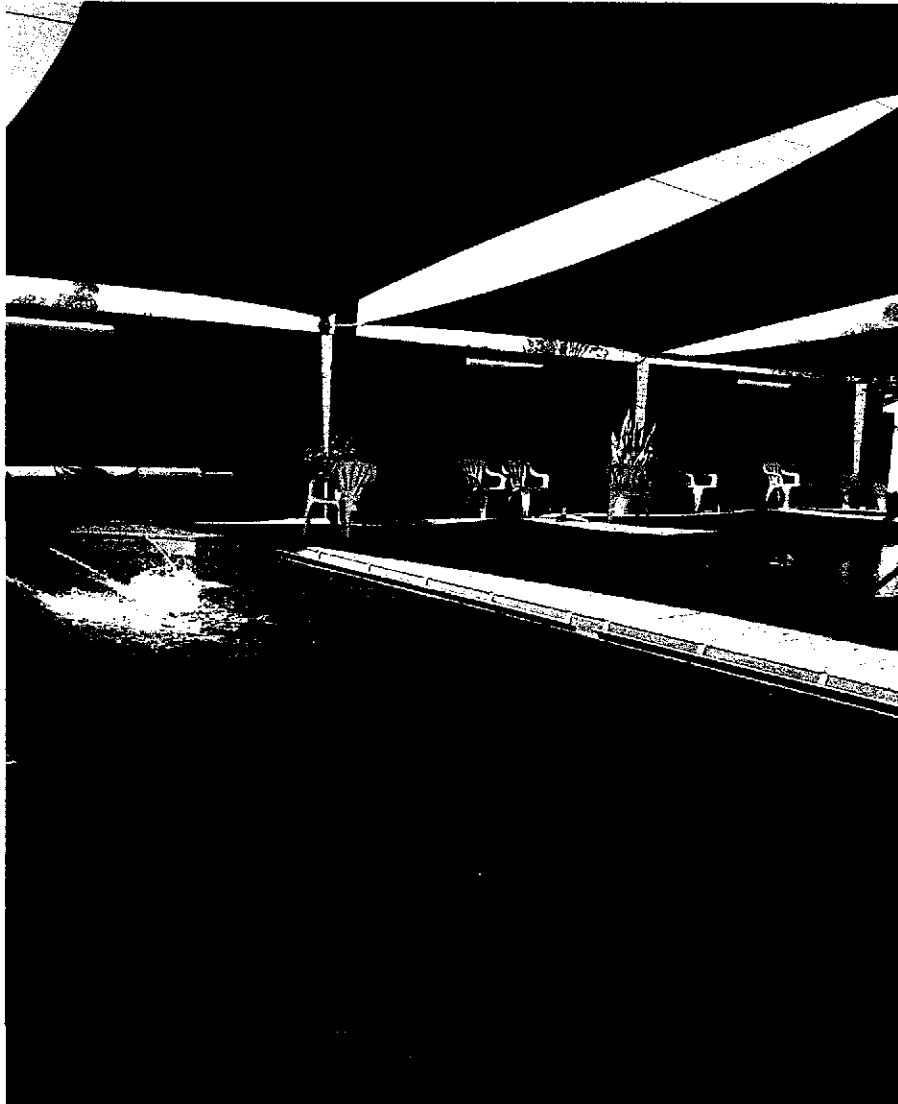


Dragon Phoenix Resort and Restaurant

Pollution Incident Response Management Plan

EPA License No. 11821



Introduction

Dragon and Phoenix Resort and Restaurant (DPRR) has prepared a Pollution Incident Response Management Plan (PIRMP) for the Dragon Phoenix swimming pool facility located at 361 Frome Street, Moree. The annual return date is 31 August every year.

The licence regulates water pollution resulting from the swimming pool.

The PIRMP contains details of site specific action that DPRR have or will, (when required as a result of an incident), put in place to improve the way pollution incidents are reported, managed and communicated to the general community.

These actions meet the environmental requirements introduced by the Protection of Environment Operations Act 1997 (POEO Act).

1.0 Objectives

The PIRMP aims to ensure there is:

1. Comprehensive and timely communication about a pollution incident to staff at the premises, the Environmental Protection Authority, other relevant authorities specified by the Act, and people outside the facility who may be affected by the impacts of the pollution incident.
2. Control of risk of a pollution incident at the facility by requiring identification of risks and the development of planned pre-emptive actions to minimise and manage these risks; and
3. A plan properly implemented by trained staff, identifying persons responsible for implementing it, and ensuring that the plan is regularly tested for accuracy, currency and suitability.

