



PRICE CHEMICALS PTY LIMITED

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MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

Revision Date JULY 2011

Product Name CALCIUM CHLORIDE DIHYDRATE

Other Names CALCIUM CHLORIDE GRANULAR; CALCIUM CHLORIDE DIHYDRATE;
CALCIUM CHLORIDE FOOD GRADE; CALCIUM CHLORIDE-2-HYDRATE;

Uses Food Applications.

Contact Information

Organisation	Location	Telephone	Ask For
Price Chemicals Pty Ltd	10 Pile Rd Somersby NSW 2250 Australia	+61 2 43400088	Technical Officer
Poison Information Centre	Westmead NSW Australia	131126	
Chemcall 24 Hour Emergency Number	Australia New Zealand	1800-127406 0800-243622	
National Poisons Centre	New Zealand	0800-764766	

2. HAZARD IDENTIFICATION

Hazardous according to criteria of NOHSC/ASCC.

IRRITANT

Risk Phrases

R36 Irritating to eyes.

Safety Phrases

- S25 Avoid contact with eyes.
- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S36/39 Wear suitable protective clothing and eye/face protection.

ERMA New Zealand Approval Code HSR003217

HSNO Hazard Classification 6.1D 6.3A 6.4A 9.3C

This Material Safety Data Sheet may not provide exhaustive guidance for all HSNO Controls assigned to this substance. The ERMA Web Site should be consulted for a full list of triggered controls and cited regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	CAS Number	Proportions (%)
CALCIUM CHLORIDE, DIHYDRATE	[10035-04-8]	100.0

4. 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 vomiting occurs, give further water. Seek medical advice immediately.

Eye If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.

Skin If skin contact occurs, remove any contaminated clothing and wash skin with running water. If irritation occurs, seek medical advice.

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

Advice to Doctor Treat symptomatically based on judgement of doctor and individual reactions of patient.

Aggravated medical conditions caused by exposure No information available on medical conditions aggravated by exposure to this product.

5. FIRE FIGHTING MEASURES

Extinguishing Media In case of fire, use appropriate extinguishing media most suitable for surrounding fire conditions. Suitable media may include fine water spray, normal foam, or dry agent such as carbon dioxide or dry chemical powder. Keep containers cool with water spray.

Hazards from Combustion Products Non-combustible solid. Negligible fire hazard when exposed to heat or flame. This product does not burn. Incompatible with methyl vinyl ether, bromine trifluoride, acids, bases, water, zinc and sources of ignition. When involved in a fire, this product may generate toxic fumes, including chlorine, oxides of calcium and calcium hydroxide is formed on reaction with strong bases.

Special Protective Precautions and Equipment for Fire Fighters Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves). Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources.

Move fire exposed containers from fire area if it can be done without risk. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment. Dike area to prevent runoff and contamination of water sources.

Flammability Conditions Product is a non-flammable solid.

Additional Information

Hazchem Code N/A

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures Avoid accidents, clean up immediately. spillage of product creates slippery surfaces. Personnel involved in the clean up should wear full protective clothing as listed in section 8. Evacuate all unnecessary personnel. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Stop leak if safe to do so. Isolate the danger area. Do NOT let product reach drains or waterways. If the product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management.

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 container and dispose of promptly as hazardous waste. Wash area down with excess water.

7. HANDLING AND 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. Avoid handling which leads to dust formation. Avoid contact with eyes, skin and clothing. Do not inhale product dust/fumes. Instantly remove any soiled and impregnated garments. Launder contaminated clothing before re-use. Keep away from moisture and incompatible materials.

Conditions for Safe Storage (Including Any Incompatibles) 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 as listed in section 10. Protect from direct sunlight and moisture. Prevent formation of dust. The product is hygroscopic and absorbs moisture from the air. 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. **SUITABLE:** Storage container must be made of corrosion resistant materials.

8. 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 exposure standard for dust not otherwise specified is 10mg/m³ (for inspirable dust) and 3mg/m³ (for respirable dust). **NOTE:** The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. 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.

