

Calcium hypochlorite

Safety Data Sheet

According to Regulation (EU) 2015/830 (REACH Annex II)

Date of issue: 11/12/2018

Revision date: 11/12/2018

Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Product name : Calcium hypochlorite 65%
BPR CASE number BC-CY045479-04

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

1.2.1. Relevant identified uses

Main use category : PT 2 Disinfectants and algacides not intended for direct application to humans or animals

- 1 Disinfection of sewage/ waste water (pre-chlorination)
- 2 Disinfection of sewage/ waste water (post-chlorination)
- 3 Disinfection of swimming pools (public pools, continuous flow, professional)
- 4 Disinfection of swimming pools (public pools, continuous flow, non-professional)
- 5 Disinfection of swimming pools (public pools, shock disinfection, professional)
- 6 Disinfection of swimming pools (public pools, shock disinfection, non-professional)
- 7 Disinfection of swimming pools (private pools, continuous flow, professional)
- 8 Disinfection of swimming pools (private pools, continuous flow, non-professional)
- 9 Disinfection of swimming pools (private pools, shock disinfection, professional)
- 10 Disinfection of swimming pools (private pools, shock disinfection, non-professional)

PT 3 Veterinary hygiene

- 1 Disinfection in poultry plants-spraying
- 2 Disinfection in poultry plants- wiping (floors)
- 3 Disinfection in poultry plants-wiping (other surface than floors)

PT 4 Food and feed area

- 1 Disinfection in farm shops- spraying
- 2 Disinfection in farm shops-wiping (floors)
- 3 Disinfection in farm shops-wiping (other surface than floors)
- 4 Disinfection of kitchens, kitchens utensils and brewery equipment- spraying
- 5 Disinfection of kitchens, kitchens utensils and brewery equipment-wiping (floors)
- 6 Disinfection of kitchens, kitchens utensils and brewery equipment -wiping (other surface than floors)
- 7 Disinfection of poultry dressing area-spraying
- 8 Disinfection of poultry dressing area-wiping (floors)
- 9 Disinfection of poultry dressing area-wiping (other surface than floors)
- 10 Disinfection related to egg-breaking operations-spraying
- 11 Disinfection related to egg-breaking operations-wiping (floors)
- 12 Disinfection related to egg-breaking operations- wiping (other surface than floors)

PT 5 Drinking water

- 1 Human drinking water disinfection
- 2 Poultry drinking water disinfection

1.2.2. Uses advised against

Restrictions on use : No information available

1.3. Details of the supplier of the safety data sheet

Supplier : Haixing Eno Chemical Co., Ltd
Address : Hai Xing Economic Development Area, Hai Xing County 061200, Hebei Province, China
Zip Code : 061200
Phone : +86-317-661 6088
Fax : +86-317-668 0002
E-mail : williamzhang@enochem.com.cn

Importer : Paper Power Refinery Industrial Services LTD

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Address : Unit 3 Boarshurst Business Park, Boarshurst Lane, Greenfield, Oldham, United Kingdom. OL3 7ER
Zip Code : OL3 7ER
Phone : +44 0161 284 3164
Fax : +44 0161 284 3164
E-mail : Email: Sales@pprindustrial.co.uk

1.4. Emergency telephone number

+86-317-668-0006

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Oxidising Solids, Category 2	H272
Acute toxicity (oral), Category 4	H302
Acute toxicity (inhal.), Category 3	H331
Skin corrosion/irritation, Category 1B	H314
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

May intensify fire; oxidiser. Toxic if inhaled. Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. Very toxic to aquatic life.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS03

GHS06

GHS09

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H272 - May intensify fire; oxidiser.
H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H331 - Toxic if inhaled.
H400 - Very toxic to aquatic life.

Precautionary statements (CLP)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

