Reg. No. : 01-2119494219-28-xxxx	>= 25 - <= 45	Eye Irrit.2	H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice : Take off all contaminated clothing immediately. If symptoms call a physician.

If inhaled : Remove to fresh air. If symptoms persist, call a physician.

In case of skin contact	: Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician.
In case of eye contact	: Rinse immediately with plenty of water, also under the eyelids, for at least 5 minutes. Consult an eye specialist immediately. Go to an ophthalmic hospital if possible.
If swallowed	: Rinse mouth with water. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Protection of First Aid Responders	: First Aid responders should pay attention to self-protection and use the recommended protective clothing.

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

Symptoms	: See Section 11 for more detailed information on health effects and symptoms.
Effects	: irritant effects

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

Treatment	: Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	High volume water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting	:	Fire may cause evolution of: Irritant gases/vapours

5.3. Advice for firefighters

Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.Wear personal protective equipment.
Further advice	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains.Cool closed containers exposed to fire with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	:	Use personal protective equipment. Keep away unprotected persons. Ensure adequate ventilation. Avoid contact with skin and eyes.

6.2. Environmental precautions

Environmental precautions	:	Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

6.3. Methods and materials for containment and cleaning up

Methods and materials for containment and cleaning up	:	Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders). Keep in suitable, closed containers for disposal.
Further information	:	Treat recovered material as described in the section "Disposal considerations".

6.4. Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on personal protective equipment.
See Section 13 for waste treatment information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling	:	Keep container tightly closed. Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Emergency eye wash fountains and emergency showers should be available in the immediate vicinity.
Hygiene measures	:	Keep away from food, drink and animal feedingstuffs. Smoking, eating and drinking should be prohibited in the application area. Wash hands before breaks and at the end of workday. Take off all contaminated clothing immediately.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	:	Store in original container. Suitable materials for containers: Polypropylene; polyethylene; Unsuitable materials for containers: Aluminium
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.
Further information on storage conditions	:	Keep tightly closed in a dry and cool place.

7.3. Specific end use(s)

Specific use(s)	:	Identified use: See table in front of appendix for a complete overview of identified uses.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Other Occupational Exposure Limit Values		
(Additional) Information	:	Contains no substances with occupational exposure limit values. Contains no substances with occupational exposure limit values.

Component:	calcium chloride	CAS-No. 10043-52-4

Derived No Effect Level (DNEL)/Derived Minimal Effect Level (DMEL)

DNEL Workers, Acute - local effects, Inhalation	:	10 mg/m3
DNEL Workers, Long-term - local effects, Inhalation	:	5 mg/m3
DNEL Consumers, Acute - local effects, Inhalation	:	5 mg/m3
DNEL Consumers, Long-term - local effects, Inhalation	:	2,5 mg/m3

Component:	calcium chloride	CAS-No. 10043-52-4

Predicted No Effect Concentration (PNEC)

No PNEC value was derived.	:	

8.2. Exposure controls

Appropriate engineering controls

Refer to protective measures listed in sections 7 and 8.

Personal protective equipment

Respiratory protection

Advice	:	Required, if exposure limit is exceeded (e.g. OEL). Respiratory protection complying with EN 141.

Hand protection

Advice	:	Protective gloves complying with EN 374. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under

which the product is used, such as the danger of cuts, abrasion, and the contact time.
Protective gloves should be replaced at first signs of wear.

Material	:	Natural Rubber
Break through time	:	>= 480 min
Glove thickness	:	0,5 mm

Material	:	polychloroprene
Break through time	:	>= 480 min
Glove thickness	:	0,5 mm

Material	:	Nitrile rubber
Break through time	:	>= 480 min
Glove thickness	:	0,35 mm

Material	:	butyl-rubber
Break through time	:	>= 480 min
Glove thickness	:	0,5 mm

Material	:	Fluorinated rubber
Break through time	:	>= 480 min
Glove thickness	:	0,4 mm

Material	:	Polyvinylchloride
Break through time	:	>= 480 min
Glove thickness	:	0,5 mm

Eye protection

Advice : Safety goggles

Skin and body protection

Advice : Wear personal protective equipment.