2.0 Description of Hazard

Spillage of pool chemicals – during unloading to onsite storage.

Rupture of spa discharge pipe

3.0 Pre-emptive Actions to be taken

The following pre-emptive actions shall be implemented to mitigate the hazards

Hazard description	Pre-emptive action
Spillage of pool chemicals	1. Spill kit on site

	<ol style="list-style-type: none"> 2. Fire extinguishers located at the main office 3. Fire extinguishers checked and maintained annually by accredited person 4. Chemical SDS updated regularly 5. Pool chemicals store is secure 6. Storage is ventilated. 7. Daily check of stock/ area.
Rupture of spa discharge pipe to stormwater drain, leading to escape of artesian water to surround land in breach of licence	Routine inspection of hydraulic lines and pumps

4.0 Inventory of Potential Pollutants

Potential Pollutant	Max Possible Quantity	Storage Details
Sodium Hypochlorite	100 Litres x 1 tank	Store room next to the owner resident
Tidie	20 litres x 2 drums	Store room next to indoor pool

5.0 Contact details for Immediate Notification of a Pollution Incident

Under the Protection of the Environment Operations Act 1997, it is now a requirement that all pollution incidents are report to the EPA, NSW Health, Fire & Rescue NSW, WorkCover NSW, and the local Council when material harm to the environment is caused or threatened.

If the incident presents an immediate threat to human health or property, 000 will be called first as Fire & Rescue NSW, the NSW police and the NSW Ambulance Service are the first responders, as they are responsible for controlling and containing incidents.

If the incident does not require an initial combat agency, or once the 000 call has been made, notification to the following authorities in the list order should occur. The 24 hours hotline for each authority is given

NSW Environment Protection Authority Environment Line - Armidale	131555 or 6776 0000
Moree Hospital	6757 0000
Work Cover	131050

Moree Plains Shire Council	6757 3222
Fire, Police and Ambulance	000

6.0 Communicating with neighbours and the Community

Early warning and regular update to owners and occupiers of premises who may be affected by an incident occurring at the DPRR will be notified as follows:

Properties surrounding the facility:

Should a neighbour be required to take actions due to an impending or actual pollution risk, a call to the telephone (landline and /or mobile) of the resident or business where a pollution impact may be experienced will be made by the management of DPRR.

In the event of a major pollution incident, residents or businesses may be further contacted by an emergency service representative, such as in a case where evacuation or critical safety actions are necessary.

An “all-clear” telephone call will also be made to residents when the incident is no longer of concern or normality has been restored.

Wider community:

Depending on the nature, scale and timing of the incident, DPRR will provide information via the local media.

7.0 Staff Training

Staff are required to have training in and hold the following qualification / certificates where applicable:

First Aid

Chemical handling

8.0 Testing Plan

This plan will be tested once every 12 months to ensure that the information contained is accurate and up to date.

9.0 Site Plan

The plan shows the location of chemical storage and emergency assembly point (appendix A)

