

Safety Data Sheet



Hazardous Chemical, Dangerous Goods

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: **CALCIUM HYPOCHLORITE**

Synonyms

Bleaching Powder; Calcium Hypochlorite; Calcium Oxychloride; Calcium Salt;
Chlorinated Lime; HYPOCHLOROUS ACID

Product Code

Recommended use: Water-treatment agent; Bleaching Agent; Bactericide; Algaecide

Supplier: Aquapac Pty Ltd
ABN: 36 114 118 311
Street Address: 88 Lee Holm Road
St Marys NSW 2760
Telephone: 02 9673 1192
Facsimile: 02 9673 1193

Emergency Telephone number: 1800 HELP

2. HAZARDS IDENTIFICATION

This material is hazardous according to health criteria of Safe Work Australia.



Signal Word

Danger

Hazard Classifications

Oxidising Solids - Category 2
Acute Toxicity - Oral - Category 4
Skin Corrosion/Irritation - Category 1B
Acute Hazard to the Aquatic Environment - Category 1

Hazard Statements

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

Prevention Precautionary Statements

P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220 Keep/Store away from clothing/combustible materials/(insert appropriate material).
P221 Take any precaution to avoid mixing with combustibles/(insert incompatible materials).
P260 Do not breathe dust, fume, gas, mist, vapours or spray.
P264 Wash hands, face and all exposed skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.

Safety Data Sheet



P280 Wear protective clothing, gloves, eye/face protection and suitable respirator.

Response Precautionary Statements

- P101 If medical advice is needed, have product container or label at hand.
- P301+P310 IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
- P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- 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 CENTRE or doctor/physician.
- P321 Specific treatment (see product label).
- P330 Rinse mouth.
- P363 Wash contaminated clothing before reuse.
- P370+P378 In case of fire: Use (insert appropriate media) for extinction.
- P391 Collect spillage.

Storage Precautionary Statement

- P405 Store locked up.

Disposal Precautionary Statement

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

Poison Schedule:

DANGEROUS GOOD CLASSIFICATION

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

Dangerous Goods Class:

3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO	PROPORTION
Hypochlorous acid, calcium salt	7778-54-3	100 %
Water	7732-18-5	5-10 %
		100%

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation: Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention. Serious Inhalation: Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Skin Contact: If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical

Safety Data Sheet



got on the victim's exposed skin, such as the hands : Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. If irritation persists, seek medical attention. Wash contaminated clothing before reusing. Serious Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Eye contact: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Ingestion: Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention

PPE for First Aiders: Wear safety shoes, overalls, gloves, safety glasses, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Notes to physician: Treat symptomatically. Can cause corneal burns. Treat symptomatically based on individual reactions of patient and judgement of doctor. Effects may be delayed. May cause corneal burns. Comments: Provide general supportive measures (comfort, warmth, rest). Consult a physician and/or the nearest Poison Control Centre for all exposure except minor instance of inhalation or skin contact.

5. FIRE FIGHTING MEASURES

Hazchem Code:

Suitable extinguishing media: If material is involved in a fire use water fog (or if unavailable fine water spray), alcohol resistant foam, standard foam, dry agent (carbon dioxide, dry chemical powder).

Specific hazards: May intensify fire; oxidiser.

Fire fighting further advice: On burning or decomposing may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion or decomposition.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILLS

Avoid accidents, clean up spills immediately, observing precautions in the protective Equipments section. Remove all sources of ignition. Keep water away from spilled material. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Avoid generating dusty conditions. Remove all sources of ignition. Isolate the danger area. Use clean, non-sparking tools and equipment. Increase ventilation.

LARGE SPILLS

Contain and sweep/shovel up spills with dust binding material or use an industrial vacuum cleaner. Transfer to suitable, labelled, corrosion-resistant containers and dispose of promptly as hazardous waste. Do not get water inside containers. Do not use combustible materials such as paper towels to clean up spill.

Dangerous Goods - Initial Emergency Response Guide No: Not applicable

7. HANDLING AND STORAGE

Safety Data Sheet



Handling: Keep container dry. Keep away from heat. Keep away from sources of ignition. Keep away from combustible material Do not ingest. Do not breathe dust. Never add water to this product In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes Keep away from incompatibles such as reducing agents, combustible materials, organic materials, acids, moisture.

