

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.11.2023

Version number 11 (replaces version 10)

Revision: 08.11.2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking**• 1.1 Product identifier****• Trade name: Calcium Hypochlorite**

- Article number: 0401
- CAS Number:
7778-54-3
- EC number:
231-908-7
- Index number:
017-012-00-7
- UFI: X1Y7-YJW9-VCOK-TU6V

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

No further relevant information available.

• Application of the substance / the mixture

Water treatment

MAIN GROUP 1: Disinfectants.

Product-type 2: Disinfectants and algacides not intended for direct application to humans or animals.

• 1.3 Details of the supplier of the safety data sheet**• Manufacturer/Supplier:**

Complete Pool Controls Ltd
Unit 2, The Park
Stoke Orchard
Bishops Cleeve
Gloucestershire
GL52 7RS

Telephone: +44 (0) 8712 229081

Fax: +44 (0) 8712 229083

E-mail: sales@cpc-chemicals.co.uk

• Further information obtainable from: product safety**• 1.4 Emergency telephone number:**

Telephone: +44 (0) 8712 229081 (office hours)
+44 (0) 1242 300271 (outside of office hours)

National Poison Inform. Centre
Medical Toxicology Unit
Avalonley Road
London SE14 5ER
+44 (0) 171 635 91 91

SECTION 2: Hazards identification**• 2.1 Classification of the substance or mixture****• Classification according to Regulation (EC) No 1272/2008**

flame over circle

Ox. Sol. 2 H272 May intensify fire; oxidiser.



corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

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Acute Tox. 4 H302 Harmful if swallowed.

• 2.2 Label elements

• Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the GB CLP regulation.

• Hazard pictograms



GHS03



GHS05



GHS07



GHS09

• Signal word Danger

• Hazard-determining components of labelling:

calcium hypochlorite

• Hazard statements

H272 May intensify fire; oxidiser.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H400 Very toxic to aquatic life.

• Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P273 Avoid release to the environment.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

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/doctor.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

• Additional information:

EUH031 Contact with acids liberates toxic gas.

EUH206 Warning! Do not use together with other products. May release dangerous gases (chlorine).

• 2.3 Other hazards

• Results of PBT and vPvB assessment

• PBT: Not applicable.

• vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

• 3.1 Substances

• CAS No. Description

7778-54-3 calcium hypochlorite

• Identification number(s)

• EC number: 231-908-7

• Index number: 017-012-00-7

• Impurities and stabilising additives:

• biocidal active substances

: Ja

SECTION 4: First aid measures

• 4.1 Description of first aid measures

• General information:

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
Seek medical treatment.
Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Call a doctor immediately.
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Call for a doctor immediately.
Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
Water spray
Carbon dioxide
Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear fully protective suit.
Mouth respiratory protective device.
- **Additional information**
Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Avoid formation of dust.
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Use neutralising agent.
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Use only in well ventilated areas.
Ensure that suitable extractors are available on processing machines
Thorough dedusting.
- **Information about fire - and explosion protection:**
Substance/product is oxidising when dry.
The product is not flammable.

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- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
 - Requirements to be met by storerooms and receptacles: Provide alkali-resistant floor.
 - Information about storage in one common storage facility:
 - Store away from flammable substances.
 - Do not store together with acids.
 - Further information about storage conditions:
 - Store in a cool place.
 - Store in dry conditions.
 - Protect from humidity and water.
 - Keep container tightly sealed.
- Storage class: 5.1 B
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- Additional information: The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- General protective and hygienic measures:
 - Use skin protection cream for skin protection.
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes.
 - Avoid contact with the eyes and skin.
- Respiratory protection:
 - Filter P2
 - Filter P3
- Hand protection



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- Material of gloves
 - Nitrile rubber, NBR
 - Rubber gloves
 - Plastic gloves
- The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- Penetration time of glove material
 - The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- For the permanent contact gloves made of the following materials are suitable:
 - Natural rubber, NR
 - Nitrile rubber, NBR
 - Butyl rubber, BR
 - Fluorocarbon rubber (Viton)
 - PVC gloves
- Not suitable are gloves made of the following materials:
 - Leather gloves
 - Strong material gloves

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- Eye/face protection
- Gauze goggles



Tightly sealed goggles

- Body protection:
- Protective work clothing
- Boots

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

• Physical state	Solid
• Colour:	White
• Odour:	Like chlorine
• Odour threshold:	Not determined.
• Melting point/freezing point:	100 °C
• Boiling point or initial boiling point and boiling range	Undetermined.
• Flammability	Contact with combustible material may cause fire.
• Lower and upper explosion limit	
• Lower:	Not determined.
• Upper:	Not determined.
• Flash point:	Not applicable.
• Decomposition temperature:	177 °C
• pH	11.5
• Viscosity:	
• Kinematic viscosity	Not applicable.
• Dynamic:	Not applicable.
• Solubility	
• water at 20 °C:	217 g/l
• Partition coefficient n-octanol/water (log value)	Not determined.
• Vapour pressure:	Not applicable.
• Density and/or relative density	
• Density at 20 °C:	2.35 g/cm ³
• Relative density	Not determined.
• Vapour density	Not applicable.

