

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Name: Aquachlor Pool Chlorine 700

Other Names: Calcium Hypochlorite

Manufacturers' Code & Pack Size:

A66702	2 kg
A66704	4 kg
A66710	10 kg

Recommended Use: Pool chemical, bleaching agent, oxidising agent.

Supplier's Details: Waterco Limited, 390 Marion Street, Bankstown. NSW 2200

Ph: (02) 9795.5500

Emergency Phone Number: Business hours only 1800 226 556

2. HAZARD IDENTIFICATION

Hazardous Classification: Classified as a hazardous substance according to the criteria of the Occupational National Health and Safety Commission.

Risk Phrases:

- R8 Contact with combustible material may cause fire.
- R31 Contact with acids liberated toxic gas.
- R34 Causes burns.
- R21/221 Harmful in contact with skin and if swallowed.

Safety Phrases:

- S2 Keep out of reach of children.
- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S43 In case of fire, use fog, foam or dry agent
- S45 In case of accident or if you feel unwell seek medical advice immediately.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Entity †	Synonyms	CAS Number	Amount
Calcium Hypochlorite (as available chlorine)		7778-54-3	70-75%
Inert Ingredients (includes 5.5 – 10% moisture)			30-25%

† Where they are present in this product, and other ingredients of this material are not hazardous, as defined by either inclusion in the *List of Designated Hazardous Substance* or classified in accordance with the *Approved Criteria for Defining a Hazardous Substance*, and published by the National Occupational Health and Safety Commission/AGPS, 1999.

4. FIRST AID MEASURES

First Aid: Take a copy of this MSDS to medical advisers if signs or symptoms of overexposure occur and medical attention is required.

Swallowed: DO NOT INDUCE VOMITING. Wash out mouth with water and give plenty of water to drink. Seek immediate attention.

Skin: Immediately wash affected areas with copious quantities of running water. Remove contaminated clothing and wash before re-use. If irritation, swelling, redness, blistering or irritation occurs seek medical advice.

Eye: If contact with the eye(s) occurs, wash with copious amounts of water for approximately 15 minutes holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. Seek immediate medical attentions.

Inhaled: Remove victim from exposure – avoid becoming a casualty. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If breathing laboured and patient cyanotic (blue), ensure airways are clear and have qualified person give oxygen through a face mask. If breathing has stopped apply artificial respiration at once. In the event of cardiac arrest, apply external cardiac massage. For all but the most minor symptoms arrange for patient to be seen by a doctor as soon as possible – either on site or at the nearest hospital,

First Aid Facilities: Eye wash station, safety shower and normal washroom facilities.

Advice to Doctor: Treat symptomatically or consult a Poisons Information Centre.

Medical Conditions that may be Aggravated by Exposure: Asthma and respiratory and cardiovascular disease.

5. FIRE FIGHTING MEASURES

Hazchem Code: 2W

Extinguishers: Use flooding amounts of water from a distance. Take care as contact with water will release toxic chlorine gas. Do not use foam or dry agent.

Fire Fighting Precautions: Fire-fighters should wear full protective clothing and self contained breathing apparatus (SCBA) operated in positive pressure mode.

Other Precautions: This product is non-combustible, however it is a strong oxidizer and contact with reducing agents or combustible materials may cause fire. Keep away from heat, sparks or naked flames. Heating may cause explosion. Contact with strong acids may generate heat. Contact with strong alkalis may generate heat.

6. ACCIDENTAL RELEASE MEASURES

Remove all sources of heat and ignition. Increase ventilation. Evacuate all unnecessary personnel. Avoid contact with combustibles and other incompatible materials. Wear appropriate breathing apparatus and full protective clothing to minimize skin and eye exposure. Collect with spark-free tools avoiding dust generation and place into a suitable labelled container for subsequent disposal. Prevent entry into drains, waterways or confined areas. If large quantities of this material enter the waterways contact the Environmental Protection Authority, or your local Waste Management Authority.