Storage: May corrode metallic surfaces. Store in a metallic or coated fiberboard drum using a strongpolyethylene inner package. Corrosive materials should be stored in a separate safety storagecabinet or room.Store in original packaging as approved by manufacturer. Container type/packageing must comply with all applicable local legislation.

This material is classified as a as per the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and/or the "New Zealand NZS5433: Transport of Dangerous Goods on Land" and must be stored in accordance with the relevant regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National occupational exposure limits: No value assigned for this specific material by Safe Work Australia.

Biological Limit Values: As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.

Engineering Measures: Natural ventilation should be adequate under normal use conditions.

Personal Protection Equipment: SAFETY SHOES, OVERALLS, GLOVES, SAFETY GLASSES, RESPIRATOR.

Personal protective equipment (PPE) must be suitable for the nature of the work and any hazard associated with the work as identified by the risk assessment conducted.

AS1715/1716, AS1336/1337, AS2161, AS3765/2210

Wear safety shoes, overalls, gloves, safety glasses, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Hygiene measures: Splash goggles. Lab coat. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Base Units: Kilogram
Form: Fine Granules
Colour: White
Odour: Strong chlorine odour

Solubility: 23.4 g/100 mL 40°C
Solubility in water: Soluble in water
Specific Gravity: 2.00 - 2.35
Relative Vapour Density (air=1): 6.9 Air = 1
Vapour Pressure (20 °C): Not available
Flash Point (°C): 50 °C
Melting Point/Range (°C): Decomposes at temperatures above 100 °C
Boiling Point/Range (°C): Decomposes before boiling

Safety Data Sheet



pH: 10-11

(Typical values only - consult specification sheet)
N Av = Not available, N App = Not applicable

10. STABILITY AND REACTIVITY

Chemical stability: The stability of solid calcium hypochlorite depends on the content of moisture, lime and impurities (e.g., magnesium hypochlorite and metal oxides), and the temperature and humidity of the storage area. Anhydrous calcium hypochlorite containing 1% moisture may lose 1-3% available chlorine per year. Normally unstable, it readily undergoes violent chemical changes, but does not detonate. Small amount of water added to a container of calcium hypochlorite may generate enough heat to initiate the hazardous decomposition of this material. However, it is stable at room temperature in closed container under normal storage and handling conditions. Rapidly decomposes on exposure to air. May decompose violently if exposed to heat or direct sunlight. Instability Temperature: slowly decomposition above 120?. violent exothermic decomposition above 160?.

Conditions to avoid: Conditions of Instability: Reacts with acids, evolving chlorine, an irritating, corrosive and toxic gas. In the presence of moisture, corrosive to most metals. Dust irritates mucous membranes. Corrosivity: Extremely corrosive in presence of aluminum, of zinc. Corrosive in presence of steel, of copper. Slightly corrosive to corrosive in presence of glass, of stainless steel(304), of stainless steel(316).

Incompatible materials: Calcium hypochlorite is a strong oxidizer. Reacts with water and acids giving off chlorine gas. Forms explosive compounds with ammonia and amines. Incompatible with organic materials, nitrogen compounds and combustible materials. Reducing agents, carbon tetrachloride, ammonia, aliphatic amines, aromatic amines, sulfur, sulfides (inorganic, e.g. ferric sulfide, lead sulfide, sodium sulfide), metal oxides, glycerol, phenols, diethylene, glycol monomethyl ether, carbon, acetic acid + potassium, cyanides (e.g. potassium cyanide, sodium cyanide), ammonium chloride, charcoal, N,N-dichloromethylamine+heat, ethanol, menthol, iron oxide, rust, 1-propanethiol, isobutanethiol, turpentine, sodium hydrogen sulfate + starch + sodium carbonate, acetylene, hydroxy compounds (e.g. ethanol, ethylene glycol, glycerol, sugar), combustible material (e.g. anthracene, grease, oil, mercaptans, methyl carbitol, nitromethane, organic matter, and propylmercaptan).

Hazardous decomposition products: As in any fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. The presence of magnesium oxide in lime used to prepare calcium hypochlorite may lead to the formation of magnesium hypochlorite, which is dangerously reactive. Calcium hypochlorite gives off oxygen, chlorine and chlorine monoxide.

