

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name: **CALCIUM HYPOCHLORITE, 50- 65% AVAILABLE CHLORINE**

| Synonyms | Product Code | Bar Code |
|--------------|--------------|----------|
| CALHYP-40KG | - | - |
| CALHYPO-40KG | - | - |

Recommended use: Swimming pool chemical, algicide, biocide, oxidant.

Supplier: DuluxGroup (PNG) Pte. Ltd.

Street Address: Air Corps Road
Lae, Morobe 411,
Papua New Guinea

Telephone: +675 7444 9999

Emergency Telephone number: Australia +613 9663 2130

2. HAZARDS IDENTIFICATION

This material is hazardous according to criteria of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) 7th edition.



Signal Word

Danger

Hazard Classifications

Oxidising Solids - Category 2

Acute Toxicity - Oral - Category 4

Skin Corrosion/Irritation - Category 1B

Eye Damage/Irritation - Category 1

Specific Target Organ Toxicity (Single Exposure) - Category 3 Respiratory Tract Irritation

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.
- H335 May cause respiratory irritation.
- H400 Very toxic to aquatic life.

Prevention Precautionary Statements

- P102 Keep out of reach of children.
- P103 Read carefully and follow all instructions.
- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- P220 Keep/Store away from clothing/combustible materials.
- P260 Do not breathe dust or fume.
- P264 Wash hands, face and all exposed skin thoroughly after handling.

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- P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing including eye/face protection and suitable respirator.

Response Precautionary Statements

- P101 If medical advice is needed, have product container or label at hand.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340 IF INHALED: Remove person to fresh air and keep 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 CENTER/doctor/insert appropriate source of emergency medical advice.
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.

Storage Precautionary Statements

- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal Precautionary Statement

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

DANGEROUS GOOD CLASSIFICATION

Classified as Dangerous Goods by the criteria of the United Nations "Recommendations on the Transport of Dangerous Goods."

Dangerous Goods Class: 5.1

3. COMPOSITION INFORMATION

| CHEMICAL ENTITY | CAS NO | PROPORTION |
|--|-----------|------------|
| Hypochlorous acid, calcium salt | 7778-54-3 | >60 % |
| Ingredients determined to be non-hazardous or below reporting limits | - | Balance % |
| | | 100% |

4. FIRST AID MEASURES

Inhalation: Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

Skin Contact: If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If swelling, redness, blistering or irritation occurs seek medical assistance. For gross contamination, immediately drench with water and remove clothing. Continue to flush skin and hair with plenty of water (and soap if material is insoluble). For skin burns, cover with a clean, dry dressing until medical help is available. If blistering occurs, do NOT break blisters. If swelling, redness, blistering, or irritation occurs seek medical assistance.

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Eye contact: Immediately irrigate with copious quantities of water for 15 minutes. Eyelids to be held open. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport to hospital or medical centre.

Ingestion: Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Immediately call Poisons Centre or Doctor.

PPE for First Aiders: Wear safety shoes, overalls, gloves, chemical goggles, dust mask. Available information suggests that gloves made from nitrile rubber 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.

5. FIRE FIGHTING MEASURES

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: Not combustible, however will support the combustion of other materials. Calcium hypochlorite is a powerful oxidizing agent and decomposes violently upon heating liberating oxygen, and toxic chlorine gas. In case of fire, area must be evacuated, and specialist fire fighters called. Only large quantities of water should be used as an extinguishing agent. If excess water is not available, DO NOT attempt to extinguish the fire; use available water to prevent the spread of fire to adjacent property. Attending fire fighters should keep upwind if possible and wear full protective equipment including rubber boots and self-contained breathing apparatus. A fire in the vicinity of calcium hypochlorite should be extinguished in the most practical manner but avoid contaminating this material with the fire-fighting agent, including water. Decomposes on contact with water evolving toxic chlorine gas. Once fire is extinguished, wash area thoroughly with excess water. Ensure that drains are not blocked with solid material. Maintenance of excess water during cleaning up operation is essential. Combustible material involved in the incident should be removed to a safe open area for controlled burning or for further drenching with water prior to collection for disposal.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILLS

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of dust. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal.

LARGE SPILLS

Wear protective equipment to prevent skin and eye contact and breathing in vapours/dust. Air-supplied masks are recommended to avoid inhalation of toxic material. DO NOT return spilled material to original container for re-use. DO NOT add small amounts of water to calcium hypochlorite. Sweep up, avoiding generation of dust, then immediately spread as a thin layer in uncontaminated, dry, open area to reduce the possibility of local hot spots forming. Where a spill has occurred in a confined space or an inadequately ventilated enclosure and the material is damp and evolving chlorine, the rate of chlorine evolution can be reduced by covering the thinly spread solid with soda ash.

Dangerous Goods - Initial Emergency Response Guide No: 31

7. HANDLING AND STORAGE

Handling: Avoid eye contact and skin contact. Avoid inhalation of dust.

