

SAFETY DATA SHEET

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

1.1 Product identifier

Product Name: Shock/Cal HypoTablets
Datasheet Number: SDS 011
Chemical Name: Calcium hypochlorite
Active substance(s): Active chlorine released from calcium hypochlorite (64.3% active chlorine)
Synonyms: Hypochlorous acid, calcium salt
CAS No.: 7778-54-3
EC No.: 231-908-7
UFI: 2X00-F07W-C00V-P34H

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

Use of the substance/mixture: Pool / spa treatment; Biocide

Use descriptors (REACH)

Sectors of use	Description
LCS "PW"	Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
LCS "C"	Consumer uses: Private households (= general public = consumers)
Product category	Description
PC 8	Biocidal Products (e.g. Disinfectants, pest control)

Use advised against: No information available

1.3 Details of the supplier of the safety data sheet

Name of Supplier: Plastica Ltd
Address of Supplier: Perimeter House
Napier Road
St Leonards-on-Sea
East Sussex
United Kingdom
TN38 9NY
Telephone: +44 (0) 1424 857857
Email: info@plasticapools.net

1.4 Emergency telephone number

Emergency Telephone: 0800 043 0891 (technical)
0800 043 0892 (emergency)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]: Ox. Sol. 2, H272; Acute Tox. 4, H302; Skin Corr. 1B, H314; Aquatic Acute 1, H400; EUH031; EUH071

Additional information: For full text of Hazard and EU Hazard statements: see section 16

2.2 Label elements



Hazard statements

SECTION 2: Hazards identification (....)

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

P102 - Keep out of reach of children.
 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.
 P280 - Wear protective gloves/protective clothing/eye protection.
 P303+P361+P353+P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
 P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
 P501 - Dispose of contents/container to an authorised waste collection point

Supplemental Hazard information (EU)

EUH031 - Contact with acids liberates toxic gas.
 EUH071 - Corrosive to the respiratory tract
 Active substance(s): Calcium hypochlorite (99 g/100 g)

2.3 Other hazards

Not a PBT according to REACH Annex XIII
 Not a vPvB according to REACH Annex XIII
 Has not been identified as having endocrine disrupting properties

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical Name	Conc.	CAS No.	EC No.	Classification (REGULATION (EC) No 1272/2008) [CLP/GHS]	SCL/ M-Factor/ ATE	REACH Registration Number	WEL/ OEL
Calcium hypochlorite (64.3% active chlorine)	95 - 100 %	7778-54-3	231-908-7	Ox. Sol. 2, H272 Acute Tox. 4, H302 Skin Corr. 1B, H314 Aquatic Acute 1, H400 EUH031 EUH071	Eye Dam. 1 H318: 3 % ≤ C < 5 % Eye Irrit. 2 H319: 0,5 % < C < 3 % Skin Corr. 1B H314: C ≥ 5 % Skin Irrit. 2 H315: 1 % ≤ C < 5 % M=10	-	No

3.2 Mixtures

Not applicable

SECTION 4: First aid measures

4.1 Description of first aid measures

Rescuers should put on approved personal protective equipment (PPE) before administering first aid

SECTION 4: First aid measures (....)

Rescuers should take suitable precautions to avoid becoming casualties themselves

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

Contact with eyes

If substance has got into eyes, immediately wash out with plenty of water for several minutes
Irrigate eyes thoroughly whilst lifting eyelids
Remove contact lenses, if present and easy to do. Continue rinsing.
Get immediate medical advice/attention.

Contact with skin

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of soap and water
Contaminated clothing should be laundered before reuse
Get immediate medical advice/attention.

Ingestion

Rinse mouth with water (do not swallow)
Give plenty of water to drink
Do NOT induce vomiting.
Never give anything by mouth to an unconscious person
Get immediate medical advice/attention.

Inhalation

Remove victim to fresh air and keep warm and at rest in a position comfortable for breathing. Loosen clothing.
If unconscious, place person in recovery position
Get immediate medical advice/attention.

