



SAFETY DATA SHEET

CALCIUM HYPOCHLORITE

Active chlorine 26.2% - 32.3%

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. PRODUCT IDENTIFIER

Product name: Calcium Hypochlorite

Product No.: CA

CAS-No.: 7778-54-3

Index No.: 017-012-00-7

EC No.: 231-908-7

Synonym: Hypochlorous acid, Calcium salt, Bleaching powder, Calcium oxychloride, Chloride of lime

Chemical Formula: $\text{Ca}(\text{OCI})_2$

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Recommended use: For the disinfection of drinking water or swimming pool water;
For bleaching cotton and linen and is used in the manufacture of chloroform;
As a bathroom cleaner;
For cleaning secondhand items;
Adds glow to glass dishware;
As a household disinfectant spray;
It remove moss and algae from paths, patios and driveways;
Use to sanitize garden to ols;
Kills weeds in walkways;
Preserves and keeps cut flowers fresk;
To clean garden furniture.

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

HD Chemicals LTD
UNIT 9 Scott Business Park
PL2 2PB Plymouth UK
contact@hdchemicals.co.uk

SECTION 2: HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification 67/548/EEC:	O; R8, C; R34, Xn; R22, R31, N; R50
Classification – EC 1272/2008:	Oxidizing solids; Category 2 (H272)
	Acute toxicity, Oral; Category 4 (H302)
	Skin Corrosion/irritation; Category 1C (H314)
	Aquatic Acute; Category 1 (H400)

2.2. LABEL ELEMENTS



SIGNAL WORDS

Danger

RISK PHRASES

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

HAZARD PHRASES

H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H400	Very toxic to aquatic life

**PROTECTION PHRASES**

P220	Keep/Store away from clothing/combustible materials
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection
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/ physician

SAFETY PHRASES

S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
S61	Avoid release to the environment. Refer to special instructions/safety data sheets

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

67/548/EEC/1999/45/EC

Composition information – main constituents

Substance name	Mol. Formula	Index No.	Typical conc. (%w/w)	EINECS No.	CAS-No.	Classification
Calcium Hypochlorite	Ca(OCl) ₂	017-012-00-7	Active chlorine 26.2% - 32.3%	231-908-7	7778-54-3	O; R8, C; R34, Xn; R22, R31, N; R50

EC 1272/2008

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Calcium Hypochlorite	Ca(OCl) ₂	017-012-00-7	Active chlorine 26.2% - 32.3%	231-908-7	7778-54-3	H272, H302, H314, H400



SECTION 4: FIRST AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES

First-aid measures general: Consult a physician when you feel unwell. Show this safety data sheet to the doctor in attendance.

Inhalation: Harmful by inhalation. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention.

Ingestion: DO NOT INDUCE VOMITING. If swallowed, seek medical advice immediately and show this container or label. Wash out mouth with water.

Skin contact: May cause irritation to skin. May cause dermatitis. Wash off immediately with plenty of soap and water. Remove contaminated clothing and shoes. Seek medical attention if irritation or symptoms persist.

Eye contact: May cause irritation to eyes. Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Inhalation: Irritating to respiratory system. Cough, shortness of breath.

Ingestion: May cause chemical burns in mouth, oesophagus and stomach. May cause stomach pain, nausea, vomiting or respiratory collapse.

Skin contact: May cause chemical skin burns, redness.

Eye contact: Severe irritation, burning, tearing and redness. May cause chemical eye burns.

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

In Calcium Hypochlorite gives off oxygen intensifying fire hazard also produces toxic gas.

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray, carbon dioxide (CO₂).

Unsuitable extinguishing media: Dry powder.



5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Keep away from combustible material. In case of fire hazardous decomposition products may be produced such as: chlorine, hydrogen chloride, carbon monoxide (CO), carbon dioxide (CO₂).

5.3. ADVICE FOR FIRE-FIGHTERS

Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode. Wear appropriate clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Wear suitable protective equipment. Splash goggles, protective suit, boots and gloves to prevent any contamination of skin, eyes and personal clothing. Select appropriate protective clothing for the size of the spillage. Ensure adequate ventilation of the working area. Avoid contact with skin and eyes. Avoid formation of dust. Do not breathe dust.

6.2. ENVIRONMENTAL PRECAUTIONS

Do not allow product to reach ground water, water course or sewage system. Must not reach sewage water or drainage ditch undiluted or unneutralized. May cause long term adverse effects in the aquatic environment. Prevent further leakage or spillage if safe to do so. If spillage of contamination of water courses, drains or vegetation, inform relevant authorities.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Cover with dry lime, sand or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after materials pickup is complete. Disposal according to local regulations (see section 13).

SECTION 7: HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Keep in a cool, dry, well ventilated area. Keep containers tightly closed. Keep away from foodstuff. Keep away from combustible materials, heat, sparks, open flame and direct sunlight. Prevent ingress of moisture into container or package. Keep away from acid and reducing agents.

7.3. SPECIFIC END USE(S)

See section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS/EXPOSURE GUIDELINES

Occupational Exposure Limit Values (Calcium Hypochlorite) GB:

CAS NO	Exposure limit	Value	Name of Agent
7778-54-3	TWA – 8 Hrs	No data available	No data available
7778-54-3	STEL – 15 Min	No data available	No data available

Engineering controls: Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before breaks and at the end of the working day.

Protective equipment: Wear appropriate protective goggles, gloves and clothing to prevent skin and eyes exposure.



