



Paramount Pools & Spas

a division of PoolQuip Limited

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If you have a Chemical Emergency phone 111 and ask for Fire
In case of Poisoning contact The National Poisons Centre on 0800 POISON (0800 764 766)
The most current version of this document is available online at www.poolquip.co.nz

MATERIAL SAFETY DATA SHEET (MSDS)

1.0 Product & Company Information

Revision Date: April 2011
Product Name: **Calcium Chloride**
Other Names: Water Hardener, Calcium Increaser
Uses: Decreasing the Ph of Water in Swimming Pools
Distributor Details: As per above and any of our authorised retailers and distributors

2.0 Hazard Data

Hazardous according to criteria of NOHSC/ASCC. IRRITANT

Risk Phrases: R36 Irritating to eyes.

Safety Phrases: S2 Keep out of the reach of children.
S22 Do not breathe dust.
S24 Avoid contact with skin.

ERMA New Zealand Approval Code: 186346

HSNO Hazard Classification: 6.1D 6.3A 6.4A 9.3C

3.0 Composition

Chemical Name:	Calcium Chloride
CAS Number:	10043-52-4
Percentage Rating:	74-100%

4.0 First Aid Measures

Description of necessary measures according to routes of exposure.

Swallowed:	Rinse mouth with water. Give water to drink. Do NOT induce vomiting. If symptoms develop, seek medical attention.
Eyes:	Immediately flush eyes with plenty of water holding eyelids open. If irritation persists, seek medical attention.
Skin:	Immediately remove contaminated clothing. Flush affected area with lukewarm water. Seek immediate medical attention.
Inhaled:	Remove victim from exposure to fresh air. If rapid recovery does not occur, seek medical attention.
Advice to Doctor:	Treat symptomatically based on individual reactions of patient and judgement of doctor. NOTE: For advice in an emergency, contact a Poisons Information Centre (Australia 13-11-26 or New Zealand 0800-764-766).
Aggravated medical	No information available on medical conditions which are aggravated from exposure to this product.

5.0 Fire Fighting Measures

Extinguishing Media	In case of fire, use appropriate extinguishing media most suitable for surrounding fire conditions.
Hazards from Combustion Products	Non-combustible solid. Material does not burn. Containers may explode upon heating. Avoid generating dust. Incompatible with oxidizing agents, calcium oxide, boron oxide, methyl vinyl ether, bromine trifluoride and sources of ignition. Reacts exothermically with water to liberate heat. Hygroscopic. Fire or heat may produce irritating, poisonous and/or corrosive gases.
Special Protective	Fire fighters should wear a self contained breathing apparatus and full

Precautions and Equipment for Fire Fighters	protective clothing along with protective equipment.
Flammability Conditions	Product is a non-flammable solid.
Hazchem Code	N/A

6.0 Accidental Release Measures

Emergency Procedures	Personnel involved in the clean up should wear full protective clothing. Eliminate all sources of ignition. Increase ventilation. Stop leak if safe to do so. Avoid generating dust. Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. Use spark-proof tools and equipment.
Methods and Materials for Containment and Clean Up	Contain and sweep/shovel up spills with dust binding material or use an industrial vacuum cleaner. Transfer to a suitable, labelled chemical waste container and hold for safe disposal. Minor spills and small residuals can be flushed down the drain with plenty of water.

7.0 Handling & Storage

Precautions for Safe Handling	Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment.
Conditions for Safe Storage (Including any compatibles)	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials including oxidizing agents, calcium oxide, boron oxide, methyl vinyl ether, bromine trifluoride and ignition sources. Protect from moisture. Hygroscopic. This product is not classified dangerous for transport according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.
Container Type	Packaging must comply with requirements of Hazardous Substances (Packaging) Regulations 2001. Store in original packaging as approved by manufacturer.

8.0 Exposure Controls / Personal Protection

National Exposure Standards	No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC). However, the
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exposure standard for dust not otherwise specified is 10mg/m³ (for inspirable dust) and 3mg/m³ (for respirable dust).