7. HANDLING AND STORAGE

Handling: Wear appropriate protective equipment and clothing. Use in a well ventilated area. Keep containers closed when not in use. Avoid spillage onto floor – keep it clean at all times. It is essential that all who come into contact with this material, maintain high standards of personal hygiene i.e. washing hands prior to eating, drinking, smoking or going to the toilet.

Storage: Store in a cool, dry, well-ventilated area out of direct sunlight. Store away from foodstuffs, incompatible materials and sources of heat or ignition. Keep containers securely sealed and protected against physical damage.

Incompatibilities: This product is a powerful oxidizer. Contact with wood, cotton, straw or oils may cause fire. Add the product to water.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Standards: No ingredients in this product have exposure standards, as outlined in the standard *Exposure Standards for Atmospheric Contaminants in the Occupational Environment* third edition, published by the National Occupational Health and Safety Commission/AGPS, 1995. However, an exposure standard exists for the decomposition product:

Ingredient: Chlorine, TWA 1ppm, 3 mg/m³, STEL Peak limitation ppm, mg/m³

Note: TWA – Time Weighted Average over an eight hour shift.

Engineering Controls: Avoid generating and inhaling dusts. Use in a well ventilated area only. Keep containers in a well ventilated area. Local exhaust ventilation system may be required, especially if chlorine gas is evolved.

Personal Protective Equipment:

Clothing: Suitable protective clothing should be worn e.g. cotton overalls buttoned at neck and wrist.

Skin Protection: Impervious PVC or rubber gloves should be worn.

Eye Protection: Safety glasses with side shields or goggles should be worn as described in Australian Standard AS/NZS 1337 – Eye Protectors for Industrial Applications.

Respiratory Protection: If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable acid gas filter and P1 or P2 particulate filter should be used. Final choice of appropriate breathing protection is dependant upon actual airborne concentrations and the type of breathing protection required will vary according to individual circumstances. Expert advice may be required to make this decision. Reference should be made to Australian Standards AS/NZS 1715, Selection, use and maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices.

Personal Hygiene: Ensure a high level of personal hygiene is maintained when using this product. Always wash hands before eating, drinking, smoking or using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odour:	Off white granular powder with a strong chlorine odour.
pH:	10.5-11.5 (1% solution)
Vapour Pressure:	Not available
Boiling Point/Range:	Not available
Freezing/Melting Point:	Not available
Solubility in Water:	18% @ 25°C
Specific Gravity/Density:	Not applicable
Flash Point:	Not applicable
Lower Flammability Limit:	Not applicable
Upper Flammability Limit:	Not applicable

10. STABILITY AND REACTIVITY

- Chemical Stability:** Rapidly decomposes on exposure to air. May decompose violently if exposed to heat or direct sunlight. Thermally unstable.
- Conditions to Avoid:** Avoid high temperatures and high humidity.
- Incompatible Material:** The substance is an oxidant and reacts with acids, reducing agents, organic, nitrogen containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), corrosive, flammable or combustible materials. Forms explosive compounds with ammonia and amines. Keep away from primary aliphatic or aromatic amines, lubricating oils, damp sulphur, organic thiols or sulphides, metal oxides, nitromethane, alcohols, glycerol, phenol, diethylene glycol monoethyl ether and carbon. Contact with these products could produce ignition or explosion. Reacts with other oxidising agents such as Dichloroisocyanuric acid, dry, and its salts, and Trichloroisocyanuric acid, dry, and its salts. Reacts with water and acids releasing chlorine gas.
- Hazardous Decomposition Products:** Thermal decomposition products include toxic chlorine gas.