Environmental exposure controls

General advice : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	:	liquid
Physical state	:	liquid

Colour	:	colourless
Odour	:	odourless
Odour Threshold	:	Not applicable
Melting point/range	:	ca. -46 °C 18 - 42% solution
Boiling point/boiling range	:	ca. 100 - 120 °C 18 - 42% solution
Flammability (solid, gas)	:	Not applicable Remarks: does not sustain combustion.
Upper explosion limit / Upper flammability limit	:	Not applicable
Lower explosion limit / Lower flammability limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	> 772 °C
Self-Accelerating decomposition temperature (SADT)	:	No data available
pH	:	10 - 11 (20 °C) Concentration: 100 % (formulated product)
Viscosity		
Viscosity, dynamic	:	ca. 2 - 10 mPa.s 18 - 42% solution
Viscosity, kinematic	:	No data available
Flow time	:	No data available
Solubility(ies)		
Water solubility	:	completely soluble
Solubility in other solvents	:	No data available
Dissolution Rate	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable
Dispersion Stability	:	No data available

Vapour pressure	:	Not applicable
Relative density	:	No data available
Density	:	1,4 g/cm3 solution 40%
Bulk density	:	No data available
Relative vapour density	:	No data available

Particle characteristics
No data available

9.2 Other information

Explosives	:	Product is not explosive.
Flammability (liquids)	:	Not applicable Remarks: does not sustain combustion.

SECTION 10: Stability and reactivity

10.1. Reactivity

Advice	:	No decomposition if stored and applied as directed.

10.2. Chemical stability

Advice	:	Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions	:	No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Conditions to avoid	:	Exposure to moistureProduct is hygroscopic.
Thermal decomposition	:	> 772 °C

10.5. Incompatible materials

Materials to avoid	:	Strong reducing agents, Strong oxidizing agents

10.6. Hazardous decomposition products

Hazardous decomposition products	:	Fire may cause evolution of: Irritant gases/vapours

SECTION 11: Toxicological information

11.1. Information on the hazard classes within the meaning of Regulation (EC) No. 1272/2008

Data for the product

Acute toxicity

Oral

Please find this information in the listing of the component/components below in this section.

Inhalation

Please find this information in the listing of the component/components below in this section.

Dermal

Please find this information in the listing of the component/components below in this section.

Irritation

Skin

Result : Please find this information in the listing of the component/components below in this section.

Eyes

Result : Please find this information in the listing of the component/components below in this section.

Sensitisation

Result : Please find this information in the listing of the component/components below in this section.

CMR effects

CMR Properties

Carcinogenicity : Please find this information in the listing of the component/components below in this section.

Mutagenicity : Please find this information in the listing of the component/components below in this section.

Teratogenicity : Please find this information in the listing of the component/components below in this section.

Reproductive toxicity : Please find this information in the listing of the component/components below in this section.

Carcinogenicity

Please find this information in the listing of the component/components below in this section.

Teratogenicity

Please find this information in the listing of the component/components below in this section.

Specific Target Organ Toxicity		
Single exposure		
Remarks	:	Please find this information in the listing of the component/components below in this section.
Repeated exposure		
Remarks	:	Please find this information in the listing of the component/components below in this section.
Other toxic properties		
Repeated dose toxicity		
		; Please find this information in the listing of the component/components below in this section.
Aspiration hazard		
		No data available

Component:	**calcium chloride**	**CAS-No. 10043-52-4**
Acute toxicity		
Oral		
LD50	:	2120 mg/kg body weight(Rat, male and female) (OECD Test Guideline 401)
Inhalation		
		No data available
Dermal		
LD50	:	> 5000 mg/kg body weight(Rabbit, male and female)
Irritation		
Skin		
Result	:	No skin irritation (Rabbit) (OECD Test Guideline 404)
Eyes		
Result	:	Irritating to eyes. (Rabbit) (OECD Test Guideline 405)

Sensitisation

Result	:	Study scientifically not justified.

CMR effects

Carcinogenicity

It dissociates into ions that are present physiologically in relatively high levels in vertebrates. Therefore, a study is considered (scientifically) unnecessary.

