

Material Safety Data Sheet



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: DRY CHLORINE TABLETS

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

Supplier: Orica Australia Pty Ltd

ABN: 004 117 828

Street Address: 1 Nicholson Street,
Melbourne 3000
Australia

Telephone Number: +61 3 9665 7111

Facsimile: +61 3 9665 7937

Emergency Telephone: 1 800 033 111 (ALL HOURS)

2. HAZARDS IDENTIFICATION

This material is hazardous according to criteria of ASCC; HAZARDOUS SUBSTANCE.

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

Risk Phrases: Contact with combustible material may cause fire. Harmful if swallowed. Contact with acids liberates toxic gas. Causes burns. Risk of serious damage to eyes. Very toxic to aquatic organisms.

Safety Phrases: Avoid contact with skin and eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible).

Poisons Schedule: S6 Poison.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components / CAS Number	Proportion	Risk Phrases
Calcium hydroxide 1305-62-0	1-5%	R38, R41
Water 7732-18-5	7-16%	-
Calcium hypochlorite 7778-54-3	>60%	R8, R22, R31, R34, R41, R50

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4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (Phone eg. Australia 131 126; New Zealand 0 800 764766) or a doctor.

Inhalation: Remove victim from area of 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. If patient finds breathing difficult and develops a bluish discoloration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Skin Contact: If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.

Eye Contact: Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport to hospital or medical centre.

Ingestion: Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.

Medical attention and special treatment: Treat symptomatically. Can cause corneal burns. Delayed effects from exposure to chlorine (decomposition product) can include shortness of breath, severe headache, pulmonary oedema and pneumonia.

5. FIRE FIGHTING MEASURES

Hazards from combustion products: Non combustible, but will support combustion of other materials.

Precautions for fire fighters and special protective equipment: Not combustible, however will support the combustion of other materials. Calcium hypochlorite is a powerful oxidising 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

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removed to a safe open area for controlled burning or for further drenching with water prior to collection for disposal.

Suitable Extinguishing Media: Coarse water spray, fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem Code: 1W

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures: Shut off all possible sources of ignition. Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services. For large spills notify the Emergency Services.

Methods and materials for containment and clean up: 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. 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.

7. HANDLING AND STORAGE

This material is a Scheduled Poison S6 and must be stored, maintained and used in accordance with the relevant regulations.

Conditions for safe 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. Keep dry - reacts with water, may lead to drum rupture. Keep containers closed when not in use - check regularly for spills.

Precautions for safe handling: Avoid skin and eye contact and breathing in dust. Keep out of reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:

No value assigned for this specific material by the National Occupational Health and Safety Commission. However, Exposure Standard(s) for constituent(s):

Calcium hydroxide: 8hr TWA = 5 mg/m³

As published by the National Occupational Health and Safety Commission.

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

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over an entire working life.

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.

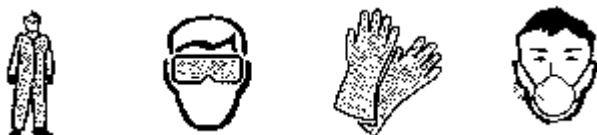
Engineering controls:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Exposure Standards. Avoid generating and breathing in dusts. Use with local exhaust ventilation or while wearing dust mask. Keep containers closed when not in use.

Personal Protective Equipment:

The selection of PPE is dependant on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

Orica Personal Protection Guide No. 1, 1998: F - OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, DUST MASK.



Wear overalls, chemical goggles and impervious gloves. Avoid generating and inhaling dusts. If dust exists, wear dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Solid
Colour:	White
Odour:	Chlorine
Molecular Formula:	Ca(OCl) ₂
Solubility:	Soluble in water.
Specific Gravity:	2.35
Relative Vapour Density (air=1):	Not available
Vapour Pressure (20 °C):	Not available
Flash Point (°C):	Not available
Flammability Limits (%):	Not available
Autoignition Temperature (°C):	Not available
% Volatile by Weight:	Not available
Solubility in water (g/L):	Not available
Melting Point/Range (°C):	Not available
Decomposition Point (°C):	ca. 180
pH:	Not available

10. STABILITY AND REACTIVITY

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- 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.
- Incompatible materials:** Calcium hypochlorite (dry or hydrated) and its mixtures are incompatible with dichloroisocyanuric acid, ammonium nitrate, trichloroisocyanuric acid, or any chloroisocyanurate, strong acids, aluminium, iron, lead, magnesium, and zinc. Incompatible with organic materials, combustible materials, reducing agents, ammonia, nitrogen compounds, acidic materials, and chlorinated isocyanuric acid (organic bleaching powder).
- Hazardous decomposition products:** Chlorine.
- Hazardous reactions:** Reacts with water liberating toxic chlorine gas. Decomposition occurs on contact with heat, reducing agents, and combustible materials.

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:

- Ingestion:** 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.
- Skin contact:** Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.
- Inhalation:** Breathing in dust may result in respiratory irritation. Chlorine, evolved from decomposition when wet, is a severe respiratory irritant, corrosive, and highly toxic. Delayed effects can include shortness of breath, headache, pulmonary oedema, and pneumonia.
- Long Term Effects:**
No information available for the product.

Toxicological Data:

Oral LD50 (rat): 790-1260 mg/kg.

12. ECOLOGICAL INFORMATION

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Ecotoxicity Avoid contaminating waterways.

Persistence/degradability and mobility

This material is biodegradable.

Aquatic toxicity:

Very toxic to aquatic organisms.

96hr LC50 (fish): 0.15 mg/L (Atlantic silverside)

13. DISPOSAL CONSIDERATIONS

Disposal methods: Refer to Waste Management Authority. Dispose of material through a licensed waste contractor. Clean containers with water.

14. TRANSPORT INFORMATION

Road and Rail Transport

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.



UN No: 2880
Class-primary 5.1 Oxidizing Agent
Packing Group: II
Proper Shipping Name: CALCIUM HYPOCHLORITE, HYDRATED
Hazchem Code: 1W

Marine Transport

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

UN No: 2880
Class-primary: 5.1 Oxidizing Agent
Packing Group: II
Proper Shipping Name: CALCIUM HYPOCHLORITE, HYDRATED

Air Transport

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

UN No: 2880
Class-primary: 5.1 Oxidizing Agent
Packing Group: II
Proper Shipping Name: CALCIUM HYPOCHLORITE, HYDRATED

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15. REGULATORY INFORMATION

Classification: This material is hazardous according to criteria of ASCC; HAZARDOUS SUBSTANCE.

Hazard Category: Xn: Harmful
C: Corrosive

Risk Phrase(s): R8: Contact with combustible material may cause fire.
R22: Harmful if swallowed.
R31: Contact with acids liberates toxic gas.
R34: Causes burns.
R41: Risk of serious damage to eyes.
R50: Very toxic to aquatic organisms.

Safety Phrase(s): S24/25: Avoid contact with skin and eyes.
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 whenever possible).

Poisons Schedule: S6 Poison.

This material is listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

In: 'The Dictionary of Substances and their Effects'. Ed. Gangolli S. Royal Society of Chemistry, 1999.

Reason(s) for Issue:
5 Yearly Revised Primary MSDS

This MSDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Orica Limited cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Orica representative or Orica Limited at the contact details on page 1.

Orica Limited's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

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