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# Material Safety Data Sheet

## Hazardous Substance, Dangerous Goods

### 1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

**Product name:** Premium Quality Knockout 700

**Other Names:** Calcium hypochlorite 70%, Chlorinated lime.

**Recommended use:** Swimming pool sanitiser

**Supplier:** Zodiac Group Australia Pty Ltd

**ABN:**

**Street Address:** 219 Woodpark Rd,  
Smithfield NSW 2164  
Australia

**Telephone:** +612 87866800

**Facsimile:** +612 1300781688

**Emergency telephone number:** If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

### 2. HAZARDS IDENTIFICATION

This material is hazardous according to health criteria of NOHSC Australia.

**Hazard Category:**

Xn Harmful  
C Corrosive

**Risk Phrase(s):**

R22: Harmful if swallowed.  
R31: Contact with acids liberates toxic gas.  
R34: Causes burns.  
R41: Risk of serious damage to eyes.

**Safety Phrase(s):**

S22: Do not breathe dust.  
S24/25: Avoid contact with skin and eyes.  
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.  
S38: In case of insufficient ventilation, wear suitable respiratory equipment.

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

**Class:** 5.1 Oxidising Agent

**Product name:** Premium Quality Knockout

**Substance Key:** ZKO

**Issued:** 1<sup>st</sup> July, 2009

**Version:** 2.0

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## Poisons Schedule (Aust): S6

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

### 3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO.	PROPORTION
Calcium hypochlorite	7778-54-3	>90%
Water	7732-18-5	5-10%
Ingredients determined to be non-hazardous	-	Balance
		<hr/> 100%

### 4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

**Inhalation:** Remove victim from 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. Seek medical advice if effects persist.

**Skin contact:** If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.

**Eye contact:** Immediately irrigate with copious quantities of water for 15 minutes. Eyelids to be held open. 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 to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Get to a doctor or hospital quickly.

**Notes to physician:** Treat symptomatically. Effects may be delayed. Can cause corneal burns.

### 5. FIRE-FIGHTING MEASURES

**Specific hazards:** Non-combustible material. Contact with combustible or organic materials may result in ignition.

**Fire fighting further advice:** Not combustible, however material will decompose if involved in a fire. On decomposing may emit toxic fumes, including chlorine, and also oxygen an accelerant. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.

**Hazchem Code:** 2W

**Suitable extinguishing media:** N Not combustible, however, if material is involved in a fire use water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).



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## 6. ACCIDENTAL RELEASE MEASURES

### SMALL SPILLS

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours. Wipe up with absorbent (clean rag or paper towels). Allow absorbent to dry before disposing with normal household garbage. Collect and seal in properly labelled containers or drums for disposal.

### LARGE SPILLS

Clear area of all unprotected personnel. Wear protective equipment to prevent skin and eye contamination and the inhalation of dust. Work up wind or increase ventilation. Cover with damp absorbent (inert material, sand or soil). Sweep or vacuum up, but avoid generating dust. Collect and seal in properly labelled containers or drums for disposal. If contamination of sewers or waterways has occurred advise local emergency services.

**Dangerous Goods – Initial Emergency Response Guide No: 31**

## 7. HANDLING AND STORAGE

**Handling:** Avoid skin and eye contact and inhalation of dust.

**Storage:** Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from incompatible materials described in Section 10. Store away from sources of heat. Keep containers closed when not in use - check regularly for spills.

This material is classified as a Dangerous Good Class 5.1 Oxidising Substance as per the criteria of the Australian Dangerous Goods Code and must be stored in accordance with the relevant regulations.

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

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### National occupational exposure limits:

No value assigned for this specific material by the National Occupational Health and Safety Commission (NOHSC Australia).

However for:

	TWA		STEL		CARCINOGEN CATEGORY	NOTICES
	ppm	mg/m3	ppm	mg/m3		
Chlorine	1	3	Peak limitation		-	-

As published by the National Occupational Health & Safety Commission (NOHSC Australia).

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

STEL (Short Term Exposure Limit) - the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.



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Peak Limitation - a ceiling concentration that should not be exceeded over a measurement period, which should be as short as possible, but not exceeding 15 minutes.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept too 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.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

**Biological Limit Values:** As per the "National Model Regulations for the Control of Workplace Hazardous Substances [NOHSC: 1005 (1994)]" the ingredients in this material do not have a Biological Limit Allocated.

**Engineering measures:** Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Avoid generating and inhaling dusts. Use with local exhaust ventilation or while wearing appropriate respirator. Chlorine gas vapour is heavier than air - prevent concentration in hollows or sumps. DO NOT enter confined spaces where vapour may have collected. Keep containers closed when not in use.