EUH-statements

: EUH031 - Contact with acids liberates toxic gas.
EUH071 - Corrosive to the respiratory tract.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Active chlorine released from calcium hypochlorite	(CAS-No.) 7778-54-3 (EC-No.) 231-908-7 (EC Index-No.) 017-012-00-7	>= 65.5	Ox. Sol. 2, H272 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Inhalation), H331 Skin Corr. 1B, H314 Aquatic Acute 1, H400 (M=10)
Sodium chloride	(CAS-No.) 7647-14-5 (EC-No.) 231-598-3	<= 18	Not classified
Calcium chloride	(CAS-No.) 10043-52-4 (EC-No.) 233-140-8 (EC Index-No.) 017-013-00-2	<= 5	Eye Irrit. 2, H319
Calcium chlorate	(CAS-No.) 10137-74-3 (EC-No.) 233-378-2	<= 5	Not classified
Calcium hydroxide	(CAS-No.) 1305-62-0 (EC-No.) 215-137-3	<= 5	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Active chlorine released from calcium hypochlorite	(CAS-No.) 7778-54-3 (EC-No.) 231-908-7 (EC Index-No.) 017-012-00-7	(0.5 =<C < 3) Eye Irrit. 2, H319 (1 =<C < 5) Skin Irrit. 2, H315 (3 =<C < 5) Eye Dam. 1, H318 (C >= 5) Skin Corr. 1B, H314

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice (show directions for use or safety data sheet if possible).
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing; Give oxygen or artificial respiration if necessary; If you feel unwell, seek medical advice
First-aid measures after skin contact	: Wash skin with plenty of water and take off contaminated clothing; Take off immediately all contaminated clothing. Call a physician immediately. If skin irritation or rash occurs: Get medical advice/attention; Wash contaminated clothing before reuse
First-aid measures after eye contact	: Rinse cautiously with water for several minutes while holding the eyelids wide open; Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention
First-aid measures after ingestion	: If swallowed, rinse mouth; Do not induce vomiting; Give nothing or a little water to drink; Never give anything by mouth to an unconscious person; If you feel unwell, seek medical advice;

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

Symptoms/effects after skin contact	: Causes severe skin burns
Symptoms/effects after eye contact	: Causes severe eye damage.
Symptoms/effects after ingestion	: Harmful if swallowed.
Symptoms/effects after inhaled	: Toxic if inhaled

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	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: No information available

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5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Thermal decomposition can lead to release of irritating and toxic gases and vapors

5.3. Advice for firefighters

Precautionary measures fire : Eliminate every possible source of ignition. Keep container tightly closed and away from heat, sparks and flame.

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

Other information : Ensure adequate ventilation, especially in confined areas. Evacuate personnel to a safe area. Avoid contact with skin, eyes and inhalation of vapors. Move containers from fire area if it can be done without personal risk. Cool tanks/drums with water spray/remove them into safety. Stay upwind.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ensure adequate ventilation, especially in confined areas. Ventilate spillage area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition. Avoid generation of dust

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".

Emergency procedures : Avoid breathing dust/fume/gas/mist/vapours/spray Stop leak if safe to do so. Evacuate personnel to safe areas. Avoid contact with skin and eyes.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Absorb and/or contain spill with inert material (sand), then place in suitable container. Use a clean shovel to collect it in a properly sealed waste container with a label and completely sealed. Avoid contact with strong acid.

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 : Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Wear personal protective equipment. Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : The product for swimming pool disinfection should be stored in a dry place in a well-sealed package.

Keep away from heat, sparks, flame and other sources of ignition

Keep locked up and out of reach of children

Keep away from food, drink and animal feeding stuffs

Store in accordance with local regulations

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Sodium chloride (7647-14-5)

Latvia	OEL TWA (mg/m ³)	5 mg/m ³
Lithuania	IPRV (mg/m ³)	5 mg/m ³

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Calcium chloride (10043-52-4)

Czech Republic	Expoziční limity (PEL) (mg/m ³)	5 mg/m ³
Latvia	OEL TWA (mg/m ³)	2 mg/m ³

Calcium hydroxide (1305-62-0)