Biological Limit Values No information available on biological limits 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. PHYSICAL AND CHEMICAL PROPERTIES

Appearance White to Off White Solid; Granular; Fine Crystals; Flakes; or Powder.

Formula CaCl₂.2H₂O

Odour Odourless

Vapour Pressure Not applicable.

Vapour Density Not applicable.

Boiling Point >1600°C deg C

Melting Point 176°C deg C

Solubility in Water 42.7g/100g Solution

Specific Gravity 1.85g/cm³ (25°C) (Water = 1)

Flash Point Not applicable.

pH 8.0-10.0 ()

Lower Explosion Limit Not applicable.

Upper Explosion Limit Not applicable.

Ignition Temperature Not applicable.

Specific Heat Value Not applicable.

Particle Size Not applicable.

Volatile Organic Compounds (VOC) Content Not applicable.

Evaporation Rate Not applicable.

Viscosity Not applicable.

Percent Volatile Not applicable.

Octanol/Water partition coefficient Not applicable.

Saturated Vapour Concentration Not applicable.

Additional Characteristics Not applicable.

Flame Propagation/Burning Rate of Solid Materials Not applicable.

Properties of Materials That May Initiate or Contribute to Fire Intensity Not applicable.

Potential for Dust Explosion Not applicable.

Reactions that Release Flammable Gases Not applicable.

Fast of Intensely Burning Characteristics Not applicable.

Non-flammables That Could Contribute Unusual Hazards to a Fire Not applicable.

Release of Invisible Flammable Vapours and Gases Not applicable.

Decomposition Temperature Not applicable.

Additional Information Solubility: Soluble in water, ethyl alcohol.

10. STABILITY AND REACTIVITY

Chemical Stability Product is stable under normal conditions of use, storage and temperature. Hygroscopic. Absorbs moisture from the surrounding air.

Conditions to Avoid Avoid excessive heat, generating dust, direct sunlight, moisture, static charges and high temperatures.

Incompatible Materials Incompatible with methyl vinyl ether, bromine trifluoride, acids, bases, water zinc and sources of ignition.

Hazardous Decomposition Products When involved in a fire, this product may generate toxic fumes, including chlorine, oxides of calcium and calcium hydroxide is formed on reaction with strong bases.

Hazardous Reactions Polymerisation will not occur. Hygroscopic - absorbs moisture from surrounding air. Metals will slowly corrode in aqueous solutions of calcium chloride. Aluminium (and alloys) and yellow brass will be attacked by calcium chloride.

11. TOXICOLOGICAL INFORMATION

Toxicity Data Oral LD50 Rabbit: 1000mg/Kg (33% Liquid)

Health Effects – Acute

Swallowed No adverse effects expected, however, large amounts may cause nausea and vomiting.

Eye An eye irritant. Eye contact causes pain.

Skin Prolonged or repeated skin contact may lead to allergic contact dermatitis in some individuals. The skin may react by producing redness, irritation, weals or pustules.

Inhaled Breathing in dust may result in respiratory irritation.

12. ECOLOGICAL INFORMATION

Ecotoxicity Pimephales Promelas LC50/96hr : 4630mg/L Daphnia Magna EC50/48hr : 2400mg/L Selenastrum Capricornutum EC50/72hr : 2900mg/L

Persistence and Degradability No information available on persistence/degradability for this product.

Mobility No information available on mobility for this product. Soluble in water.

Environmental Fate (Exposure) Do NOT let product reach waterways, drains and sewers.

Bioaccumulative Potential No information available on bioaccumulation for this product.

13. DISPOSAL CONSIDERATIONS

Disposal 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.

Special Precautions for Land Fill or Incineration Contact a specialist disposal company or the local waste regulator for advice. This should be done in accordance with 'The Hazardous Waste Act'. This material may be suitable for approved landfill. For small disposals dilute with a large amount of water and neutralise with acid to about pH 7.