Hazardous reactions: No known hazardous reactions.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Acute Effects

Inhalation: Corrosive. Extremely destructive to tissues of the mucous membranes and upper respiratory tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Inhalation may be fatal as a result of spasm inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Dust and mist may irritate the nose and throat and upper respiratory tract. When mixed with acids, chlorine gas releases. This gas can cause severe irritation of the nose and throat. Prolonged exposure to high concentration of chlorine gas may result in severe lung damage.

Skin contact: Corrosive. Symptoms of redness, pain, and severe burn can occur. Calcium hypochlorite dust and solutions can cause irritation, and in severe cases, chemical burns with permanent scar.

Ingestion: Harmful if swallowed. Calcium hypochlorite may cause burns to the mouth and digestive tract.

Safety Data Sheet



Symptoms include abdominal pain, vomiting, difficulty in breathing, confusion, delirium and, in severe cases, coma and death. Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach. Can cause sore throat, vomiting, diarrhea.

Eye contact: Corrosive. Contact can cause blurred vision, redness, pain and severe tissue burns. Exposure to calcium hypochlorite dust and mist can cause eye irritation. Concentrated solutions can cause burns which may result in permanent eye damage. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.

Acute toxicity

Inhalation: This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): LC50 > 5 mg/L

Skin contact: This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >2,000 mg/Kg bw

Ingestion: This material has been classified as a Category 4 Hazard. Acute toxicity estimate (based on ingredients): 300 - 2,000 mg/Kg bw

Corrosion/Irritancy: Eye: this material has been classified as not corrosive or irritating to eyes. Skin: this material has been classified as a Category 1B Hazard (irreversible effects to skin).

Sensitisation: Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as not a skin sensitiser.

Aspiration hazard: This material has been classified as non-hazardous.

Specific target organ toxicity (single exposure): This material has been classified as non-hazardous.

Chronic Toxicity

Mutagenicity: This material has been classified as non-hazardous.

Carcinogenicity: This material has been classified as non-hazardous.

Reproductive toxicity (including via lactation): This material has been classified as non-hazardous.

Specific target organ toxicity (repeat exposure): This material has been classified as non-hazardous.

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Acute aquatic hazard: This material has been classified as a Category Acute 1 Hazard. Acute toxicity estimate (based on ingredients): <1 mg/L

Long-term aquatic hazard: This material has been classified as non-hazardous. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): >100 mg/L, where the substance is not rapidly degradable and/or BCF < 500 and/or log K_{ow} < 4.

Ecotoxicity: No information available.

Persistence and degradability: Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Bioaccumulative potential: No information available.

Safety Data Sheet



Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility. Contact a specialist disposal company or the local waste regulator for advice. Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. Untreated waste calcium hypochlorite must never be discharged directly into sewers or surface water. Following decontamination, disposal of residue by secure landfill may be acceptable.

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

UN No: 3487

Dangerous Goods Class:

Packing Group: II

Hazchem Code:

Emergency Response Guide No:

Proper Shipping Name: CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE or CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, CORROSIVE, with not less than 5.5% but not more than 16% water

Segregation Dangerous Goods:

MARINE TRANSPORT

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

UN No: 3487

Dangerous Goods Class:

Packing Group: II

Proper Shipping Name: CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE or CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, CORROSIVE, with not less than 5.5% but not more than 16% water

AIR TRANSPORT

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

UN No: 3487

Dangerous Goods Class:

Product Name: CALCIUM HYPOCHLORITE

Reference No:

Issued: 2019-07-16

Version:

Page 7 of 8

Safety Data Sheet



Packing Group: II

Proper Shipping Name: CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE or
CALCIUM HYPOCHLORITE, HYDRATED MIXTURE,
CORROSIVE, with not less than 5.5% but not more than 16%
water

15. REGULATORY INFORMATION

This material is not subject to the following international agreements:
Montreal Protocol (Ozone depleting substances)
The Stockholm Convention (Persistent Organic Pollutants)
The Rotterdam Convention (Prior Informed Consent)
Basel Convention (Hazardous Waste)
International Convention for the Prevention of Pollution from Ships (MARPOL)

16. OTHER INFORMATION

Reason for issue: First Issue

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

If you are an employer it is your duty to tell your employees, and any others that may be affected, of any hazards described in this sheet and of any precautions that should be taken.

Safety Data Sheets are updated frequently. Please ensure you have a current copy.