EU	IOELV TWA (mg/m ³)	1 mg/m ³ (respirable fraction)
EU	IOELV STEL (mg/m ³)	4 mg/m ³ (respirable fraction)
Austria	MAK (mg/m ³)	2 mg/m ³ (inhalable fraction)
Austria	MAK Short time value (mg/m ³)	4 mg/m ³ (inhalable fraction)
Belgium	Limit value (mg/m ³)	5 mg/m ³
Bulgaria	OEL TWA (mg/m ³)	5 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	5 mg/m ³
Cyprus	OEL TWA (mg/m ³)	5 mg/m ³
Czech Republic	Expoziční limity (PEL) (mg/m ³)	2 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	5 mg/m ³
Estonia	OEL TWA (mg/m ³)	5 mg/m ³
Finland	HTP-arvo (8h) (mg/m ³)	5 mg/m ³
France	VME (mg/m ³)	5 mg/m ³
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	1 mg/m ³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed-inhalable fraction)
Gibraltar	Eight hours mg/m ³	5 mg/m ³ (existing scientific data on health effects appear to be particularly limited)
Greece	OEL TWA (mg/m ³)	5 mg/m ³
Hungary	AK-érték	5 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	5 mg/m ³
Ireland	OEL (15 min ref) (mg/m ³)	15 mg/m ³ (calculated)
Latvia	OEL TWA (mg/m ³)	5 mg/m ³
Lithuania	IPRV (mg/m ³)	5 mg/m ³
Luxembourg	OEL TWA (mg/m ³)	5 mg/m ³
Malta	OEL TWA (mg/m ³)	5 mg/m ³
Netherlands	Grenswaarde TGG 8H (mg/m ³)	5 mg/m ³
Poland	NDS (mg/m ³)	2 mg/m ³ (inhalable fraction) 1 mg/m ³ (respirable fraction)
Poland	NDSch (mg/m ³)	4 mg/m ³ (respirable fraction) 6 mg/m ³ (inhalable fraction)
Portugal	OEL TWA (mg/m ³)	5 mg/m ³ (indicative limit value)
Romania	OEL TWA (mg/m ³)	5 mg/m ³
Slovakia	NPHV (priemerná) (mg/m ³)	5 mg/m ³
Slovenia	OEL TWA (mg/m ³)	5 mg/m ³ (inhalable fraction)
Spain	VLA-ED (mg/m ³)	1 mg/m ³ (respirable fraction)
Spain	VLA-EC (mg/m ³)	4 mg/m ³ (respirable fraction)
Sweden	nivågränsvärde (NVG) (mg/m ³)	3 mg/m ³ (inhalable dust)
Sweden	kortidsvärde (KTV) (mg/m ³)	6 mg/m ³ (inhalable dust)
United Kingdom	WEL TWA (mg/m ³)	5 mg/m ³
United Kingdom	WEL STEL (mg/m ³)	15 mg/m ³ (calculated)
Norway	Grenseverdier (AN) (mg/m ³)	5 mg/m ³
Norway	Grenseverdier (Korttidsverdi) (mg/m ³)	10 mg/m ³ (value calculated)

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Calcium hydroxide (1305-62-0)

Switzerland	MAK (mg/m ³)	5 mg/m ³ (inhalable dust)
Turkey	OEL TWA (mg/m ³)	5 mg/m ³
Australia	TWA (mg/m ³)	5 mg/m ³
Canada (Quebec)	VEMP (mg/m ³)	5 mg/m ³
USA - ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³
USA - NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³
USA - OSHA	OSHA PEL (TWA) (mg/m ³)	15 mg/m ³ (total dust) 5 mg/m ³ (respirable fraction)

8.2. Exposure controls

Appropriate engineering controls:

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

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

Environmental exposure controls:

Avoid release to the environment.

The residence time before the effluent is discharged into the surface water of the treated STP needs to be more than 30 minutes.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid, small chips of different dimensions.
Colour	: White
Odour	: Characteristic smell of bleach, lightly pungent.
Odour threshold	: No data available
pH	: 11.94 (solution)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 202.5 °C
Boiling point	: No data available
Flash point	: Not applicable
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not flammable
Vapour pressure	: Not applicable
Relative vapour density at 20 °C	: Not applicable
Relative density	: 1.0
Density	: 1.0 g/ml
Solubility	: Insoluble in water: 193.3 g/L
Log Kow	: -0.87
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Explosive properties	: Not explosive
Oxidising properties	: May intensify fire; oxidizer
Explosive limits	: Not applicable

9.2. Other information

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

May intensify fire. Contact with acids liberates toxic gas

Risk of explosion in contact with: amines, ammonia, organic substances, acetylene; ammonium chloride; dichloromethyl amine (heat); iron oxides; acetic acid/potassium cyanide; ethanol; urea; glycerin; coal (heat); methanol; nitromethane; sulphur; oil of turpentine; carbon tetrachloride (heat)

Calcium hypochlorite can react dangerously with: alkali metals, combustible substances, reducing agents, moisture/water, water, anthracene; diethylene glycol monomethyl ether; greases; heat; hydroxyl compounds; mercaptans; sodium hydrogensulphate; oils; phenol; hydrochloric acid, organic sulphides, thioles

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid contact with Incompatible materials

10.5. Incompatible materials

Amines, ammonia, organic substances, acetylene; ammonium chloride; dichloromethyl amine (heat); iron oxides; acetic acid/potassium cyanide; ethanol; urea; glycerin; coal (heat); methanol; nitromethane; sulphur; oil of turpentine; carbon tetrachloride (heat), alkali metals, combustible substances, reducing agents, moisture/water, water, anthracene; diethylene glycol monomethyl ether; greases; heat; hydroxyl compounds; mercaptans; sodium hydrogensulphate; oils; phenol; hydrochloric acid, organic sulphides, thioles

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) : Oral: Harmful if swallowed.