4.2 Most important symptoms and effects, both acute and delayed**Contact with eyes**

Causes redness and swelling
May cause severe damage with formation of corneal ulcers and permanent impairment of vision.

Contact with skin

May cause blistering of the skin
May cause severe burns with permanent skin damage which are slow to heal.

Ingestion

May cause burns to mouth and throat
May disturb the mucous membranes
May cause stomach pain
The ingestion of significant quantities may cause burning sensation

Inhalation

Corrosive to the respiratory tract.
Inhalation of decomposition products of calcium hypochlorite may cause lung oedema. The effects may be delayed.
May cause shortness of breath
May cause coughing

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; water fog; sand/earth

Unsuitable extinguishing media: Carbon dioxide; alcohol resistant foam; DO NOT USE dry extinguishers containing ammonium compounds such as dry powder.

5.2 Special hazards arising from the substance or mixture

May intensify fire; oxidiser.

Not combustible, but will contribute to the combustion of other materials. May cause violent, sometimes explosive reactions.

In a fire or if heated, a pressure increase will occur and the container may burst

Gives off irritating or toxic fumes (or gases) in a fire.

Decomposition products may include carbon oxides, oxygen, composed halogens, hypochlorous acid, chlorine, hydrogen chloride and specific metallic oxides

5.3 Advice for firefighters

Evacuate the area and keep personnel upwind

Keep container(s) exposed to fire cool, by spraying with water

Collect contaminated fire extinguishing water separately. This MUST not be discharged into drains. Prevent fire extinguishing water from contaminating surface or ground water.

Special protective equipment: Wear self-contained breathing apparatus (SCBA). Wear full protective clothing including chemical protection suit.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Rescuers should take suitable precautions to avoid becoming casualties themselves

Only trained and authorised personnel should carry out emergency response

Personal precautions for non-emergency personnel: Ensure adequate ventilation; Do not breathe dust/fume/gas/mist/vapours/spray; Wear protective clothing as per section 8; Wash thoroughly after handling.

Personal precautions for emergency responders: Evacuate the area and keep personnel upwind; Wear self-contained breathing apparatus (SCBA); Wear suitable protective clothing, eye/face protection and gloves.

6.2 Environmental precautions

Avoid release to the environment.

Do not allow to enter public sewers and watercourses

If contamination of drainage systems or water courses is unavoidable, immediately inform appropriate authorities

6.3 Methods and material for containment and cleaning up

Stop leak if safe to do so.

Avoid formation of dust

Collect as much as possible in clean container for reuse or disposal

Seal containers and label them

SECTION 6: Accidental release measures (....)

Remove contaminated material to safe location for subsequent disposal

Ventilate the area and wash spill site after material pick-up is complete

Seek expert advice for removal and disposal of all contaminated materials and wastes

6.4 Reference to other sections

See section(s): 7, 8 & 13

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Protect from moisture.

Do not add water to the product, always add the product to large quantities of water.

Do not mix with other chemicals

Use only in well ventilated areas

Do not breathe dust/fume/gas/mist/vapours/spray.

Avoid contact with skin and eyes

Wear goggles or safety glasses giving complete eye protection

Wear protective clothing as per section 8

Contaminated clothing should be laundered before reuse

Use good personal hygiene practices

Do not eat, drink or smoke when using this product.

Wash thoroughly after handling.

Ensure eyewash stations and safety showers are nearby

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry well-ventilated place. Keep container tightly closed.

Protect from moisture

Protect from sunlight.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep away from food, drink and animal feedingstuffs

Keep away from combustible material

Incompatible with strong acids, bases, reducing agents, alkali metals, metal powders, oxidizing materials and amines. Contact with metals can result in decomposition with the formation of oxygen.

7.3 Specific end use(s)

This product should only be used for applications quoted in section 1.2.

Always read the label or leaflet before use and follow all the instructions provided.

Respect the conditions of use of the product (concentration, contact time, temperature, pH, etc.).

Inform the registration holder if the treatment is ineffective.