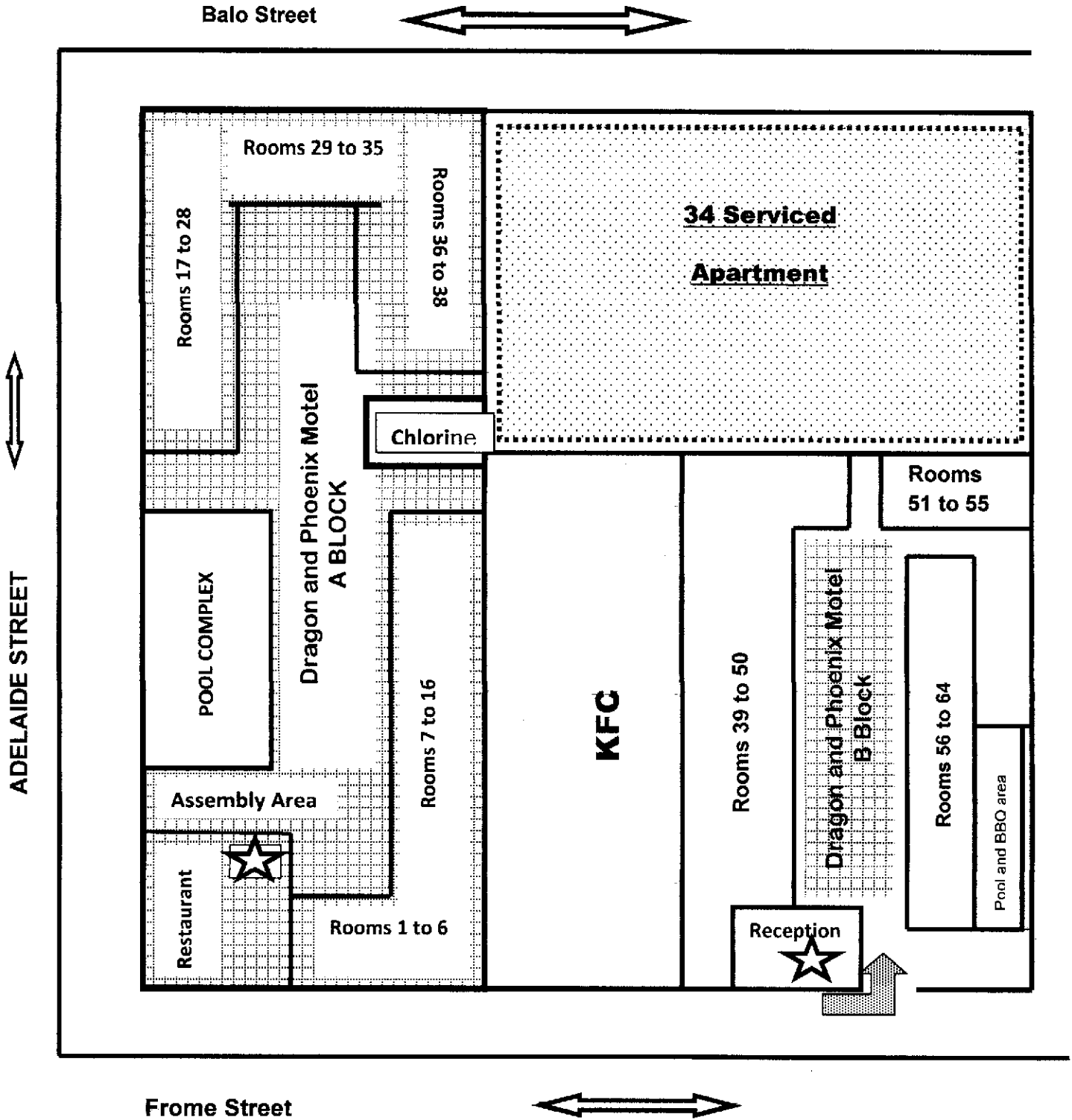
10. MSDS

See the appendix B

11. Further Information

The PIRMP has been developed to comply with legislative obligations and is not an indication of increased pollution risk from the facility. DPRR welcomes any further enquiry about the PIRMP which can be made by calling DPRR directly on 02 6752 5555

Appendix A



Appendix B

Safety Data Sheet

Sodium Hypochlorite

Mountain Cleaning Products

Issue Date: April 2016

Valid to: April 2021

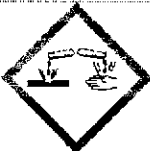
SECTION 1: IDENTIFICATION OF PRODUCT AND COMPANY

Trade Name:	Sodium Hypochlorite
Synonyms:	Bleach, Chlorine
Chemical Formula:	NA
CAS Number:	NA
Product Uses:	Sanitising, disinfecting and bleaching agent
Supplier/Manufacturer:	Mountain Cleaning Products
Address:	7/7/ Snow St, South Lismore, NSW 2480
Telephone:	02 6622 8733
Fax:	02 6622 8744
Email:	support@mountaincleaning.com.au
Website:	www.mountaincleaning.com.au
Emergency Telephone:	13 11 26 (Poisons Information Centre)

SECTION 2: HAZARD(S) IDENTIFICATION

GHS Classification:	Corrosive to metals (Category 1). Skin corrosion (Sub-category 1C). Eye damage (Category 1).
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LABELLING ELEMENTS:

Signal Word:	Danger
Pictogram(s):	 Corrosive
Hazard Statement(s):	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. AUH031 Contact with acid liberates toxic gas.
Precautionary Statement(s):	Prevention P234 Keep only in original container. P260 Do not breathe fumes/gas/mist/vapours/spray. P264 Wash hands thoroughly after handling.