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Storage: Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Store away from sources of heat and/or ignition. Store locked up. Keep container standing upright. Keep containers closed when not in use - check regularly for spills.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National occupational exposure limits:

| | TWA | | STEL | | NOTICES |
|-----------------|-----|-------|------|-------|---------|
| | ppm | mg/m3 | ppm | mg/m3 | |
| Inspirable dust | - | 10 | - | - | - |

As published by Safe Work Australia.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

STEL (Short Term Exposure Limit) - the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

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: Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use only in well ventilated areas. Avoid generating and inhaling dusts. Use with local exhaust ventilation or while wearing dust mask.

Personal Protection Equipment: SAFETY SHOES, OVERALLS, GLOVES, CHEMICAL GOGGLES, DUST MASK.

Wear safety shoes, overalls, gloves, chemical goggles, dust mask. Available information suggests that gloves made from nitrile rubber 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: Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid eye contact and skin contact. Avoid inhalation of dust. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form: Crystalline Powder
Colour: White
Odour: Strong chlorine-like

Product Name: CALCIUM HYPOCHLORITE, 50 - 65% AVAILABLE CHLORINE

Reference No: DLXPNGEN001679

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| | |
|---|---------------------------|
| Solubility: | Slightly soluble in water |
| Specific Gravity: | 2.35 |
| Density: | N Av |
| Relative Vapour Density (air=1): | N App |
| Vapour Pressure (20 °C): | N App |
| Flash Point (°C): | N App |
| Flammability Limits (%): | N App |
| Autoignition Temperature (°C): | N App |
| Melting Point/Range (°C): | 100 |
| Boiling Point/Range (°C): | N Av |
| Decomposition Point (°C): | 175 |
| pH: | N Av |
| Viscosity: | N App |
| Total VOC (g/Litre): | N Av |

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

10. STABILITY AND REACTIVITY

Chemical stability: Powerful oxidising agent. Calcium hypochlorite (dry or hydrated) and its mixtures are incompatible with dichloroisocyanuric acid, ammonium nitrate, trichloroisocyanuric acid, or any chloroisocyanurate. Reacts with water liberating chlorine.

Conditions to avoid: Avoid exposure to heat, direct sunlight and moisture.

Incompatible materials: Calcium hypochlorite (dry or hydrated) and its mixtures are incompatible with dichloroisocyanuric acid, ammonium nitrate, trichloroisocyanuric acid, or any chloroisocyanurate, acids, aluminium, iron, lead, magnesium, zinc. Incompatible with organic materials, combustible materials, reducing agents, ammonia, nitrogen compounds, acidic materials, cyanides, hydrogen peroxide, chlorinated isocyanuric acid (organic bleaching powder), copper.

Hazardous decomposition products: Chlorine.

Hazardous reactions: Decomposition occurs on contact with heat, reducing agents, combustible materials. Explosive and toxic nitrogen trichloride is formed by contact with chlorinated isocyanuric acid. Corrosive to metals in the presence of moisture.

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: Material is an irritant to mucous membranes and respiratory tract.

Skin contact: Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.

Ingestion: Harmful if swallowed. Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.

Eye contact: A severe eye irritant. Corrosive to eyes: contact can cause corneal burns. Contamination of eyes can result in permanent injury. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.

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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 a Category 3 Hazard. Exposure via inhalation may result in respiratory irritation.

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: No information available.

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

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If possible material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international Regulations.

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods by the criteria of the United Nations "Recommendations on the Transport of Dangerous Goods."



UN No: 2880
Dangerous Goods Class: 5.1
Packing Group: II
Emergency Response Guide No: 31

Proper Shipping Name: CALCIUM HYPOCHLORITE, HYDRATED MIXTURE

Segregation Dangerous Goods: Not to be loaded with explosives (Class 1), flammable gases (Class 2.1), toxic gases (Class 2.3), flammable liquids (Class 3), flammable solids (Class 4.1), spontaneously combustible substances (Class 4.2), dangerous when wet substances (Class 4.3), organic peroxides (Class 5.2), radioactive substances (Class 7), corrosive substances (Class 8), fire risk substances or combustible liquids. Also note that fire risk substances including dangerous goods of Class 6 or Class 9 which are fire risk substances are incompatible with dangerous goods of Class 1, Class 5.1 and Class 5.2. Exemptions may apply.

MARINE TRANSPORT

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea. This material is classified as a Marine Pollutant (P) according to the International Maritime Dangerous Goods Code.



UN No: 2880
Dangerous Goods Class: 5.1
Packing Group: II

Proper Shipping Name: CALCIUM HYPOCHLORITE, HYDRATED MIXTURE

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: 2880
Dangerous Goods Class: 5.1
Packing Group: II

Product Name: CALCIUM HYPOCHLORITE, 50 - 65% AVAILABLE CHLORINE

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Proper Shipping Name: CALCIUM HYPOCHLORITE, HYDRATED MIXTURE

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: Revised

This Safety Data Sheet has been prepared by Chemical Data Services Pty Ltd (chemdata.com.au) on behalf of its client.

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

This SDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle and use the product in the workplace. Since DuluxGroup (Australia) Pty Ltd and DuluxGroup (New Zealand) Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this SDS in the context of how the user intends to handle and use the product in the workplace.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.

Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request.