Use descriptions

USE 2 - Swimming pool disinfection (public and private) by professional users: shock treatment against microorganisms.

SECTION 7: Handling and storage (....)

PT02 - Disinfectants and algacides not intended for direct application to humans or animals
(Disinfectants)
Bacteria/Virus
Indoor/Outdoor

The products are added to private/ public swimming pool as a shock treatment against micro-organisms. Pools that are not connected to sewage system are not covered.

Method: Pouring or injection by a dosing system

Application Rate: 10 mg/L

Dilution (%): -

Number and timing of application: Bacteria and virus: 10 mg/L of av Cl₂ in water (contact time of 10 minutes).

Shock treatment without dosing system:

Tablets: put directly into the skimmer with filtration running.

Use-specific risk mitigation measures

Application of this product is exclusively allowed in swimming pools with connection to STP (sewage treatment plant). It is not allowed to directly discharge swimming pool water to the surface water.

- Treatment must be made in absence of bathers for shock treatment.

- Do not allow entrance to the pool until the concentration decreases back to 1.4 mg/L of available chlorine for swimming pools or to national chlorine limit.

USE 3 - Swimming pool disinfection (public and private) by professional users: shock treatment against algae

PT02 - Disinfectants and algacides not intended for direct application to humans or animals
(Disinfectants)
Green algae
Indoor/Outdoor

The products are added to private/ public swimming pool as a shock treatment against green algae. The application rate of the product added to the swimming pool depends on the quality of water (e.g. depending on the turbidity). Pools that are not connected to sewage system are not covered.

Method: Pouring or injection by a dosing system

Application Rate: 10 – 15 mg/L

Dilution (%): 0

Number and timing of application: 10 – 15 mg/L of av Cl₂

Action delay: 48H

Recommendation for use:

- At 10 mg/L of av Cl₂ in water for moderate green water (104 CFU/mL)
- At 15 mg/L of av Cl₂ in water for very green water (105 CFU/mL)
- If the level of contamination and/or the organic load is/are unknown, the treatment could be performed in two steps: if a first dose of 10 mg/L is not sufficient to reach a visually satisfactory water within 48 h, a second dose of 5 mg/L could be added.

Shock treatment without dosing system:

Tablets: put directly into the skimmer with filtration running

Use-specific risk mitigation measures

Application of this product is exclusively allowed in swimming pools with connection to STP (sewage treatment plant). It is not allowed to directly discharge swimming pool water to the surface water.

- Treatment must be made in absence of bathers for shock treatment.

- Do not allow entrance to the pool until the concentration decreases back to 1.4 mg/L of available chlorine for swimming pools or to national chlorine limit.

USE 4 - Swimming pool disinfection (public and private) by professional users: continuous dosing

PT02 - Disinfectants and algacides not intended for direct application to humans or animals
(Disinfectants)
Bacteria/Virus/Green algae
Indoor/Outdoor

The products are added as continuous dosing into private/public swimming pools which are linked to sewage treatment plant system. Pools that are not connected to sewage system are not covered.

Method: Automatic dosing system or pouring or manual application

SECTION 7: Handling and storage (....)

Application Rate: 1.4 mg/L

Dilution (%): -

Number and timing of application:

- Bacteria, virus and algae at the application rate of 1.4 mg/L of av Cl₂ (without stabilising agent)

Use-specific instructions for use:

- Periodic treatment with tablet or granular feeder and dosing system:
 - Permanently maintain a rate of av Cl₂ at 1.4 mg/L.
 - Periodic treatment without dosing system:
- Tablets: put directly into the skimmer or other reservoir with filtration running

Use-specific risk mitigation measures

- Application of this product is exclusively allowed in swimming pools with connection to STP (sewage treatment plant). It is not allowed to directly discharge swimming pool water to the surface water.
- For application of solution of predissolved granules / tablets (manual application), wear protective chemical resistant gloves (glove material to be specified by the authorisation holder within the product information), coverall (material to be specified by the authorisation holder within the product information) and face shield.
- Treatment must be made in absence of bathers until complete dissolution of the product for direct application for maintenance treatment.

