



POOLPRIDE CHLORINE GRANULES

Chemwatch Material Safety Data Sheet
For Domestic Use Only.
Issue Date: 10-Dec-2007
XC9477SD

CHEMWATCH 1748-1
Version No:6
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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

POOLPRIDE CHLORINE GRANULES

STATEMENT OF HAZARDOUS NATURE

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation.

OTHER NAMES

Cl₂-O₂.Ca, Ca-Cl₂-O₂, Ca-O₂-Cl₂, Ca(ClO)₂, "hypochlorous acid, calcium salt", "calcium chlorohydrochlorite", "calcium hypochloride", "calcium oxychloride", "bleaching powder", "B-K powder", Camporit, "Cal Hypo", "Pool Chlorine (Victorian DG Regs)", Hy-Chlor, Pittchlor, CCH, HTH

PROPER SHIPPING NAME

CALCIUM HYPOCHLORITE, DRY or CALCIUM HYPOCHLORITE MIXTURE, DRY

PRODUCT USE

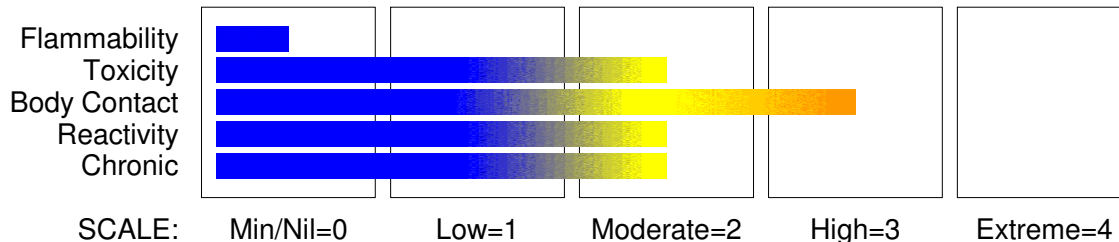
» WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material.
• Material is mixed and used in accordance with manufacturers directions.
Used as an algicide, fungicide, bactericide, disinfectant, steriliser, sanitiser and deodorant; an oxidising agent; and a bleaching agent. It is also used in the refining of sugar.
Intermediate

SUPPLIER

Company: Damar Industries Limited
Address:
Eastgate Business Park
800 Te Ngae Road
Rotorua
Telephone: +64 7 345 6007
Emergency Tel: 0800 2436 2255
Emergency Tel: 0800 CHEMCALL
Fax: +64 7 345 6019

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS



GHS Classification

Acute Aquatic Hazard Category 1
Acute Toxicity (Oral) Category 4
Metal Corrosion Category 1
Oxidizing Liquid Category 2
Serious Eye Damage Category 1

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Section 2 - HAZARDS IDENTIFICATION

Skin Corrosion/Irritation Category 1B



EMERGENCY OVERVIEW

HAZARD

DANGER

Gazetted by ERMANZ:

5.1.1B 6.1D 8.1A 8.2B 8.3A 9.1A 9.2A 9.3C

May intensify fire; oxidizer

Harmful if swallowed

May be corrosive to metals

Causes severe skin burns and eye damage

Causes serious eye damage

Very toxic to aquatic life

Very toxic to life in the soil

Harmful to terrestrial vertebrates

PRECAUTIONARY STATEMENTS

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep/Store away from clothing and other combustible materials.

Take any precaution to avoid mixing with combustibles.

Keep only in original container.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face protection.

Response

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue

rinsing.

Immediately call a POISON CENTER or doctor/physician.

Rinse mouth.

Wash contaminated clothing before reuse.

Absorb spillage to prevent material damage.

Collect spillage.

Storage

Store locked up.

Store in corrosive resistant container or with a resistant inner liner.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
calcium hypochlorite, dry	7778-54-3	94 app.
may contain		
calcium hydroxide hypochlorite	12394-14-8	(< 6
calcium chloride	10043-52-4	(
calcium hydroxide	1305-62-0	(
(Available chlorine >39%)		
Decomposes when wet and gives off toxic chlorine	7782-50-5	

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Section 4 - FIRST AID MEASURES

NEW ZEALAND POISONS INFORMATION CENTRE 0800 POISON (0800 764 766)
NZ EMERGENCY SERVICES: 111

SWALLOWED

- For advice, contact a Poisons Information Centre or a doctor at once.
- Urgent hospital treatment is likely to be needed.

EYE

- » If this product comes in contact with the eyes:
- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

SKIN

- » If skin or hair contact occurs:
- Immediately flush body and clothes with large amounts of water, using safety shower if available.
- Quickly remove all contaminated clothing, including footwear.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.