CMR Properties

Carcinogenicity	:	Study scientifically not justified.
Mutagenicity	:	In vitro tests did not show mutagenic effects
Teratogenicity	:	Did not show teratogenic effects in animal experiments.
Reproductive toxicity	:	Study scientifically not justified.

Teratogenicity

NOAEL Maternal	:	169 mg/kg (Rabbit)(OECD Test Guideline 414)

Specific Target Organ Toxicity

Single exposure

Remarks	:	The substance or mixture is not classified as specific target organ toxicant, single exposure.

Repeated exposure

Remarks	:	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Other toxic properties

Repeated dose toxicity

; It dissociates into ions that are present physiologically in relatively high levels in vertebrates. Therefore, a study is considered (scientifically) unnecessary.

Aspiration hazard
Not applicable,

11.2. Information on other hazards

Data for the product		
Endocrine disrupting properties		
Assessment	:	No information available about endocrine disruption properties for human health.

Component:	calcium chloride	CAS-No. 10043-52-4
Endocrine disrupting properties		
Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

12.1. Toxicity

Component:		calcium chloride	CAS-No. 10043-52-4
Acute toxicity			
Fish			
LC50	:	4.630 mg/l (Pimephales promelas (fathead minnow); 96 h) (static test; EPA 600/4-90/027)	
Toxicity to daphnia and other aquatic invertebrates			
NOEC	:	2.000 mg/l (Daphnia magna; 48 h) (static test; OECD Test Guideline 202)	
LC50		2.400 mg/l (Daphnia magna; 48 h) (static test; OECD Test Guideline 202)	
algae			
EC50	:	2900 mg/l (Pseudokirchneriella subcapitata (green algae); 72 h) (OECD Test Guideline 201)	

Bacteria		
	:	Study scientifically unjustified.

12.2. Persistence and degradability

Component:	calcium chloride	CAS-No. 10043-52-4
Persistence and degradability		
Persistence		
Result	:	(Related to: Water) decomposition by hydrolysis.
Biodegradability		
Result	:	The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

Component:	calcium chloride	CAS-No. 10043-52-4
Bioaccumulation		
Result	:	Bioaccumulation is not expected.

12.4. Mobility in soil

Component:	calcium chloride	CAS-No. 10043-52-4
Mobility		
Water	:	The product is water soluble.

12.5. Results of PBT and vPvB assessment

Data for the product		
Results of PBT and vPvB assessment		
Result	:	The PBT or vPvB criteria of Annex XIII to the REACH Regulation does not apply to inorganic substances.

Component:	calcium chloride	CAS-No. 10043-52-4
Results of PBT and vPvB assessment		
Result	:	The PBT or vPvB criteria of Annex XIII to the REACH Regulation does not apply to inorganic substances.

12.6. Endocrine disrupting properties

Data for the product		
Endocrine disrupting potential	:	No information available about endocrine disruption properties for environment.

Component:	calcium chloride	CAS-No. 10043-52-4
Endocrine disrupting potential	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7. Other adverse effects

Data for the product		
Additional ecological information		
Result	:	Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

Component:	calcium chloride	CAS-No. 10043-52-4
Additional ecological information		
Result	:	Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product	:	Disposal together with normal waste is not allowed. Special disposal required according to local regulations. Do not let product enter drains. Contact waste disposal services. This product shall be disposed of or recovered in compliance with Directive 2008/98/EC on waste as lastly amended.
Contaminated packaging	:	Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning. If recycling is not practicable, dispose of in compliance with local regulations.
European Waste Catalogue Number	:	No waste code according to the European Waste Catalogue can be assigned for this product, as the intended use dictates the assignment. The waste code is established in consultation with the regional waste disposer.

SECTION 14: Transport information

Not dangerous goods for ADR, RID, IMDG and IATA.

14.1. UN number or ID number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packaging group

Not applicable.

14.5. Environmental hazards

Not applicable.

14.6. Special precautions for user

Not applicable.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Data for the product

EU. Regulation EC No. 689/2008	:	; The substance/mixture does not fall under this legislation.
EU. REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC)	:	Point Nos.: , 3; Listed
EU. Directive 2012/18/EU (SEVESO III) on major accident hazards involving dangerous substances, Annex I	:	; The substance/mixture does not fall under this legislation.

