

# Safety Data Sheet

## 1. IDENTIFICATION

### Calcium Hypochlorite

**Use:** Algicide, bactericide, deodorant, potable water purification, disinfectant for swimming pools, fungicide, bleaching agent (paper, textiles).  
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Emergency Information

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## 2. HAZARD(s) IDENTIFICATION

**GHS Classification:** GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)  
Oxidizing solids (Category 2), H272  
Acute toxicity, Oral (Category 4), H302  
Skin corrosion (Category 1B), H314  
Serious eye damage (Category 1), H318  
Acute aquatic toxicity (Category 1), H400  
Chronic aquatic toxicity (Category 1), H410

**Label Element:**



**Signal Word:** **Danger**

**Hazard Statement:** May intensify fire; oxidizer.  
Harmful if swallowed.  
Causes severe skin burns and eye damage.

May cause respiratory irritation.  
Very toxic to aquatic life with long lasting effects.

**Precautionary Statements**

- **Prevention:** Keep away from heat. Keep/Store away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Use only outdoors or in a well-ventilated area. Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product. Avoid release to the environment
- **Response:** In case of fire: Use water for extinction. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. If exposed: Call a poison center/doctor. Collect spillage.
- **Storage:** Store locked up. Store in a well-ventilated place. Keep container tightly closed.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Entity	CAS Number	Percentage (%)
Calcium Hypochlorite	7778-54-3	>70.0
Sodium Chloride	7647-14-5	<15.0
Calcium Dichloride	10043-52-4	<6.0
Water	7732-18-5	<10.0
Calcium Dihydroxide	1305-62-0	<6.0
Calcium Carbonate	471-34-1	<4.0
<b>Note:</b> Available Chlorine		≥ 70.0
Granular Size		≥ 90.0%
Water Insoluble		< 5.0

**4. FIRST-AID MEASURES**

- Eyes:** Immediately flush with plenty of lukewarm water for up to 20 minutes. Remove any contact lenses and open eyelids wide apart. Continue rinsing. Take care not to raise contaminated water into affected eye. Get medical attention immediately.

- Skin:** Take off immediately all contaminated clothing. Immediately flush skin with plenty of water. Wash contaminated clothing before reuse.
- Ingestion:** Never give anything by mouth if victim is rapidly losing consciousness, or if unconscious or convulsing. Have victim rinse mouth thorough with water. Have victim drink one cup (240-300ml 8-10 oz) to dilute material in stomach. Do not induce vomiting. If vomiting occurs naturally, rinse mouth and repeat administration of water. If breathing has stopped, trained personnel should begin artificial respiration or, if the heart has stopped cardiopulmonary resuscitation (CPR) immediately. Get medical attention immediately.
- Inhalation:** Remove source of contamination or move victim to fresh air. If breathing has stopped, trained personnel should begin artificial respiration or, if the heart has stopped start CPR (cardiopulmonary resuscitation). Get medical attention immediately.

## 5. FIRE-FIGHTING MEASURES

- Extinguishing Media:** Dry chemical
- Exposure Hazard:** Does not occur
- Protective Equipment:** Wear full protective clothing and self-contained breathing apparatus exposed to vapors or products of combustion.
- Advice for Firefighters:** In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

## 6. ACCIDENTAL RELEASE MEASURES

- Personal Precaution:** Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
- Environmental Precaution:** Cover the drains to prevent the product from entering the environment. If product contaminates rivers and lakes or drains inform respective authorities.
- Clean up Methods:** Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations. Do not flush with water. Keep in suitable, closed containers for disposal.

## 7. HANDLING and STORAGE

- Handling:** Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The

potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition – “No Smoking”. Keep away from heat and sources of ignition.

**Storage:** Keep container tightly closed in a dry and well-ventilated place. May corrode metallic surfaces. Store in a metallic or coated fiberboard drum using a strong polyethylene inner package. Corrosive materials should be stored in a separate safety storage cabinet or room.

**Incompatible Material:** Never allow product to get in contact with water during storage. Do not store near acids.

## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

- Personal Protection:** Avoid contact, wear gloves, safety boots, safety glasses and overalls
- Respiratory Protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)
- Eye Protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)
- Skin Protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
- Other Personal Protection Data:** Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- Hygiene Measures:** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL and CHEMICAL PROPERTIES

- Physical State: Solid granules
- Appearance: White, free flowing granules with a strong chlorine odor.
- Odor threshold: Not available.
- pH: 11.5 (5% Solution)

Specific gravity:	2.050 – 2.20 @ 20°C (Water = 1@4 °C)
Melting point/freezing point:	Decomposes at temperature above 150°C
Boiling point:	Not available
Vapor Pressure:	Not available
Vapor Density:	Not available
Evaporation Rate:	Not available

## 10. STABILITY and REACTIVITY

<b>Conditions to Avoid:</b>	Heat, heated surfaces, static electricity, electric arcs, sparks and flames.
<b>Materials to Avoid:</b>	Inorganic acids, organic mixtures. Avoid contact with strong reducing agents, which include hydrogen, hydrazine, sulfides, sulfites, and nitrites. Product is an oxidizer. It may react vigorously with organics or other materials resulting in an explosion and fire.
<b>Hazardous Decomposition:</b>	Acid or Ammonia combination will release toxic gases. Excessive heat results in release of Oxygen and Chlorine gas.