Safety Data Sheet

Sodium Hypochlorite

Mountain Cleaning Products

Issue Date: April 2016

Valid to: April 2021

	<p>P273 Avoid release to the environment (unless intended use). P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>Response P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Immediately take off all contaminated clothing. Rinse skin with water/shower. P363 wash contaminated clothing before reuse. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTRE (13 11 26) or doctor. P321 Specific treatment, see First Aid Measures on this Safety Data Sheet. P390: Absorb spillage to prevent material damage P391: Collect spillage.</p>
Storage:	<p>P405 Store locked up. P406: Store in corrosive resistant container.</p>
Disposal:	<p>P501 Dispose of contents/container to an approved waste disposal plant.</p>

SECTION 3: COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredients	CAS No.s	Percentage (w/w)	Classification
Water	7732-18-5	>60%	
Sodium hypochlorite	7681-52-9	10-13%	H314 + H400
Sodium hydroxide	1310-73-2	<1%	H314

SECTION 4: FIRST AID MEASURES

First Aid Facilities:	Normal washroom facilities. Safety shower and emergency eye wash.
Eye Contact:	Immediately irrigate with copious quantities of water for at least 20 minutes. Eyelids to be held open. Seek medical advice

Safety Data Sheet

Sodium Hypochlorite

Mountain Cleaning Products

Issue Date: April 2016

Valid to: April 2021

	(e.g. ophthalmologist) if there are ongoing symptoms.
Skin Contact:	Remove contaminated clothing. Immediately wash contaminated skin with plenty of soap and water. Seek medical advice if irritation, burning or redness occurs and persists.
Inhalation:	Remove victim to fresh air away from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position, keep warm and at rest. If breathing laboured and patient cyanotic (blue), ensure airways are clear and have qualified person give oxygen through a facemask. If breathing has stopped apply artificial respiration at once. Seek immediate medical advice.
Ingestion:	Do NOT induce vomiting. Do NOT attempt to give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Give water to drink. If vomiting occurs, give further water to achieve effective dilution. Seek medical advice.
Advice to Doctor:	No specific antidote. Treat symptomatically. All treatments should be based on observed signs and symptoms of distress of the patient. Poisons Information Centre in each Australian State capital city or in Christchurch, New Zealand can provide additional assistance for scheduled poisons.
Scheduled Poisons:	Poisons Information Centre in each Australian State capital city can provide additional assistance for scheduled poisons. Phone Australia 13 11 26.

SECTION 5: FIRE FIGHTING MEASURES

Fire and Explosion Hazard:	Non-flammable. May evolve toxic gas (chlorine) when heated to decomposition.
Extinguishing Media:	If material is involved in a fire use fine water spray, or use normal foam or dry agent (carbon dioxide, dry chemical powder).
Fire Fighting:	Keep containers exposed to extreme heat cool with fine water spray. Fire fighters to wear self-contained breathing apparatus if risk of exposure to products of combustion or decomposition.
Flash Point:	None.
Hazchem Code:	2X

Safety Data Sheet

Sodium Hypochlorite

Mountain Cleaning Products

Issue Date: April 2016

Valid to: April 2021

SECTION 6: ACCIDENTAL RELEASE MEASURES

Minor Spills:	Do not normally require special clean-up measures. Sweep up residues and rinse area with water.
Major Spills:	For example transport accident or bulk spill. Clear area of unprotected personnel. Work up wind or increase ventilation. Prevent spillage from entering drains or watercourses. Wear appropriate protective equipment (see section 8) to prevent skin and eye contamination and inhalation of fumes. Contain spillage, then cover/absorb spill into dry, inert material (e.g. sand, earth or vermiculite), collect and place into suitable containers, appropriately labeled, for disposal by an approved agent according to local conditions. Spillage area may remain slippery. Flush spill area with water. If contamination of sewers or waterways has occurred advise the local emergency services. In the event of a large spillage notify the local environment protection authority or emergency services.
PPE:	Personal protective equipment advice is contained in Section 8 of this document.