11. TOXICOLOGICAL INFORMATION

- Toxicology Information:** Dermal LD₅₀ (rabbit) = 1000 mg/kg
Oral LD₅₀ (rat) = 850 mg/kg
Oral LD₅₀ (human) = >15g/kg
- Acute Effects:**
- Swallowed:** Harmful if swallowed. Ingestion may cause nausea, vomiting, shock and coma. Corrosive. Will cause severe damage to the mucous membranes, including irritation and/or burns to the entire gastrointestinal tract. This is characterised by nausea, vomiting, diarrhea, abdominal pain, bleeding and/or tissue ulceration. May also cause circulatory collapse, cyanosis, shock, confusion, delirium and swelling of the throat or tongue resulting in obstruction of the airway.
- Skin:** Harmful in contact with skin. Corrosive to skin – causes burns. Dermal exposure can cause severe irritation and/or burns characterised by redness, swelling and scab formation. Skin contact may also cause eruptions and eczema.
- Eye:** Causes burns and is a severe eye irritant. Contact may cause impairment of vision or corneal damage,
- Inhaled:** The vapour is an irritant to the mucous membranes and respiratory tract. Inhalation of dust will result in respiratory irritation. Inhalation may result in headaches, dizziness and possible nausea. May also cause burns to the respiratory tract with the production of lung edema which can result in shortness of breath, wheezing, choking, chest pain and impairment of lung function. Inhalation of high concentrations can result in permanent lung damage.
- Chronic Effects:** Prolonged skin exposure may cause destruction of the dermis with impairment of the skin at site of contact to regenerate.

12. ECOLOGICAL INFORMATION

Highly toxic to aquatic life. Avoid contaminating waterways. Breaks down in sunlight.
Acute toxicity – Fish 0.5 ppm/trout/killed/fresh water.

13.DISPOSAL CONSIDERATIONS

Disposal Methods and Containers: Dispose of according to relevant local, state and federal government regulations.

14.TRANSPORT INFORMATION

UN Number: 2880
UN Proper Shipping Name: Calcium Hypochlorite, Hydrated
Dangerous Goods Class: 5.1
Packing Group: II
Hazchem Code: 2W

Special Precaution to User: This material is classified as a Class 5.1 Dangerous Good according to the Australian Code for the Transport of Dangerous Goods. Class 5.1 oxidising agents shall not be loaded or packed in the same vehicle or freight as:

- Class 1 – Explosives
- Class 2.1 – Flammable Gases
- Class 2.3 – Toxic Gases
- Class 3 – Flammable Liquids
- Class 4.1 – Flammable Solids
- Class 4.2 – Spontaneously Combustible Substances
- Class 4.3 – Dangerous When Wet Substances
- Class 5.2 – Organic Peroxides
- Class 6 – Toxic Substances (where the toxic substances are fire risk substances)
- Class 7 – Radioactive Substances
- Class 8 – Corrosive Substances
- Class 9 – Miscellaneous Dangerous Goods (where the miscellaneous dangerous goods are fire risk substances), or Fire Risk Substances or Combustible Liquids

15.REGULATORY INFORMATION

Poisons Schedule: S5
EPG: 5.1.004

16.OTHER INFORMATION

Worker Training: As a minimum all workers using this product should be shown a copy of this MSDS before first use.

Date of Preparation of this MSDS: August 2006

This material safety data sheet (MSDS):

1. Is produced by Waterco Ltd for use in Australia, and is based on information supplied to Waterco Ltd by our suppliers.
2. Summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace,

3. Has been formatted to MSDS format accepted by the National Occupational Health and Safety Commission for use in Australia.
4. Has been produced following the principles and recommendation outline in the *National Code of Practice for the Preparation of Material Safety Data Sheet* published by the National Occupational Health and Safety Commission/AGPS, Canberra, 2003.

Each user must review this MSDS in the context of how the product will be handled and used in the workplace. If clarification or further information is needed to ensure that an appropriated risk assessment can be made, the user should contact Waterco Ltd.

If this MSDS is a copy, or more than five years old, contact Waterco Ltd for a new one.