Instructions for use:

- Respect the conditions of use of the product (concentration, contact time, temperature, pH, etc.).
- Inform the registration holder if the treatment is ineffective.
- Always read the label or leaflet before use and follow all the instructions provided.
- The treatment should be performed at range pH 6.8-7.4
- The authorisation holder should give indications of application of the product (dilution, quantity to add to the pool, etc.) on the label in order to guarantee the efficacy of the product during its application.

Risk mitigation measures:

- Application of this product is exclusively allowed in swimming pools with connection to STP (sewage treatment plant). It is not allowed to directly discharge swimming pool water to the surface water.
- Granulated product/tablets: Use of a tool with a handle (like a scoop or plier) to transfer the product. This tool must be provided with the packaging and must not be in contact with the product (must not be stored inside the packaging). Decanting has to be avoided.
 - Wait for the complete dissolution of the product before working on the dosing system or the skimmer/reservoir
 - Wash hands after use
 - Avoid contact with skin and eyes.
 - Avoid splashes and spills during the M&L and application for product dissolved in a bucket.

USE 1 - Swimming pool disinfection (private): shock treatment against micro-organisms

PT02 - Disinfectants and algacides not intended for direct application to humans or animals (Disinfectants)

Bacteria/Virus

Indoor/Outdoor

The products are added to private swimming pool as a shock treatment against microorganisms. Pools that are not connected to sewage system are not covered.

Method: Pouring or injection by a dosing system

Application Rate: 10 mg/L

Dilution (%): -

Number and timing of application:

- Bacteria and virus: 10 mg/L of av Cl₂ in water (contact time of 10 minutes).

Use-specific instructions for use

Shock treatment without dosing system :

Tablets: put directly into the skimmer with filtration running.

Use-specific risk mitigation measures

- Treatment must be made in absence of bathers for shock treatment.
- Do not allow entrance to the pool until the concentration decreases back to 1.4 mg/L of available chlorine for swimming pools or to national chlorine limit.

USE 2 - Swimming pool disinfection (private): shock treatment against algae

SECTION 7: Handling and storage (....)

PT02 - Disinfectants and algacides not intended for direct application to humans or animals (Disinfectants)

Green algae
Indoor/Outdoor

The products are added to private swimming pool as a shock treatment against green algae. The application rate of the product added to the swimming pool depends on the quality of water (e.g. depending on the turbidity). Pools that are not connected to sewage system are not covered.

Method: Pouring or injection by a dosing system

Application Rate: 10 - 15 mg/L

Dilution (%): -

Number and timing of application: 10 - 15 mg/L of av Cl₂

Action delay: 48H

Use-specific instructions for use

- Recommendation of use:

- At 10mg/L of av Cl₂ in water for moderate green water (104 CFU/mL)
- At 15mg/L of av Cl₂ in water for very green water (105 CFU/mL)
- If the level of contamination and/or the organic load is/are unknown, the treatment could be performed in two steps: if a first dose of 10 mg/L is not sufficient to reach a visually satisfactory water within 48 h, a second dose of 5 mg/L could be added.

- Shock treatment without dosing system :

Tablets : put directly into the skimmer with filtration running

Use-specific risk mitigation measures

Treatment must be made in absence of bathers for shock treatment.

- Do not allow entrance to the pool until the concentration decreases back to 1.4mg/L of available chlorine for swimming pools or to national chlorine limit.

USE 3 - Swimming pool disinfection (private): continuous dosing

PT02 - Disinfectants and algacides not intended for direct application to humans or animals (Disinfectants)

The products are added as continuous dosing into private swimming pools which are linked to sewage treatment plant system. Pools that are not connected to sewage system are not covered.

Bacteria/Virus/Green algae

Indoor/Outdoor

Method: Automatic dosing system or pouring or manual application

Application Rate: 1.4 mg/L

Dilution (%): 0

Number and timing of application:

- Bacteria, virus and algae at the application rate of 1.4 mg/L of av Cl₂ (without stabilizing agent)

Use-specific instructions for use

Periodic treatment with tablet or granular feeder and dosing system :

- Permanently maintain a rate of av Cl₂ of 1.4 mg / L.