SECTION 7: HANDLING AND STORAGE

Handling:	Avoid skin and eye contact and avoid breathing in vapours. Keep out of reach of children. Always wash hands with water after handling.
Storage:	Store in a cool, dry, place with good ventilation and out of direct sunlight. Avoid storing in aluminium and alloy containers. Store away from incompatible materials (see Section 10). Keep containers closed at all times when not in use.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS: None established for this product.

Ingredient	TWA	STEL	Notes
Sodium hypochlorite	1ppm- 3mg/m3	Not set	
Sodium hydroxide	2mg/m3		

Safety Data Sheet

Sodium Hypochlorite

Mountain Cleaning Products

Issue Date: April 2016

Valid to: April 2021

Personal Protection:	Overalls, chemical goggles or face shield, gloves (LONG). Possibly apron and rubber boots.
Engineering Controls:	Ensure ventilation is adequate. Where an inhalation risk exists, mechanical extraction ventilation is recommended to maintain vapour levels below recommended exposure standard.
Eye and Face Protection:	Chemical goggles or face shield.
Hand and Skin Protection:	Wear impervious PVC or rubber gloves (long) to dispense. Wear coveralls. When using large quantities or where heavy contamination is likely, wear rubber boots and a PVC apron.
Inhalation Protection:	Where an inhalation risk exists wear a Type B (inorganic vapours and gasses) respirator that meets AS/NZS 1715 and AS/NZS 1716.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear pale yellow liquid
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Odour:	Chlorine	Vapour Pressure:	Not available
Odour Threshold:	Not available	Vapour Density:	Not available
pH:	12.5-13.5 neat	Relative Density (Water=1):	1.17-1.2 @ 25 °C
Melting/Freezing Point:	Not available	Water Solubility:	Soluble
Boiling Point:	100 °C approx.	Partition Coefficient n-Octanol/Water	Not available
Flash Point:	Not relevant	Auto-ignition Temperature	Not available
Evaporation Rate:	Not available	Decomposition Temperature	Not available
Flammability:	Not flammable	Viscosity	Non viscous
Upper/Lower Flammability:	Not relevant		

SECTION 10: STABILITY AND REACTIVITY

Safety Data Sheet

Sodium Hypochlorite

Mountain Cleaning Products

Issue Date: April 2016

Valid to: April 2021

Reactivity:	May evolve chlorine gas when heated to decomposition.
Chemical Stability:	Stable under recommended conditions of storage.
Possibility of Hazardous Reactions:	Hazardous polymerisation will not occur. Reacts exothermically with acids. Reacts with ammonia, amines and ammonium salts to produce chloramines. Decomposes on heating to produce chlorine gas.
Conditions to Avoid:	Avoid contact with foodstuffs; exposure to heat, ignition sources and open flame; and exposure to direct sunlight. Avoid contact with acids and mixing with other chemicals.
Incompatible Materials:	Acids, metals, metal salts, organic materials (e.g. peroxides), reducing agents (e.g. amines), EDTA.

SECTION 11: TOXICOLOGICAL INFORMATION

Inhaled:	Breathing in mists or aerosols may produce respiratory irritation, coughing, nausea and headache. Delayed (up to 48 hours) fluid build up in lungs may occur.
Skin Contact:	May result in irritation, redness, pain, rash, dermatitis and possible burns.
Eye Contact:	Corrosive to eyes. Contact can cause irritation; redness, corneal burns and can possibly result in permanent injury.
Ingestion:	Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.
Acute Toxicity:	No LD50 data available for this product. For main active constituent, sodium hypochlorite: Oral LD50 (mice) - 5800mg/kg Oral TDLo (woman) - 1gm/kg Intravenous TDLo (man) - 45mg/kg
Chronic:	No information available.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:	Acute aquatic toxicity (Category 1). Very toxic to aquatic life. Avoid contaminating waterways. LC50 (fish) - 0.07-5.9 mg/l – 48h.
Persistence and	Biodegradable to salt and oxygen.