NOTES TO PHYSICIAN

- » Excellent warning properties force rapid escape of personnel from chlorine vapour thus most inhalations are mild to moderate.
- If escape is not possible, exposure to high concentrations for a very short time can result in dyspnea, haemophysis and cyanosis with later complications being tracheobroncho-pneumonitis and pulmonary oedema. Oxygen, intermittent positive pressure breathing apparatus and aerosolised bronchodilators are of therapeutic value where chlorine inhalation has been light to moderate. Severe inhalation should result in hospitalisation and treatment for a respiratory emergency. Depending on the degree of exposure, periodic medical examination is indicated. The symptoms of lung oedema often do not manifest until a few hours have passed and they are aggravated by physical effort. For acute or repeated exposures to hypochlorite solutions:
- Release of small amounts of hypochlorous acid and acid gases from the stomach following ingestion, is usually too low to cause damage but may be irritating to mucous membranes. Buffering with antacid may be helpful if discomfort is evident.
 - Evaluate as potential caustic exposure.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- » FOR SMALL FIRE:
- USE FLOODING QUANTITIES OF WATER.
- DO NOT use dry chemical, CO₂, foam or halogenated-type extinguishers.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
 - May be violently or explosively reactive.
- When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 800 metres in all directions.

FIRE/EXPLOSION HAZARD

- Will not burn but increases intensity of fire.
- Heating may cause expansion or decomposition leading to violent rupture of containers. Decomposition may produce toxic fumes of: hydrogen chloride.

FIRE INCOMPATIBILITY

- Avoid storage with reducing agents.
- Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous.

Personal Protective Equipment

Gas tight chemical resistant suit.

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Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

- Clean up all spills immediately.
- No smoking, naked lights, ignition sources.

MAJOR SPILLS

- Clear area of personnel and move upwind.
 - Alert Fire Brigade and tell them location and nature of hazard.
 - DO NOT touch the spill material.
- Cover remainder with a weak reducing agent to destroy available chlorine and mix with water.
Transfer sludge to suitable container and neutralise with soda ash.
Wash spill area with detergent, reducer and water.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Avoid personal contact and inhalation of dust, mist or vapours.
 - Provide adequate ventilation.
- WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material.

SUITABLE CONTAINER

- » Liquid inorganic hypochlorites shall not to be transported in unlined metal drums. Inner packagings shall be fitted with vented closures and plastics drums and carboys shall have vented closures or be performance tested to a minimum of 250 kPa. All non-vented packagings shall be filled so that the ullage is at least 10% at 21-25 deg.C. Vented packagings may be filled to an ullage not less than 5% at 21-25 deg.C, provided that this ullage does not result in leakage from, nor distortion of, the packaging.
- DO NOT repack. Use containers supplied by manufacturer only.
- For low viscosity materials
- Drums and jerricans must be of the non-removable head type.
 - Where a can is to be used as an inner package, the can must have a screwed enclosure.

STORAGE INCOMPATIBILITY

- Contact with acids produces toxic fumes.
- Presence of rust (iron oxide) or other metal oxides catalyses decomposition of inorganic hypochlorites.
- Contact with water can cause heating and decomposition giving off chlorine and oxygen gases. Solid hypochlorites in contact with water or moisture may generate sufficient heat to ignite combustible materials. Thermal decomposition can be sustained in the absence of oxygen.
- Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous.
- Avoid storage with reducing agents.
- Oxidising agents as a class are not necessarily combustible themselves, but can increase the risk and intensity of fire in many other substances.

STORAGE REQUIREMENTS

- Store in original containers.
 - Keep containers securely sealed as supplied.
- In addition, Goods of Class 5.1, packing group II should be:
- stored in piles so that
 - the height of the pile does not exceed 1 metre.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m ³	STEL ppm	STEL mg/m ³
_____	_____	_____	_____	_____	_____

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

New Zealand Workplace Exposure Standards (WES)	calcium hypochlorite, dry (Chlorine)	0.5	1.5	1	2.9
New Zealand Workplace Exposure Standards (WES)	calcium hydroxide hypochlorite (Chlorine)	0.5	1.5	1	2.9
New Zealand Workplace Exposure Standards (WES)	calcium hydroxide (Calcium hydroxide)		5		
New Zealand Workplace Exposure Standards (WES)	chlorine (Chlorine)	0.5	1.5	1	2.9

The following materials had no OELs on our records

- calcium chloride:

CAS:10043- 52- 4

PERSONAL PROTECTION



RESPIRATOR

Type B-P Filter of sufficient capacity

EYE

- Chemical goggles.
- Full face shield may be required for supplementary but never for primary protection of eyes.

HANDS/FEET

- Wear chemical protective gloves, eg. PVC.
- Wear safety footwear or safety gumboots, eg. Rubber.

NOTE:

• The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.

- Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

Suitability and durability of glove type is dependent on usage. Factors such as:

- frequency and duration of contact,
- chemical resistance of glove material,.
- Neoprene gloves.
- DO NOT wear cotton or cotton-backed gloves.
- DO NOT wear leather gloves.