- Periodic treatment without dosing system :

Tablets: put directly into the skimmer or other reservoir with filtration running.

Use-specific risk mitigation measures

- Treatment must be made in absence of bathers until complete dissolution of the product for direct application for maintenance treatment.

Instructions for use

Comply with the instructions of use.

- Respect the conditions of use of the product (concentration, contact time, temperature, pH, etc.).

- Inform the registration holder if the treatment is ineffective.

- Read label before use

- The treatment should be performed at range pH 6.8-7.4

- The authorisation holder should give indications of application of the product (dilution, quantity to add to the pool, etc.) on the label in order to guarantee the efficacy of the product during its application.

Risk mitigation measures

Application of this product is exclusively allowed in swimming pools with connection to a STP. It is not allowed to directly discharge swimming pool water to the surface water.

SECTION 7: Handling and storage (....)

- Granulated product / tablets: Use of a tool with a handle (like a scoop or plier) to transfer the product. This tool must be provided with the packaging and must not be in contact with the product (must not be stored inside the packaging). Decanting has to be avoided.
- Wait the complete dissolution of the product before working on the dosing system or the skimmer / reservoir
- Wash hands after use
- Avoid contact with skin and eyes.
- Avoid splashes and spills during the M&L (mixing and loading) and application for product dissolved in a bucket.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters**

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace exposure - Measurement of exposure by inhalation to chemical agents - Strategy for testing compliance with occupational exposure limit values). European Standard EN 14042 (Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents). European Standard EN 482 (Workplace exposure. General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

The UK HSE (EH40) recommends the following limits for dusts: 10 mg/m³ (8hr TWA) total inhalable dust; 4 mg/m³ (8hr TWA) total respirable dust

Calcium hypochlorite

(As chlorine)

(EU) IOELV (short term limit value) 0.5 ppm 1.5 mg/m³

WEL (short term limit value) 0.5 ppm 1.5 mg/m³ (UK)

8.2 Exposure controls

Selection and use of personal protective equipment should be based on a risk assessment of exposure potential

General measures

Use only CE marked protective equipment.

Wear protective chemical resistant gloves (glove material to be specified by the authorisation holder within the product information), coverall (material to be specified by the authorisation holder within the product information) and eye protection during mixing and loading task (packaging higher than 10kg) and post-application task (maintenance, contact with solid).

Wear RPE at minima APF 20 (type to be specified by the authorisation holder within the product information) during manipulation of the product for the mixing and loading task (packaging higher than 10kg) (user and bystander).

No PPE is needed for mixing and loading task (packaging bellow or equal to 10kg) with a tool (scoop or similar). This tool must have a handle and must not be in contact to the product (must not be stored inside the packaging).

Decanting has to be avoided. Wash hands after use and avoid contact with skin and eyes.

General public should not be present during mixing and loading task.

Engineering controls

Engineering controls should be provided which maintain airborne concentrations below the relevant guidelines

SECTION 8: Exposure controls/personal protection (....)**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment

Where an air-purifying half-mask respirator is suitable, use EN 143 type SL, P3, white

Where breathing apparatus with a compressor and mask-hood is needed, use EN 12941, EN 12942

Skin protection

Wear suitable protective clothing

Wear protective gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and standard EN 374.

The selection of a suitable glove depends on work conditions and whether the product is present on its own or in combination with other substances. Breakthrough time is dependent on the characteristics of the brand of glove used and the supplier should be consulted.

Glove material: 4H

Thickness: 0.068 - 0.084 mm

Breakthrough time: > 480 min

Reference: Supplier

Eye/face protection

Wear safety glasses approved to standard EN 166.

When handling this substance, e.g. diluting, wear goggles giving complete eye protection

Hygiene measures

Do not eat, drink or smoke when using this product.

Use good personal hygiene practices

Wash thoroughly after handling.