Safety Data Sheet

Sodium Hypochlorite

Mountain Cleaning Products

Issue Date: April 2016


Valid to: April 2021

Degradability:	
Bioaccumulative Potential:	None known.
Mobility in Soil:	May leach to ground water with resultant toxicity to aquatic organisms.
Other Adverse Affects:	None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal Methods:	Refer to Waste Management Authority. Dispose of material through a licensed waste contractor. Decontamination and destruction of containers should be considered.
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SECTION 14: TRANSPORT INFORMATION

ADG Code Classification:	Dangerous Goods.
UN No.:	1791
Proper Shipping Name:	HYPOCHLORITE SOLUTION
Transport Hazard Class:	8 – Corrosive
	
Packing Group:	III
Hazchem Code:	2X
Environmental Hazards for Transport:	Harmful to aquatic life.

SECTION 15: REGULATORY INFORMATION

SUSMP (Poison Schedule):	S5 Caution
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SECTION 16: OTHER INFORMATION

Abbreviations:	ADG – Australian Code for the Transport of Dangerous Goods by
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Safety Data Sheet

Sodium Hypochlorite

Mountain Cleaning Products

Issue Date: April 2016

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	<p>Road and Rail.</p> <p>CAS No. - Chemical Abstract Service Number used to uniquely identify chemical compounds.</p> <p>GHS - Globally Harmonised System.</p> <p>IARC - International Agency for Research on Cancer.</p> <p>LD50 - Lethal Dose, 50%/median Lethal Dose.</p> <p>Mg/m³ - Milligrams per cubic metre.</p> <p>PPM – Parts per million.</p> <p>STEL – Short Term Exposure Limit.</p> <p>STOT - RE – Specific Target Organ Toxicity (repeated exposure).</p> <p>STOT – SE - Specific Target Organ Toxicity (single exposure).</p> <p>SUSMP – Standard for the Uniform Scheduling of Medicines and Poisons.</p> <p>TWA/OEL – Time Weighted Average or Occupational Exposure limit.</p>
Revision History:	Rev 1.0 Initial SDS for GHS compliance.
Prepared By:	Mountain Cleaning Products Regulatory Service.

END OF SDS

Mountain Cleaning Products

7/7 Snow St., SOUTH LISMORE. 2480
 Phone: (02) 6622 8733
 Fax: (02) 6622 8744
 Emergency: 0404 226 509

MATERIAL SAFETY DATA SHEET

Product: TYDIE
 Date of Issue: JULY 2011
 Page: 1 of 7
 Email: support@mountaincleaning.com.au

SECTION 1 – STATEMENT OF HAZARDOUS NATURE, CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

This product is classified as **HAZARDOUS** according to criteria of the National Occupational Health and Safety Commission Australia. This product is classified as **Dangerous Goods Class 8** according to the Australian Dangerous Goods (ADG) Code. This product is classified as a **Schedule 5 Poison** according to the SUSDP.

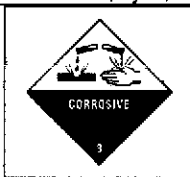
SUPPLIER:	MOUNTAIN CLEANING PRODUCTS		
ADDRESS:	7/7 Snow Street, South Lismore, NSW, 2480		
Trade Name:	"TYDIE" ACID CLEANER		
TELEPHONE:	(02) 6622 8733	FAX:	(02) 6622 8744
AH EMERGENCY TELEPHONE:	13 1126 in Australia	ABN:	51 147 855 418
Substance:	Water based cleaner	Product Use:	Detergent
Creation Date:	MAR 2003	Next Revision Date:	JULY 2016
Product Code:	6341		

SECTION 2 – HAZARDS IDENTIFICATION

Approved Criteria Classification (calculated)	C – Corrosive, Xn – Harmful R35 – Causes severe burns. R20/21/22 – Harmful by inhalation, in contact with skin and if swallowed. S(1/2) – Keep locked up and out of reach of children. S9 – Keep container in a well-ventilated place. S24/25 – Avoid contact with skin and eyes. S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28 – After contact with skin, wash immediately with plenty of soap-suds. S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection. S45 – In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible).		
UN Number	1760	ADG Classification	8
Shipping Name	CORROSIVE LIQUID, N.O.S.	ADG Subsidiary Risk	none allocated
Hazchem Code	2X	Packing Group	III
SUSDP Classification	S5 CAUTION		

EMERGENCY OVERVIEW

Colour	blue	Odour	acidic odour
Physical Description	Liquid	Viscosity	viscous liquid
Major Health Hazards	CORROSIVE and HARMFUL – skin, eyes, mucous membranes.		