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Inhalation: Toxic if inhaled.

Active chlorine released from calcium hypochlorite (7778-54-3)

LD50 oral rat	850 mg/kg
LD50 dermal rabbit	> 2000 mg/kg

Sodium chloride (7647-14-5)

LD50 oral rat	3 g/kg
LC50 inhalation rat (mg/l)	> 42 g/m ³ (Exposure time: 1 h)

Calcium chloride (10043-52-4)

LD50 oral rat	1000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg

Calcium chlorate (10137-74-3)

LD50 oral rat	4500 mg/kg
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Calcium hydroxide (1305-62-0)

LD50 oral rat	7340 mg/kg
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Skin corrosion/irritation	: Causes severe skin burns
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not considered to be skin sensitising Not expected to be sensitiser to the respiratory tract
Germ cell mutagenicity	: No genotoxic/mutagenic potential of calcium hypochlorite is expected.
Carcinogenicity	: No carcinogenic potential of calcium hypochlorite is expected

Active chlorine released from calcium hypochlorite (7778-54-3)

IARC group	3 - Not classifiable
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Reproductive toxicity	: No prenatal developmental and reproductive toxicity potential of calcium hypochlorite is expected
STOT-single exposure	: Oral exposure: Not expected to lead to severe or permanent damage of the gastro intestinal tract as recovery is rapid and without any permanent health consequences. Dermal exposure: Hypochlorite solutions $\geq 5\%$ are irritant. Hypochlorite solutions = 2% are moderate irritant Hypochlorite solutions = 1% are no irritant Accidental spillage of hypochlorite bleach into the eyes is expected to cause slight, temporary discomfort, which subsides within a short period of time or after rinsing with water. Calcium hypochlorite aerosols may be irritant to the respiratory tract. It is concluded that sodium hypochlorite does not pose a skin sensitization hazard. Inhalation exposure (chlorine gas): NOAEC=0.5ppm
STOT-repeated exposure	: Oral exposure: No indications of chronic toxicity in humans following exposure to sodium hypochlorite are reported in the literature. Dermal exposure: not classified Inhalation exposure (chlorine gas): NOAEC=0.5ppm
Aspiration hazard	: Calcium hypochlorite aerosols are expected to be irritant to the respiratory tract.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Very toxic to aquatic life.
Acute aquatic toxicity	: Very toxic to aquatic life.
Chronic aquatic toxicity	: Not classified

Active chlorine released from calcium hypochlorite (7778-54-3)

LC50 fish	0.032 mg/l (Exposure time: 96 h - Species: Coho salmon (<i>Oncorhynchus kisutch</i>))
LC50 fish	0.09 mg/l (Exposure time: 96 h - Species: <i>Leiostomus xanthurus</i>)
LC100 fish	0.16 mg/l (Exposure time: 96 h - Species: Ocean spot (<i>Leiostomus xanthurus</i>))
NOEC fish	0.04 mg/l (Exposure time: 96 h - Species: Ocean spot (<i>Leiostomus xanthurus</i>))
EC50 crustacea	0.141 mg/l (Exposure time: 48 h - Species: <i>Daphnia magna</i>)
EC50 crustacea	0.035 mg/l (Exposure time: 48 h - Species: <i>Ceriodaphnia dubia</i>)
NOEC50 crustacea	0.025 mg/l (Exposure time: 48 h - Species: <i>Ceriodaphnia dubia</i>)
LC50 crustacea	0.09 mg/l (Exposure time: 96 h - Species: humpy shrimp (<i>Pandalus goniurus</i>))
ErC50 Algae	0.0365 mg/l (Exposure time: 72 h - Species: <i>Pseudokirchneriella subcapitata</i>)
EbC50 Algae	0.0183 mg/l (Exposure time: 72 h - Species: <i>Pseudokirchneriella subcapitata</i>)
NOEC Algae	0.0054 (Exposure time: 72 h - Species: <i>Pseudokirchneriella subcapitata</i>)
LOEC Algae	0.0054 (Exposure time: 72 h - Species: <i>Pseudokirchneriella subcapitata</i>)