PROTECTION WEAR



HAND PROTECTION



RESPIRATOR



EYE PROTECTION



DUST MASK



Respiratory equipment:	Wear dust mask. In case of insufficient ventilation, wear suitable respiratory equipment; Respirator with a dust filter. Particle filter: P2.
Skin and body protection:	Wear protective gloves (rubber or PVC) and clothing. Chemical protection gloves are suitable, which are tested according to EN 374.
Eye/Face protection:	Use safety goggles giving complete eye protection. Emergency eyewash bottle.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Powder
Colour:	White or white/grey
Odour:	Odour of chlorine
Initial boiling point (°C):	Not available
Melting point (°C):	100 °C
Freezing point:	No data available
Relative density:	2.35 g/cm ³
Specific gravity / density:	Not available
Vapour density:	Not available
Vapour pressure:	Not available
Flash point (°C):	Not applicable
Molecular mass:	142.98 g/mol
Auto-ignition temperature:	Not applicable
Oxidizing properties:	Not applicable
Decomposition temperature:	Not available
Molecular formula:	Ca(OCl) ₂

SECTION 10: STABILITY AND REACTIVITY

10.1. REACTIVITY

Calcium Hypochlorite is not reactive under normal ambient conditions.



10.2. CHEMICAL STABILITY

This product is stable under normal temperature conditions and under recommended usage and storage.

10.3. POSSIBILITY OF HAZARDOUS REACTIONS

Contact with acids liberates toxic gas. Exothermic reaction on heating. May develop chlorine if mixed with acidic solutions.

10.4. CONDITIONS TO AVOID

Keep away from combustible materials, heat, sparks, open flame and direct sunlight. Prevent ingress of moisture into container or package.

10.5. INCOMPATIBLE MATERIALS

Avoid strong acids, oxidising substances, nitrogen containing compounds, dry powder extinguishers, water. Avoid corrosive, flammable or combustible materials, strong alkalis, alcohols, glycols, amines, ammonia, metal oxides. Reacts with acids to produce free chlorine.

10.6. HAZARDOUS DECOMPOSITION

Decomposition products may include acidic and toxic gases, oxygen, chlorine or/and carbon oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

TOXIC DOSE	LD50 Oral – Rat – 850 mg/kg LD50 Dermal – Rabbit – > 2000 mg/kg
Inhalation:	Irritating to respiratory system. Cough, shortness of breath.
Ingestion:	May cause chemical burns in mouth, oesophagus and stomach. May cause stomach pain, nausea, vomiting or respiratory collapse.
Skin contact:	May cause chemical skin burns, redness.
Eye contact:	Severe irritation, burning, tearing and redness. May cause chemical eye burns.



SECTION 12: ECOLOGICAL INFORMATION

12.1. TOXICITY

Aquatic Toxicity: LC50/96h: Bluegill sunfish, 0.88 mg/l
LC50/96h: Rainbow trout, 0.16 mg/l
EC50/48h: Daphnia magna, 0.116 mg/l

Very toxic to aquatic organisms.

12.2. PERSISTENCE AND DEGRADABILITY

The product solely consists of inorganic compounds which are not biodegradable.

12.3. BIOACCUMULATIVE POTENTIAL

No data available on bioaccumulation.

12.4. MOBILITY

Calcium Hypochlorite is poorly absorbed onto soils or sediments. Large volumes may penetrate soil and contaminate groundwater.

12.5. RESULTS OF PBT AND vPvB ASSESSMENT

This product is not identified as a PBT/vPvB substance.

12.6. OTHER ADVERSE EFFECTS

Do not allow product to reach ground water, water course or sewage system. Must not reach sewage water or drainage ditch undiluted or unneutralized. Danger to drinking water if even extremely small quantities leak into the ground. May cause long term adverse effects in the aquatic environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal recommendations: Waste is classified as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Do not puncture or incinerate, even when containers are empty. Can be recycled after thorough and proper cleaning. Dispose in accordance with federal and/or local regulations. Do not let product enter drains.

Uncleaned packaging: Disposal must be made according to official regulations.



SECTION 14: TRANSPORT INFORMATION

IMDG

UN number	2208
UN proper shipping name	Calcium hypochlorite mixtures, dry, with more than 10 percent but not more than 39 percent available chlorine
Transport hazard class(es)	5.1
Packing group	III

ADR/RID

UN number	2208
UN proper shipping name	Calcium hypochlorite mixtures, dry, with more than 10 percent but not more than 39 percent available chlorine
Transport hazard class(es)	5.1
Packing group	III

IATA

UN number	2208
UN proper shipping name	Calcium hypochlorite mixtures, dry, with more than 10 percent but not more than 39 percent available chlorine
Transport hazard class(es)	5.1
Packing group	III

SECTION 15: REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

EU legislation: Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

15.2 CHEMICAL SAFETY ASSESSMENT

No chemical safety assessment has been carried out.



SECTION 16: OTHER INFORMATION

General information

The information contained in this safety data sheet is provided in accordance with the requirements of the regulations. The product should not be used for purposes other than those shown in section 1 without first referring to the supplier and obtaining written handling instruction. As the specific conditions of use of the product are outside the suppliers control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

Revision Comments

This information is provided in a revised format to that previously produced.

Revision Date: 01/10/2018

Revision: 01

Safety Data Sheet Status Approved.

Date printed 01/10/2018

DISCLAIMER:

If this product is re-distributed and re-formulated for sale, details of its hazards and recommended methods for safe handling must be passed to customers. Customers are urged to ensure that the product is entirely suitable for their own purpose. It is the customer's responsibility to ensure that a suitable and sufficient assessment of the risks created by a work activity using this product is undertaken before this product is used.

NOTE:

The information contained in this Safety Data Sheet does not constitute the users own assessment of workplace risk as required by other Health & Safety Legislation (e.g. the Health and Safety at Work Act, 1974; the Control of Substances Hazardous to Health Regulations, 1988). The data given here is based on current knowledge and experience. The purpose of this data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the product's properties.