SECTION 3 – COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredients determined not to be hazardous are present in concentrations that do not exceed the relevant cut-off concentrations as found from NOHSC publication "List of Designated Hazardous Substances" or have been found NOT to meet the criteria of a hazardous substance as defined in the NOHSC publication "Approved Criteria for Classifying Hazardous Substances".

Ingredients:	CAS Number:	Proportion:	Exposure Standards TWA	Exposure Standards STEL
Oxalic acid	6153-56-6	< 10 % w/w	1 mg/m ³	2 mg/m ³
Sulphamic acid	5329-14-6	< 10 % w/w	not set	not set
Hydrochloric acid	7647-01-0	< 10 % w/w	5 ppm	not set
Quaternary ammonium compounds	63449-41-2	< 10 % w/w	not set	not set
Ingredients determined to be non-hazardous	various	< 10 % w/w	not set	not set
Water	7732-18-5	30 - 60 % w/w	not set	not set

The TWA exposure value is the Time Weighted Average airborne concentration of a particular substance when calculated over a normal 8

Mountain Cleaning Products

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MATERIAL SAFETY DATA SHEET

Product: TYDIE

Date of Issue: JULY 2011

Page: 2 of 7

Email: support@mountaincleaning.com.au

hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

SECTION 4 – FIRST AID MEASURES

Scheduled Poisons	Poisons Information Centre in each Australian State capital city or in Christchurch, New Zealand can provide additional assistance for scheduled poisons. (Phone Australia 131126 or New Zealand 03 474 7000).
First Aid Facilities	Normal washroom facilities. Safety shower and emergency eye wash.
Inhalation	Remove victim to fresh air away from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position, keep warm and to rest. 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. Seek immediate medical advice (e.g. doctor).
Skin contact	Wash skin with plenty of water. Remove contaminated clothing and wash before re-use. Seek medical advice (e.g. doctor) if irritation, burning or redness develops.
Eye contact	Immediately irrigate with copious quantities of water for at least 20 minutes. Eyelids to be held open. Seek medical advice (e.g. ophthalmologist).
Ingestion	Do NOT induce vomiting. Do NOT attempt to give anything by mouth to an unconscious person. Rinse mouth thoroughly with water immediately. Give water to drink. If vomiting occurs, give further water to achieve effective dilution. Seek medical advice (e.g. doctor).
Advice to Doctor	No specific antidote. Treat symptomatically. All treatments should be based on observed signs and symptoms of distress of the patient. Poisons Information Centre in each Australian State capital city or in Christchurch, New Zealand can provide additional assistance for scheduled poisons.
Aggravated Medical Conditions	None known.

SECTION 5 – FIRE FIGHTING MEASURES

Fire and Explosion Hazards	Water based. Not combustible. However if involved in a fire will emit toxic fumes. Can react with metals to produce flammable hydrogen gas.
Extinguishing Media	Use carbon dioxide (CO2) fire extinguisher, water fog or fine water spray.
Fire Fighting	Keep containers exposed to extreme heat cool with water spray. Fire fighters to wear self-contained breathing apparatus if risk of exposure to products of combustion or decomposition. Evacuate area - move upwind of fire.
Flash Point	None

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Emergency Procedures	HAZCHEM CODE : 2X 2 = water fog – in the absence of fog, a fine spray may be used. X = No risk of violent explosion, Full protective clothing, Contain.
Occupational Release	Minor spills do not normally need any special clean-up measures. In the event of a major spill, prevent spillage from entering drains or water courses. Wear appropriate protective equipment as in section 8 below to prevent skin and eye contamination. Spilt material may result in a slip hazard and should be absorbed into dry, inert material (e.g. sand, earth or vermiculite), which then can be put into appropriately labelled drums for disposal by an approved agent according to local conditions. Wash area down with excess water. Residual deposits will remain slippery. Consider neutralization with SODA ASH. If contamination of sewers or waterways has occurred advise the local emergency services. In the event of a large spillage notify the local environment protection authority or emergency services.