**Personal protection equipment:** OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, DUST MASK.

Wear overalls, chemical goggles and impervious gloves. Avoid generating and inhaling dusts. If dust exists, wear respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from neoprene or nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Form / Colour / Odour:** White to cream, dry free flowing powder with chlorine odour.

<b>Solubility in water:</b>	Appreciable
<b>Specific Gravity (20 °C):</b>	2.35
<b>Relative Vapour Density (air=1):</b>	N App
<b>Vapour Pressure (20 °C):</b>	N App
<b>Flash Point (°C):</b>	N App
<b>Odour Threshold:</b>	1-3 ppm*
<b>Flammability Limits (%):</b>	N App
<b>Autoignition Temperature (°C):</b>	N App
<b>Melting Point/Range (°C):</b>	approx 100
<b>Boiling Point/Range (°C):</b>	N App
<b>Decomposition Point (°C):</b>	N Av
<b>pH:</b>	N App
<b>Moisture content (%):</b>	5-10%
<b>Molecular formula</b>	Ca(OCl) <sub>2</sub>
<b>Molecular weight</b>	142.99

\* values for chlorine

(Typical values only - consult specification sheet)

N Av = Not available

N App = Not applicable



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## 10. STABILITY AND REACTIVITY

**Chemical stability:** This material is thermally stable when stored and used as directed.

**Conditions to avoid:** Elevated temperatures will result in the material decomposing releasing chlorine gas.

**Incompatible Materials:** Will react with most organic chemicals. Corrosive to most metals in the presence of moisture.

**Hazardous decomposition products:** Oxides of carbon and nitrogen, chlorine, smoke and other toxic fumes.

**Hazardous reactions:** Contact with acids will result in the evolution of chlorine gas.

## 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:

### Acute Effects

**Inhalation:** Material may be irritant to mucous membranes and respiratory tract.

**Skin contact:** Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.

**Eye contact:** A severe eye irritant. Corrosive to eyes: contact can cause corneal burns. Contamination of eyes can result in permanent injury.

**Ingestion:** Harmful if swallowed. Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.

**Long Term Effects:** No information available for product.

### Acute toxicity / Chronic toxicity

No LD50 data available for the product.

Oral LD50 (rat): 850 mg/Kg

## 12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

**Ecotoxicity:** No information available.

**Persistence and degradability:** No information available.

**Mobility:** No information available.



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## 13. DISPOSAL CONSIDERATIONS

Refer to State/Territory Land Waste Management Authority.

## 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.

**UN No:** 2880  
**Dangerous Goods Class:** 5.1  
**Packing Group:** II  
**Hazchem Code:** 2W  
**Emergency Response Guide No:** 31

**Proper Shipping Name:** CALCIUM HYPOCHLORITE, HYDRATED

**Segregation Dangerous Goods:** Not to be loaded with explosives (Class 1), flammable gases (Class 2.1), toxic gases (Class 2.3), flammable liquids (Class 3), flammable solids (Class 4.1), spontaneously combustible substances (Class 4.2), dangerous when wet substances (Class 4.3), organic peroxides (Class 5.2), radioactive substances (Class 7), corrosive substances (Class 8), fire risk substances or combustible liquids, however exemptions may apply. Also note that fire risk substances including dangerous goods of Class 6 or Class 9 which are fire risk substances are incompatible with dangerous goods of Class 1, Class 5.1 and Class 5.2.

### MARINE TRANSPORT

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

**UN No:** 2880  
**Dangerous Goods Class:** 5.1  
**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.

**UN No:** 2880  
**Dangerous Goods Class:** 5.1  
**Packing Group:** II

**Proper Shipping Name:** CALCIUM HYPOCHLORITE, HYDRATED

## 15. REGULATORY INFORMATION

**Poisons Schedule (Aust):** S6



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All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

## 16. OTHER INFORMATION

### Literary reference

This Material Safety Data Sheet has been prepared by Chemical Data Services Pty Ltd on behalf of its client.

Reason(s) For Issue: Revised

Material Safety Data Sheets are updated frequently. Please ensure that you have a current copy.

This MSDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle and use the product in the workplace. Since Premium Quality Pool Products Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this MSDS in the context of how the user intends to handle and use the product in the workplace.

All information given in this data sheet and by the company's technical staff is compiled from the information currently available to the company. The company accepts no responsibility whatsoever for its accuracy, or for any results which may be obtained by customers. Any customer who relies upon any advice or information given in this data sheet by the company or by its technical staff does so entirely at its own risk, and the company will not be liable for any loss or damage thereby suffered notwithstanding any want of care on the part of the company or its staff in compiling or giving the advice or information.

This information is given without warranty or representation. Before using any product, always read the label carefully.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.

Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request.