Component:	calcium chloride	CAS-No. 10043-52-4

EU. Chemicals Subject to PIC Procedure: Regulation 649/2012/EU on export and import of dangerous chemicals, as amended : ; The substance/mixture does not fall under this legislation.

EU. REACH, Annex XVII, Marketing and Use Restrictions (Regulation 1907/2006/EC) : Point Nos.: , 75; Listed.

EU. Directive 2012/18/EU (SEVESO III) on major accident hazards involving dangerous substances, Annex I : ; The substance/mixture does not fall under this legislation.

Notification status
calcium chloride:

Regulatory List	Notification	Notification number
AICS	YES	
DSL	YES	
EINECS	YES	233-140-8
ENCS (JP)	YES	(1)-176
IECSC	YES	
INSQ	YES	
ISHL (JP)	YES	(1)-176
KECI (KR)	YES	KE-04496
NZIOC	YES	HSR003389
ONT INV	YES	
PHARM (JP)	YES	
PICCS (PH)	YES	
TCSI	YES	
TH INV	YES	2827.20
TH INV	YES	55-1-00071
TSCA	YES	
VN INVL	YES	

15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H319	Causes serious eye irritation.

Full text of the Notes referred to under section 3.

Abbreviations and Acronyms

AU AIICL	Australia. Industrial Chemicals Act (AIIC) List
BCF	bioconcentration factor
BOD	biochemical oxygen demand
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	carcinogenic, mutagenic or toxic to reproduction
COD	chemical oxygen demand
DNEL	derived no-effect level
DSL	Canada. Environmental Protection Act, Domestic Substances List
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
ENCS (JP)	Japan. Kashin-Hou Law List
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
IECSC	China. Inventory of Existing Chemical Substances
INSQ	Mexico. National Inventory of Chemical Substances
ISHL (JP)	Japan. Inventory of Industrial Safety & Health
KECI (KR)	Korea. Existing Chemicals Inventory
LC50	median lethal concentration
LOAEC	lowest observed adverse effect concentration
LOAEL	lowest observed adverse effect level
LOEL	lowest observed effect level
NDSL	Canada. Environmental Protection Act. Non-Domestic Substances List
NLP	no-longer polymer
NOAEC	no observed adverse effect concentration
NOAEL	no observed adverse effect level
NOEC	no observed effect concentration
NOEL	no observed effect level
NZIOC	New Zealand. Inventory of Chemicals
OECD	Organisation for Economic Cooperation and Development
OEL	occupational exposure limit
ONT INV	Canada. Ontario Inventory List

PBT	persistent, bioaccumulative and toxic
PHARM (JP)	Japan. Pharmacopoeia Listing
PICCS (PH)	Philippines. Inventory of Chemicals and Chemical Substances
PNEC	predicted no-effect concentration
REACH Auth. No.:	REACH Authorisation Number
REACH AuthAppC. No.	REACH Authorisation Application Consultation Number
STOT	specific target organ toxicity
SVHC	substance of very high concern
TCSI	Taiwan. Existing Chemicals Inventory
TH INV	Thailand. Existing Chemicals Inventory from FDA
TSCA	US. Toxic Substances Control Act
UVCB	substance of unknown or variable composition, complex reaction products or biological materials
VN INVL	Vietnam. National Chemical Inventory
vPvB	very persistent and very bioaccumulative

Further information

Key literature references and sources for data	:	Supplier information and data from the "Database of registered substances" of the European Chemicals Agency (ECHA) were used to create this safety data sheet.
Methods used for product classification	:	The classification for human health, physical and chemical hazards and environmental hazards were derived from a combination of calculation methods and if available test data.
Hints for trainings	:	The workers have to be trained regularly on the safe handling of the products based on the information provided in the Safety Data Sheet and the local conditions of the workplace. National regulations for the training of workers in the handling of hazardous materials must be adhered to.
Other information	:	The information provided in this Safety Data Sheet is correct to our knowledge at the date of its revision. The information given only describes the products with regard to safety arrangements and is not to be considered as a warranty or quality specification and does not constitute a legal relationship. The information contained in this Safety Data Sheet relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

|| Indicates updated section.