Sodium chloride (7647-14-5)

LC50 fish	5560 - 6080 mg/l (Exposure time: 96 h - Species: <i>Lepomis macrochirus</i> [flow-through])
LC50 fish	12946 mg/l (Exposure time: 96 h - Species: <i>Lepomis macrochirus</i> [static])
EC50 Daphnia	1000 mg/l (Exposure time: 48 h - Species: <i>Daphnia magna</i>)
EC50 Daphnia	340.7 - 469.2 mg/l (Exposure time: 48 h - Species: <i>Daphnia magna</i> [Static])

Calcium chloride (10043-52-4)

LC50 fish	10650 mg/l (Exposure time: 96 h - Species: <i>Lepomis macrochirus</i> [static])
EC50 Daphnia	2280000 - 3948000 $\mu\text{g/l}$ (Exposure time: 48 h - Species: <i>Daphnia magna</i>)

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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Log Kow :-0.87

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available.

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.

Product/Packaging disposal recommendations : 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				
2880	2880	2880	2880	2880
14.2. UN proper shipping name				
CALCIUM HYPOCHLORITE, HYDRATED or CALCIUM HYPOCHLORITE, HYDRATEDMIXTURE, with not less than 5.5% but not more than 16% water	CALCIUM HYPOCHLORITE, HYDRATED or CALCIUM HYPOCHLORITE, HYDRATEDMIXTURE, with not less than 5.5% but not more than 16% water	CALCIUM HYPOCHLORITE, HYDRATED or CALCIUM HYPOCHLORITE, HYDRATEDMIXTURE, with not less than 5.5% but not more than 16% water	CALCIUM HYPOCHLORITE, HYDRATED or CALCIUM HYPOCHLORITE, HYDRATEDMIXTURE, with not less than 5.5% but not more than 16% water	CALCIUM HYPOCHLORITE, HYDRATED or CALCIUM HYPOCHLORITE, HYDRATEDMIXTURE, with not less than 5.5% but not more than 16% water
Transport document description				
UN 2880 CALCIUM HYPOCHLORITE, HYDRATED or CALCIUM HYPOCHLORITE, HYDRATEDMIXTURE, with not less than 5.5% but not more than 16% water, 5.1, II, (E), ENVIRONMENTALLY HAZARDOUS	UN 2880 CALCIUM HYPOCHLORITE, HYDRATED or CALCIUM HYPOCHLORITE, HYDRATEDMIXTURE, with not less than 5.5% but not more than 16% water, 5.1, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 2880 CALCIUM HYPOCHLORITE, HYDRATED or CALCIUM HYPOCHLORITE, HYDRATEDMIXTURE, with not less than 5.5% but not more than 16% water, 5.1, II, ENVIRONMENTALLY HAZARDOUS	UN 2880 CALCIUM HYPOCHLORITE, HYDRATED or CALCIUM HYPOCHLORITE, HYDRATEDMIXTURE, with not less than 5.5% but not more than 16% water, 5.1, II, ENVIRONMENTALLY HAZARDOUS	UN 2880 CALCIUM HYPOCHLORITE, HYDRATED or CALCIUM HYPOCHLORITE, HYDRATEDMIXTURE, with not less than 5.5% but not more than 16% water, 5.1, II, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
5.1	5.1	5.1	5.1	5.1
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available				

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According to Regulation (EU) 2015/830 (REACH Annex II)

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: O2
Special provisions (ADR)	: 314, 322
Limited quantities (ADR)	: 1kg
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P002, IBC08
Special packing provisions (ADR)	: B4, B13
Mixed packing provisions (ADR)	: MP10
Tank code (ADR)	: SGAN
Tank special provisions (ADR)	: TU3
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V11
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV24, CV35
Hazard identification number (Kemler No.)	: 50
Orange plates	:



Tunnel restriction code (ADR)	: E
EAC code	: 1W

Transport by sea

Special provisions (IMDG)	: 314, 322
Packing instructions (IMDG)	: P002
Special packing provisions (IMDG)	: PP85
EmS-No. (Fire)	: F-H
EmS-No. (Spillage)	: S-Q
Stowage category (IMDG)	: D
Stowage and handling (IMDG)	: SW1, SW11
Segregation (IMDG)	: SG35, SG38, SG49, SG53, SG60
Properties and observations (IMDG)	: White or yellowish solid (powder, granules or tablets) with chlorine-like odour. Soluble in water. May cause fire in contact with organic material or ammonium compounds. Substances are liable to exothermic decomposition at elevated temperatures. This condition may lead to fire or explosion. Decomposition can be initiated by heat or by impurities (e.g. powdered metals (iron, manganese, cobalt, magnesium) and their compounds). Liable to heat slowly. Reacts with acids, evolving chlorine, an irritating, corrosive and toxic gas. In the presence of moisture, corrosive to most metals. Dust irritates mucous membranes.

Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y544
PCA limited quantity max net quantity (IATA)	: 2.5kg
PCA packing instructions (IATA)	: 558
PCA max net quantity (IATA)	: 5kg
CAO packing instructions (IATA)	: 562
CAO max net quantity (IATA)	: 25kg
Special provisions (IATA)	: A3, A8, A136, A803
ERG code (IATA)	: 5L

Inland waterway transport

Classification code (ADN)	: O2
Special provisions (ADN)	: 314, 322
Limited quantities (ADN)	: 1 kg
Excepted quantities (ADN)	: E2
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

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Rail transport

Classification code (RID)	: O2
Special provisions (RID)	: 314, 322
Limited quantities (RID)	: 1kg
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P002, IBC08
Special packing provisions (RID)	: B4, B13
Mixed packing provisions (RID)	: MP10
Tank codes for RID tanks (RID)	: SGAN
Special provisions for RID tanks (RID)	: TU3
Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W11
Special provisions for carriage - Loading, unloading and handling (RID)	: CW24, CW35
Colis express (express parcels) (RID)	: CE10
Hazard identification number (RID)	: 50

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 hypochlorite is not on the REACH Candidate List

Calcium hypochlorite is not on the REACH Annex XIV List

15.1.2. National regulations

Active chlorine released from calcium hypochlorite:

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on the Canadian DSL (Domestic Substances List)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Japanese ISHL (Industrial Safety and Health Law)

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on Turkish inventory of chemical

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Germany

Reference to AwSV : Water hazard class (WGK) 2, significant hazard to water (Classification according to AwSV, Annex 1)

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

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

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SECTION 16: Other information

Issue date	: 12-Nov-2018
Revision date	: 12-Nov-2018
Full text of H- and EUH-phrases	
Acute Tox. 4 (Oral)	: Acute toxicity (oral), Category 4
Aquatic Acute 1	: Hazardous to the aquatic environment — Acute Hazard, Category 1
Eye Dam. 1	: Serious eye damage/eye irritation, Category 1
Ox. Sol. 2	: Oxidising Solids, Category 2
Skin Corr. 1B	: Skin corrosion/irritation, Category 1B
H272	: May intensify fire; oxidiser.
H302	: Harmful if swallowed.
H314	: Causes severe skin burns and eye damage.
H315	: Causes skin irritation.
H318	: Causes serious eye damage.
H331	: Toxic if inhaled.
H400	: Very toxic to aquatic life.
EUH031	: Contact with acids liberates toxic gas.
EUH071	: Corrosive to the respiratory tract.

Key or legend to abbreviations and acronyms used in the safety data sheet

ADR	: European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMDG	: International Maritime Dangerous Goods
IATA	: International Air Transport Association
ADN	: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterway
RID	: Regulations Concerning the International Carriage of Dangerous Goods by Rail
PBT	: Persistent, Bioaccumulative and Toxic
vPvB	: Very Persistent and Very Bioaccumulative
DNEL	: Derived No Effect Level
PNEC	: Predicted No Effect Concentration
LC50	: Lethal Concentration 50
LD50	: Lethal Dose 50
EC50	: Effective Concentration 50
TWA	: Time Weighted Average
STEL	: Short Term Exposure Limit

Key literature references and sources for data

ECHA: <http://echa.europa.eu/>

IFA GESTIS: [http://gestis-en.itrust.de/nxt/gateway.dll?f=templates\\$fn=default.htm\\$vid=gestiseng:sdbeng](http://gestis-en.itrust.de/nxt/gateway.dll?f=templates$fn=default.htm$vid=gestiseng:sdbeng)

HSDB: <http://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

ICSC: <http://www.ilo.org/dyn/icsc/showcard.home>

eChemPortal: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

NITE-CHRIP: http://www.nite.go.jp/en/chem/chrip/chrip_search/srhInput

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