9.2 Other information

Appearance:

- Form: Granulate

Important information on protection of health and environment, and on safety.

- Ignition temperature: Not determined.
- Explosive properties: Product does not present an explosion hazard.
- Solids content: 100.0 %
- Molecular weight: 142,99 g/mol
- **Change in condition**
- Evaporation rate: Not applicable.

Information with regard to physical hazard classes

• Explosives	Void
• Flammable gases	Void
• Aerosols	Void
• Oxidising gases	Void
• Gases under pressure	Void
• Flammable liquids	Void
• Flammable solids	Void
• Self-reactive substances and mixtures	Void
• Pyrophoric liquids	Void
• Pyrophoric solids	Void
• Self-heating substances and mixtures	Void

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- Substances and mixtures, which emit flammable gases in contact with water Void
- Oxidising liquids Void
- Oxidising solids May intensify fire; oxidiser.
- Organic peroxides Void
- Corrosive to metals Void
- Desensitised explosives Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Can decompose slowly with localised heating above 150°C.
- **10.3 Possibility of hazardous reactions**
Strong exothermic reaction with acids.
Reacts with acids releasing chlorine.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** Warning! Do not use together with other products. May release dangerous gases (chlorine).
- **10.6 Hazardous decomposition products:**
Hydrogen chloride (HCl)
Chlorine
Oxygen

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity**
Harmful if swallowed.
- **LD/LC50 values relevant for classification:**
7778-54-3 calcium hypochlorite
LC50 0.023 mg/l (fish)
LD50 850 mg/kg (rat)
- **Skin corrosion/irritation** Causes severe skin burns and eye damage.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties**
Substance is not listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**
7778-54-3 calcium hypochlorite
EC50 0.07 mg/l (daphnia)
LC50 0.41 mg/l (daphnia)
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even small quantities leak into the ground.

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Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

SECTION 13: Disposal considerations

• 13.1 Waste treatment methods

• **Recommendation** Must not be disposed together with household garbage. Do not allow product to reach sewage system.

• Uncleaned packaging:

• Recommendation: Disposal must be made according to official regulations.

• Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

• 14.1 UN number or ID number

• ADR, IMDG, IATA

UN3487

• 14.2 UN proper shipping name

• ADR

3487 CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE, ENVIRONMENTALLY HAZARDOUS

• IMDG

CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE, MARINE POLLUTANT

• IATA

CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE

• 14.3 Transport hazard class(es)

• ADR



• Class

5.1 Oxidising substances.

• Label

5.1+8

• IMDG



• Class

5.1 Oxidising substances.

• Label

5.1/8

• IATA



• Class

5.1 Oxidising substances.

• Label

5.1 (8)

• 14.4 Packing group

• ADR, IMDG, IATA

II

• 14.5 Environmental hazards:

• Marine pollutant:

Yes

Symbol (fish and tree)

Symbol (fish and tree)

• Special marking (ADR):

Warning: Oxidising substances.

• 14.6 Special precautions for user

• Hazard identification number (Kemler code):

58

• EMS Number:

F-H,S-Q

• Segregation groups

(SGG8) Hypochlorites

• Stowage Category

D

• Stowage Code

SW1 Protected from sources of heat.

SW11 Cargo transport units shall be shaded from direct sunlight.

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- Packages in cargo transport units shall be stowed so as to allow for adequate air circulation throughout the cargo.
- Segregation Code
 - SG35 Stow "separated from" SGG1-acids
 - SG38 Stow "separated from" SGG2-ammonium compounds.
 - SG49 Stow "separated from" SGG6-cyanides
 - SG53 Shall not be stowed together with combustible material in the same cargo transport unit
 - SG60 Stow "separated from" SGG16-peroxides
- **14.7 Maritime transport in bulk according to IMO instruments**
 - Not applicable.
- **Transport/Additional information:**

 - ADR
 - Excepted quantities (EQ):
 - E2
 - Limited quantities (LQ)
 - 1 kg
 - Excepted quantities (EQ)
 - Code: E2
 - Maximum net quantity per inner packaging: 30 g
 - Maximum net quantity per outer packaging: 500 g
 - Transport category
 - 2
 - Tunnel restriction code
 - E

 - IMDG
 - Limited quantities (LQ)
 - 1 kg
 - Excepted quantities (EQ)
 - Code: E2
 - Maximum net quantity per inner packaging: 30 g
 - Maximum net quantity per outer packaging: 500 g
- **UN "Model Regulation":**
 - UN 3487 CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE, 5.1 (8), II, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**
- Regulated explosives precursors

 Substance is not listed.
- Regulated poisons

 Substance is not listed.
- Reportable explosives precursors

 Substance is not listed.
- Reportable poisons

 Substance is not listed.
- **Directive 2012/18/EU**
- Named dangerous substances - ANNEX I Substance is not listed.
- Seveso category
 - P8 OXIDISING LIQUIDS AND SOLIDS
 - E1 Hazardous to the Aquatic Environment
- Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Classification according to Regulation (EC) No 1272/2008
 - The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.
- **Abbreviations and acronyms:**
 - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 - ICAO: International Civil Aviation Organisation
 - ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

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IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Ox. Sol. 2: Oxidizing solids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

- * **Data compared to the previous version altered.**

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