OTHER

- Overalls.
- PVC Apron.

ENGINEERING CONTROLS

- Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
- If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered.

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

White powder with a pungent chlorine odour; soluble in water. Powerful oxidising agent; unstable to heat, friction or direct sunlight. Wetting of solid material can cause heating and decomposition, giving off oxygen and highly toxic chlorine gas.

PHYSICAL PROPERTIES

Solid.
Mixes with water.
Contact with acids liberates toxic gas.

Molecular Weight: 142.98
Melting Range (°C): 100 decomposes
Solubility in water (g/L): Miscible
pH (1% solution): 11.5 @ 5%
Volatile Component (%vol): Nil @ 38 C.
Relative Vapour Density (air=1): Not applicable.
Lower Explosive Limit (%): Not available
Autoignition Temp (°C): Not applicable
State: Divided solid

Boiling Range (°C): Not applicable.
Specific Gravity (water=1): 2.35
pH (as supplied): Not applicable
Vapour Pressure (kPa): Not applicable
Evaporation Rate: Non Volatile
Flash Point (°C): Not Applicable
Upper Explosive Limit (%): Not available.
Decomposition Temp (°C): 100
Viscosity: Not Applicable

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
 - Product is considered stable under normal handling conditions.
 - Presence of elevated temperatures.
 - Presence of incompatible materials.
- Presence of rust (iron oxide) or other metal oxides catalyses decomposition.
For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

- » Harmful if swallowed.
- » Causes burns.
- » Risk of serious damage to eyes.

CHRONIC HEALTH EFFECTS

- » Possible skin sensitiser*.
- » Limited evidence of a carcinogenic effect*.
- » Cumulative effects may result following exposure*.
- » * (limited evidence).

TOXICITY AND IRRITATION

» Hypochlorite salts are classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing. Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Hypochlorite salts are extremely corrosive and can cause severe damage to the eyes and skin. A number of fibrosarcomas and squamous cell carcinomas were observed in mice treated dermally with repeated subcarcinogenic doses of 4-nitroquinoline-1-oxide, followed by dermal treatment with sodium hypochlorite.

CARCINOGEN

calcium hypochlorite,
dry

International Agency
for Research on Cancer
(IARC) Carcinogens

Group

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Section 12 - ECOLOGICAL INFORMATION

Very toxic to aquatic organisms.
This material and its container must be disposed of as hazardous waste.
Avoid release to the environment.
Refer to special instructions/ safety data sheets.

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle where possible
 Otherwise ensure that:
- licenced contractors dispose of the product and its container.

Section 14 - TRANSPORTATION INFORMATION



Labels Required: OXIDIZING AGENT
HAZCHEM: None

UNDG:

Dangerous Goods Class:	5.1	Subrisk:	None
UN Number:	1748	Packing Group:	II
Shipping Name: CALCIUM HYPOCHLORITE, DRY or CALCIUM HYPOCHLORITE MIXTURE, DRY with more than 39% available chlorine (8.8% available oxygen)			

Air Transport IATA:

ICAO/IATA Class:	5.1	ICAO/IATA Subrisk:	None
UN/ID Number:	1748	Packing Group:	II
Special provisions:	A135 A136		
Shipping Name: CALCIUM HYPOCHLORITE, DRY			

Maritime Transport IMDG:

IMDG Class:	5.1	IMDG Subrisk:	None
UN Number:	1748	Packing Group:	II
EMS Number:	F- H, S- Q	Special provisions:	313 314
Limited Quantities:	1 kg		
Shipping Name: CALCIUM HYPOCHLORITE, DRY or CALCIUM HYPOCHLORITE MIXTURE, DRY with more than 39% available chlorine (8.8% available oxygen)			

Section 15 - REGULATORY INFORMATION

REGULATIONS

calcium hypochlorite, dry (CAS: 7778-54-3) is found on the following regulatory lists;
GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships
IMO IBC Code Chapter 17: Summary of minimum requirements
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk
International Agency for Research on Cancer (IARC) Carcinogens
International Council of Chemical Associations (ICCA) - High Production Volume List
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Hazardous Substances Register
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Poisons Schedule [NLV]
New Zealand Workplace Exposure Standards (WES)
OECD Representative List of High Production Volume (HPV) Chemicals
WHO Guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water

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Section 15 - REGULATORY INFORMATION

Specific advice on controls required for materials used in New Zealand can be found at
<http://www.ermanz.govt.nz/search/registers.html>

Section 16 - OTHER INFORMATION

NEW ZEALAND POISONS INFORMATION CENTRE
0800 POISON (0800 764 766)
NZ EMERGENCY SERVICES: 111

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
calcium hydroxide	1305- 62- 0, 1332- 69- 0

» Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references. A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

» The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

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