14. TRANSPORT INFORMATION

Land Transport (Australia)

Regulation Name ADG

UN Number Not applicable.
Shipping Name CALCIUM CHLORIDE DIHYDRATE
Dangerous Goods Class Not applicable.
Subsidiary Risk Not applicable.
Pack Group Not applicable.
Precaution for User IRRITANT
Hazchem Code N/A
EPG Not applicable.
Special Provision Not applicable.
Sea Transport
Regulation Name IMDG
UN Number Not applicable.
Shipping Name CALCIUM CHLORIDE DIHYDRATE
Dangerous Goods Class Not applicable.
Subsidiary Risk Not applicable.
Pack Group Not applicable.
Precaution for User IRRITANT
Hazchem Code No data available.
EPG No data available.
Special Provision Not applicable.
Air Transport
Regulation Name IATA
UN Number Not applicable.
Shipping Name CALCIUM CHLORIDE DIHYDRATE
Dangerous Goods Class Not applicable.
Subsidiary Risk Not applicable.
Pack Group Not applicable.
Precaution for User IRRITANT
Hazchem Code No data available.
EPG No data available.
Special Provision Not applicable.
Land Transport (New Zealand)
Regulation Name NZS5433
UN Number Not applicable.
Shipping Name CALCIUM CHLORIDE DIHYDRATE
Dangerous Goods Class Not applicable.
Subsidiary Risk Not applicable.

Pack Group Not applicable.

Precaution for User IRRITANT

Hazchem Code N/A

EPG Not applicable.

Special Provision Not applicable.

Land Transport (South Africa)

Regulation Name NZS5433

UN Number Not applicable.

Shipping Name CALCIUM CHLORIDE DIHYDRATE

Dangerous Goods Class Not applicable.

Subsidiary Risk Not applicable.

Pack Group Not applicable.

Precaution for User IRRITANT

Hazchem Code N/A

EPG Not applicable.

Special Provision Not applicable.

15. REGULATORY INFORMATION

Poisons Schedule N/A

EPG N/A

AICS Name CALCIUM CHLORIDE, DIHYDRATE

NZ Toxic Substance N/A

HSNO Hazard Classification 6.1D 6.3A 6.4A 9.3C

ERMA Approval Code HSR003217

16. OTHER INFORMATION

Literature References No data available.

Sources for Data No data available.

Legend to Abbreviations and Acronyms

< less than

> greater than

ADG Australian Dangerous Goods Code

AICS Australian Inventory of Chemical Substances

CAS Chemical Abstracts Service (Registry Number)

cm² square centimetres

CO₂ Carbon Dioxide

COD Chemical Oxygen Demand

deg C (°C) degrees Celsius

ERMA Environmental Risk Management Authority

g gram

g/cm³ grams per cubic centimetre

g/l grams per litre

HSNO Hazardous Substance and New Organism

IATA International Air Transport Association Dangerous Goods Regulations

IDLH Immediately Dangerous to Life and Health

IMDG International Maritime Dangerous Goods Code

immiscible liquids are insoluble in each other

kg kilogram

kg/m³ kilograms per cubic metre

LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.

LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals

ltr Litre

m³ cubic metre

mbar millibar

mg milligram

mg/24H milligrams per 24 hours

mg/kg milligrams per kilogram

mg/m³ milligrams per cubic metre

Misc miscible

miscible liquids form one homogeneous liquid phase regardless of the amount of either component present

mm millimetre

mPa.s milli Pascal per second

N/A Not Applicable

NOHSC National Occupational Health and Safety Commission

OECD Organization for Economic Co-operation and Development

PEL Permissible Exposure Limit

ppb parts per billion

ppm parts per million

ppm/2h parts per million per 2 hours

ppm/6h parts per million per 6 hours

RCP Reciprocal Calculation Procedure

STEL Short Term Exposure Limit

TLV Threshold Limit Value

tne tonne

TWA Time Weighted Average

ug/24H micrograms per 24 hours

UN United Nations (number)

wt weight

This MSDS summarises Price Chemicals Pty Ltd best knowledge of the health and safety hazard information of the selected substance and how to safely handle the selected substance in the workplace however Price Chemicals Pty Ltd expressly disclaims that the MSDS is a representation or guarantee of the chemical specifications for the substance.

Each user should read the MSDS and consider the information in the context of how the selected substance will be handled and used in the workplace including its use in conjunction with other substances.

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