Contaminated clothing should be laundered before reuse

Contaminated work clothing should not be allowed out of the workplace.

Ensure eyewash stations and safety showers are nearby

Thermal hazards

Not applicable

Environmental exposure controls

Collect spillage.

Do not empty into drains

Do not allow to penetrate the ground/soil.



SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Physical state: Solid, tablets

Colour: White

Odour: Smells of chlorine
Odour threshold 1 - 3 ppm (value for chlorine)

Melting point/freezing point: 180 °C

Boiling point or initial boiling point and boiling range: Not applicable

Flammability: Not combustible, but will contribute to the combustion of other materials. May cause violent, sometimes explosive reactions.

SECTION 9: Physical and chemical properties (....)

Lower and upper explosion limit: Not applicable
Flash point: Not applicable
Auto-ignition temperature: Not applicable
Decomposition temperature: 180 °C
pH: 9.4
Kinematic viscosity: Not applicable
Solubility: 200 g/L @ 20°C
Partition coefficient n-octanol/water (log value): No data available
Vapour pressure: Not applicable
Density and/or relative density: 2.00 (20 °C) (Water = 1)
Relative vapour density: Not applicable
Particle characteristics: Not applicable

9.2 Other information

Self-Accelerating Decomposition Temperature (SADT): 175 °C
Oxidising properties: Category 2 (oxidising solids) based on GHS criteria

SECTION 10: Stability and reactivity**10.1 Reactivity**

May intensify fire; oxidiser.
Warning! Do not use with other products. May release dangerous gases (chlorine)
Contact with acids liberates toxic gas.
Reacts violently with alkali metals, metal powders, oxidizing materials and amines

10.2 Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".
May decompose on exposure to heat and light
May decompose on exposure to air and moisture
Decomposition may lead to spontaneous ignition through self- heating

10.3 Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.
Hazardous polymerisation will not occur, however this product is a highly reactive oxidising chlorine compound.
May cause fire or explosion.
Readily ignites with flammable and combustible materials, in contact with anhydrous (dry) calcium hypochlorite.
Reacts with ammonia, primary amines, aromatic amines, and urea to form explosive nitrogen trichloride.
May explode upon contact with ethanol or methanol, due to the formation of the alkyl hypochlorites.
Contact with hydroxy compounds causes ignition and may be explosive.
Contact with acetylene may lead to formation of explosive chloroacetylenes.
Reaction with acetic acid and potassium cyanide may be explosive.
Reaction with reducing agents causes a violent reaction.
Reaction with metal oxides can cause a violent oxygen-evolving decomposition of hypochlorites.
A confined intimate mixture of calcium hypochlorite + finely divided charcoal exploded on heating.
Metals catalyze the decomposition.
Reaction with organic sulfur compounds may cause a flash fire/explosion. A mixture of damp sulfur and 'solid swimming pool chlorine' caused a violent exothermic reaction.
May explode with turpentine.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

SECTION 10: Stability and reactivity (....)

Keep away from direct sunlight

Avoid formation of dust

Avoid contact with moisture

10.5 Incompatible materials

Incompatible with flammable, organic and combustible materials, ammonia, primary amines, aromatic amines, and urea acids, ammonium chloride, different types of chlorinating chemicals, ethanol or methanol, hydroxy compounds, acetylene, acetic acid and potassium cyanide, reducing agents, metal oxides, charcoal + heat, metals, organic sulfur, compounds, sulfur (damp), turpentine and all sources of ignition.

10.6 Hazardous decomposition products

Decomposition products may include carbon oxides, oxygen, composed halogens, hypochlorous acid, chlorine, hydrogen chloride and specific metallic oxides

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute Toxicity**

Harmful if swallowed

Substances

Chemical Name	LD ₅₀ (oral, rat)	LC ₅₀ (inhalation, rat)	LD ₅₀ (dermal, rabbit)
Calcium hypochlorite	850 mg/kg	No data available	> 2000 mg/kg

Skin corrosion/irritation

Causes severe skin burns

Substances

Chemical Name	Irritation/corrosion
Calcium hypochlorite	Adverse effect observed (corrosive)

Serious eye damage/irritation

Causes serious eye damage.