Biological Limit Values	No information available on biological limit values for this product.
Engineering Controls	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection	RESPIRATOR: Wear an effective dust mask (P2 filter) where dusts are generated and engineering controls are inadequate (AS1715/1716). EYES: Safety glasses with side shields (AS1336/1337). HANDS: PVC or neoprene gloves (AS2161). Do NOT use leather or cotton. CLOTHING: Chemical-resistant coveralls and safety footwear (AS3765/2210). Do NOT use leather boots/products as they will dehydrate resulting in shrinkage and possible destruction.

9.0 Physical and Chemical Properties

Appearance	white flakes, granules or powder
Formula	CaCl ₂ or CaCl ₂ .2H ₂ O
Odour	pungent odour
Vapour Pressure	Insignificant mm Hg (1 atmosphere)
Vapour Density	Not applicable.
Boiling Point	>1600 deg C
Melting Point	772 deg C
Solubility in Water	745g/L evolves heat
Specific Gravity	Not applicable
Flash Point	Not Applicable
pH	8-12 (10% H ₂ O solution)
Rate of Solid Materials	No data available
Decomposition Temperature	No data available
Additional Information	Molecular Weight: 111.0 Bulk Density: 0.75-1.0g/cm ³ Solubility: Soluble in water, alcohol, acetic acid and acetone.

10.0 Stability and Reactivity

Chemical Stability	Product is stable under normal conditions of use, storage and temperature.
Conditions to Avoid	Avoid excessive heat, direct sunlight, moisture, static discharges, freezing and high temperatures.
Incompatible Materials	Incompatible with oxidizing agents, calcium oxide, boron oxide, methyl vinyl ether, bromine trifluoride and sources of ignition.
Hazardous	Fire or heat may produce irritating, poisonous and/or corrosive gases.

Decomposition Products	Reacts exothermically with water liberating heat.
Hazardous Reactions	A violent polymerization occurs if calcium chloride is mixed with methyl vinyl ether.

11.0 Toxicological Information

Toxicity Data	Oral LD50 Rat: 1000mg/Kg Skin LD50 Rat: 2630mg/Kg Acute oral toxicity is determined in accordance with OECD Guideline 401. Skin Irritation Rabbit: Not irritating according to OECD Guideline 404. Eye Irritation Rabbit: Irritating according to OECD Guideline 405. The information on oral acute toxicity and irritation refers to dry product.
Health Effects – Acute	
Swallowed	Moderately toxic by ingestion.
Eye	Irritating to eyes.
Skin	Slightly toxic by dermal absorption.
Inhaled	Inhalation of product dust may cause irritation to the respiratory system.

12.0 Ecological Information

Ecotoxicity	No data available
Persistence and Degradability	This product will not biodegrade (inorganic product).
Mobility	Soluble in water and mobile.
Environmental Fate (Exposure)	Avoid contaminating waterways, drains and sewers..
Bioaccumulative Potential	This product does not bioaccumulate in the aquatic environment.

13.0 Disposal Considerations

Disposal	Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of at an approved facility.
Special Precautions for Land Fill or Incineration	The waste code classification is to be carried out according to the European Waste Catalogue (EWC) specifically for each branch of industry and each type of process.

14.0 Transport Information

Land and Sea Transport

UN Number	Not applicable
Shipping Name	Calcium Chloride
Dangerous Goods Class	Not applicable
Packing Group	Not applicable
Hazchem Code	Not applicable

15.0 Regulatory Information

Classified as hazardous in accordance with Annex I European Directive 67/548/EEC and The Australian Safety and Compensation Council (ASCC) formerly known as NOHSC.

Poisons Schedule	N/A
EPG	N/A
AICS Name	Calcium Chloride
NZ Toxic Substance	N
HSNO Hazard Classification	6.1D 6.3A 6.4A 9.3C
ERMA Approval Code	186346

16.0 Other Information

None