Calcium Hypochlorite is a strong oxidizing agent. Mix only into water contamination of the product may result in chemical reaction with generation of heat, liberation of hazardous gases and possible fire and explosion.

## 11. TOXICOLOGICAL INFORMATION

<b>Local effects:</b>	When contacted with skin and eyes, causes severe caustic burns. If inhaled the corrosive substances can lead to a toxic edema of lungs. Symptoms may be delayed causes throat pain and cough. Ingestion causes burns of the upper digestive and respiratory tracts if swallowed.
<b>Acute Inhalation LC50:</b>	(rat) no mortality at 3.5 mg/l (1 hour). Slight to very low toxicity
<b>Acute Dermal LD50:</b>	(rabbit) >1000 mg/kg. Slight to very low toxicity
<b>Acute Oral LD50:</b>	(rat) 850 mg/kg. Slight to very low toxicity
<b>Carcinogenicity Toxicity:</b>	Not available.
<b>Reproductive Toxicity:</b>	Not available.
<b>Mutagenicity:</b>	Not available

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity LC50:</b>	0.088mg/L/96hr bluegill sunfish – very toxic to aquatic organisms. Make sure not to allow the material contaminate the ground water system.
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**Environmental fate:**

**Mobility:** Soluble.  
**Biodegradation:** Not available.  
**Bioaccumulation:** Not available.

**Physical / Chemical:**

**Hydrolysis:** Not available.  
**Photolysis:** Not available.  
**Additional information:** Not available.

### 13. DISPOSAL CONSIDERATION

**Disposal of wastes:** Consult appropriate Federal, State/Provincial and local regulatory authorities to ascertain proper disposal procedures. Care should be taken not to mix waste Calcium Hypochlorite with incompatible material. Calcium Hypochlorite should be dissolved in water and the available chlorine should be treated using a reducing agent such as Sodium Sulfite.

**Contaminated Packaging:** Since empty containers retain product residue, follow label warnings even after container is emptied.

**Clean up:** Do not touch spilled material. Prevent material from entering sewers or confined place. Shovel into clean, dry, labeled containers. Flush area with water. Contaminated materials may be dissolved in water, then treated with a reducing agent such as sodium sulfite. Care should be taken while handling contaminated material due to fire risk.

### 14. TRANSPORT INFORMATION

DOT (Department of Transportation)  
Proper Shipping Name: Calcium Hypochlorite Hydrated  
Hazard Class: 5.1  
UN/NA Number: UN2880  
Packaging Group: II  
Label Requirements: Oxidizer  
Reportable Quantity (RQ): None

### 15. REGULATORY INFORMATION

EC Labeling Requirements: The product is classified and labeled in accordance with EC directives or respective national laws.

**Contains: Calcium Hypochlorite (231-908-7)**

**R8** – Contact with combustible material may cause fire.

**R22** – Harmful if swallowed

**R31** – Contact with acids liberates toxic gas

**R34** – Causes burns

**R50** – Very toxic to aquatic organisms

#### Safety Phrases:

**S26** – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**S45** – In case of accident or if you feel unwell, seek medical advice immediately

**S61** – Avoid release to the environment. Refer to special instructions.

**S36/37/39** – Wear suitable protective clothing, gloves, and eye/face protection.

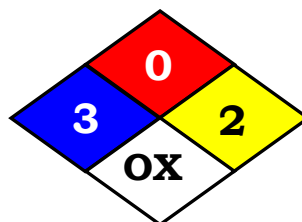
**S ½** – Keep locked-up and out of the reach of children

## 16. OTHER INFORMATION

#### HMIS

<b>HEALTH</b>	<b>3</b>
<b>FLAMMABILITY</b>	<b>0</b>
<b>REACTIVITY</b>	<b>2</b>
<b>PERSONAL PROTECTION</b>	<b>X</b>

#### NFPA



Other Information:

UL Drinking Water Treatment Chemicals Listing- calcium hypochlorite is certified for maximum use at 13mg/L under ANSI/NSF Standard 60.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.