Substances

Chemical Name	Irritation/corrosion
Calcium hypochlorite	Adverse effect observed (irreversible damage)

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met

Substances

Chemical Name	Skin sensitisation	Respiratory sensitisation
Calcium hypochlorite	No data available	No data available

Germ cell mutagenicity

Based on available data, the classification criteria are not met

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SECTION 11: Toxicological information (....)

Substances

Chemical Name	Toxicity - In Vitro	Toxicity - In Vivo
Calcium hypochlorite	No data available	No data available

Carcinogenicity

Based on available data, the classification criteria are not met

Substances

Chemical Name	NOAEL (oral, rat)	NOAEC (inhalation, rat)	NOAEL (dermal, rat)
Calcium hypochlorite	No data available	No data available	No data available

Reproductive toxicity

Based on available data, the classification criteria are not met

Substances

Chemical Name	NOAEL (oral, rat)	NOAEC (inhalation, rat)	NOAEL (dermal, rat)
Calcium hypochlorite	No data available	No data available	No data available

Specific target organ toxicity (STOT) - single exposure

Based on available data, the classification criteria are not met

Substances

Chemical Name	Route	Remarks
Calcium hypochlorite	Respiratory	No data available

Specific target organ toxicity (STOT) - repeated exposure

Based on available data, the classification criteria are not met

Substances

Chemical Name	NOAEL (oral, rat)	NOAEC (inhalation, rat)	NOAEL (dermal, rat)
Calcium hypochlorite	No data available	No data available	No data available

Aspiration hazard

Based on available data, the classification criteria are not met

Contact with eyes

Causes redness and swelling

May cause severe damage with formation of corneal ulcers and permanent impairment of vision.

Contact with skin

May cause severe burns with permanent skin damage which are slow to heal.

May cause blistering of the skin

Ingestion

May cause burns to mouth and throat

May disturb the mucous membranes

May cause stomach pain

The ingestion of significant quantities may cause burning sensation

Inhalation

Corrosive to the respiratory tract.

Inhalation of decomposition products of calcium hypochlorite may cause lung oedema. The effects

SECTION 11: Toxicological information (....)

may be delayed.
May cause shortness of breath
May cause coughing

11.2 Information on other hazards

Does not contain any substances with endocrine disrupting properties

SECTION 12: Ecological information**12.1 Toxicity**

Very toxic to aquatic life.

Substances

Chemical Name	LC ₅₀ (fish)	EC ₅₀ (aquatic invertebrates)	EC ₅₀ (aquatic algae)
Calcium hypochlorite	(4 days) 0.049 - 0.16 mg/L (static) (4 days) 0.4 mg/L (flow-through)	(48 h) 0.067 mg/L	IC50 (72 h) 2mg/L

12.2 Persistence and degradability

Calcium hypochlorite is an inorganic substance which rapidly decomposes when in contact with water and light

Substances

Chemical Name	Biodegradation
Calcium hypochlorite	Not applicable, inorganic

12.3 Bioaccumulative potential**Substances**

Chemical Name	Bioconcentration Factor (BCF)	Log Kow
Calcium hypochlorite	Bioaccumulation is not expected	No data available

12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility

Large volumes may penetrate soil and contaminate groundwater

Chemical Name	Adsorption/desorption
Calcium hypochlorite	No data available

12.5 Results of PBT and vPvB assessment

Not a PBT according to REACH Annex XIII

Not a vPvB according to REACH Annex XIII

12.6 Endocrine disrupting properties

Has not been identified as having endocrine disrupting properties

12.7 Other adverse effects

Do not empty into drains

SECTION 13: Disposal considerations

SECTION 13: Disposal considerations (....)**13.1 Waste treatment methods**

Disposal should be in accordance with local, state or national legislation

Do not discharge into drains or the environment, dispose to an authorised waste collection point

Do not reuse empty containers without commercial cleaning or reconditioning

13.2 Classification

The waste must be identified according to the List of Wastes (2000/532/EC)

Hazardous Property Code(s): HP 2 Oxidising; HP 6 Acute Toxicity; HP 8 Corrosive; HP 12 Produces Toxic gases in contact with water, air or acid; HP 14 Ecotoxic

SECTION 14: Transport information**14.1 UN number or ID number**

UN No.: 3487

14.2 UN proper shipping name

Proper Shipping Name: CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE

14.3 Transport hazard class(es)

Hazard Class: 5.1 (8)

14.4 Packing group

Packing Group: II

14.5 Environmental hazards

MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS

14.6 Special precautions for user

Keep away from heat and direct sunlight.

Ensure adequate ventilation

14.7 Maritime transport in bulk according to IMO instruments

Not applicable

14.8 Road/Rail (ADR/RID)

ADR UN No.: 3487

Proper Shipping Name: CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE

ADR Hazard Class: 5.1 (8)

ADR Packing Group: II

Tunnel Code: (E)

14.9 Sea (IMDG)

IMDG UN No.: 3487

Proper Shipping Name: CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE

IMDG Hazard Class: 5.1 (8)

IMDG Packing Group: II

SECTION 14: Transport information (....)

14.10 Air (ICAO/IATA)

ICAO UN No.: 3487
Proper Shipping Name: CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE
ICAO Hazard Class: 5.1 (8)
ICAO Packing Group: II

SECTION 15: Regulatory information

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

This safety data sheet is provided in compliance with REACH Regulation (EC) No 1907/2006 (as amended by Regulation (EU) 2020/878) and UK REACH

The GB Classification, Labelling and Packaging Regulation (GB CLP) applies in Great Britain

Regulation (EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) applies in Europe

This product is covered by the GB Biocidal Products Regulation (GB BPR)

PT02 - Disinfectants and algaecides not intended for direct application to humans or animals

This product is covered by EU Directive 2012/18/EU (the Seveso III Directive):

P8 - OXIDISING LIQUIDS AND SOLIDS, Qualifying quantity (lower-tier): 50 tonnes / (upper-tier): 200 te

E1 - ENVIRONMENTAL HAZARDS, Qualifying quantity (lower-tier): 100 te / (upper-tier): 200 te

15.2 Chemical safety assessment

A REACH chemical safety assessment has not been carried out

SECTION 16: Other information

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of PLASTICA'S limited knowledge and belief, accurate, and reliable as of the date of authorisation of this safety data sheet. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to be satisfied as to the suitability and completeness of such information for the product as used.

Sources of data: Information from published literature and supplier safety data sheets

Revision No. 2.0.0. Revised February 2024.

Changes made: Updated to conform to latest version of REACH

Training advice

Workers must be informed of the presence of hazardous ingredients and trained in the proper use and handling of this product as required under applicable regulations

Text not given with phrase codes where they are used elsewhere in this safety data sheet:

H272: May intensify fire; oxidizer

H314: Causes severe skin burns and eye damage

H318: Causes serious eye damage

H400: Very toxic to aquatic life

EUH031: Contact with acids liberates toxic gas

EUH071: Corrosive to the respiratory tract

SECTION 16: Other information (....)

Acronyms

ATE: Acute Toxicity Estimate

CAS: Chemical Abstracts Service

DNEL: Derived No-Effect Level

EC: European Community

EC₅₀: Effective Concentration, 50%

GHS: Globally Harmonised System

IOELV: Indicative Occupational Exposure Limit Value

LC₅₀: Lethal Concentration, 50%LD₅₀: Lethal Dose, 50%

NOAEC: No Observed Adverse Effect Concentration

NOAEL: No Observed Adverse Effect Level

OEL: Occupational Exposure Limit

PBT: Persistent, Bioaccumulative and Toxic

PNEC: Predicted No-Effect Concentration

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals

SCL: Specific Concentration Limit

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

WEL: Workplace Exposure Limit