SECTION 7 – HANDLING AND STORAGE

Handling	Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers closed at all times. Avoid physical damage to containers. Always wash hands with water after handling.
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MATERIAL SAFETY DATA SHEET

Product: TYDIE




Date of Issue: JULY 2011

Page: 3 of 7

Email: support@mountaincleaning.com.au

Storage	Store in a cool, dry, place with good ventilation. Avoid storing in aluminium and light alloy containers. Store away from incompatible materials (Section 10). Keep containers closed at all times – check regularly for leaks.
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SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits	National Occupational Exposure Limits, as published by National Occupational Health & Safety Commission: Time-weighted Average (TWA): None established for specific product. See SECTION 3 for Exposure Limits of individual ingredients. Short Term Exposure Limit (STEL): None established for specific product. See SECTION 3 for Exposure Limits of individual ingredients.
Biological Limit Value	None established for product.
Engineering Controls	Ensure ventilation is adequate to maintain air concentrations below exposure standards. Avoid generating mists of the product. Use only in a well-ventilated area. Ensure airflow, where this product is used, is directed away from the operators. Where high contaminant spray mist or vapour levels exist, ie, approaching the exposure limit, the following additional equipment is required: For short elevated exposures, eg, spillages:- Appropriate organic vapour cartridge respirator as per the requirements of AS/NZS 1715 and AS/NZS 1716 (Respiratory protective devices). For prolonged exposure and confined spaces:- full face air supplied or self contained breathing apparatus (if vapour levels exceed the Exposure Limit by more than ten times, air supplied apparatus should be used).
Personal Protective Equipment	Use good occupational work practice. The use of protective clothing and equipment depends upon the degree and nature of exposure. Final choice of appropriate protection will vary according to individual circumstances i.e. methods of handling or engineering controls and according to risk assessments undertaken. The following protective equipment should be available;
Eye Protection 	The use of chemical goggles or a face shield is recommended. Contact lenses pose a special hazard ; soft lenses may absorb irritants and all lenses concentrate them.
Skin Protection 	Overalls, apron, rubber boots and elbow length gloves are recommended for handling the concentrated product (as per AS/NZS 2161, or as recommended by supplier) to handle in quantity, cleaning up spills, decanting, etc.
Protective Material Types	Material suitable for alkaline detergent contact – Butyl rubber, Natural Latex, Neoprene, PVC, and Nitrile.
Respirator 	If the exposure limit is exceeded briefly, a full facepiece respirator with an organic vapour cartridge may be worn. For short elevated exposures, eg, spillages:- Appropriate organic vapour cartridge respirator as per the requirements of AS/NZS 1715 and AS/NZS 1716 (Respiratory protective devices). For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. Exposure Limit by more than ten times, air supplied apparatus should be used). WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres. EMERGENCY OR PLANNED ENTRY INTO UNKNOWN CONCENTRATION OR IDLH CONDITIONS: Positive pressure, with full-facepiece SCBA or positive pressure, full-facepiece SAR with an auxiliary positive pressure SCBA. (3M Respirator Selection Guide) 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. ABBREVIATIONS: SAR = supplied air respirator. SCBA = self contained breathing apparatus.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Viscous liquid	Colour	Blue
Odour	acidic odour.	Specific Gravity	1.0 – 1.2 @ 25 °C
Boiling Point	Approximately 100 °C.	Freezing Point	Approximately 0 °C
Vapour Pressure	Not available	Vapour Density	Not available.
Flash Point	Not flammable	Flammable Limits	none
Water Solubility	Miscible in all proportions.	pH	< 2 neat
Volatile Organic Compounds (VOC)	0 % v/v.	Coefficient of Water/Oil Distribution	Not available.
Viscosity	Not available.	Odour Threshold	Not available.

Mountain Cleaning Products

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MATERIAL SAFETY DATA SHEET

Product: TYDIE

Date of Issue: JULY 2011

Page: 4 of 7

Email: support@mountaincleaning.com.au

Evaporation Rate	Not available.	Per Cent Volatile	Ca 70 % v/v.
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SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability	Stable at normal temperatures and pressure.
Conditions to Avoid	ALKALI: violent reaction can occur, yielding heat and pressure which can burst an enclosed container. Attacks many reactive metals (aluminium/magnesium/zinc alloys) releasing highly flammable gas (hydrogen) which generates fire or explosion hazards.
Incompatible Materials	Reacts vigorously with alkalis. Reacts with metal salts, oxidizers and reducing agents.
Hazardous Decomposition Products	Product can decompose on combustion to form Carbon Monoxide, Carbon Dioxide, and other possibly toxic gases and vapours.
Hazardous Reactions	Reacts vigorously with alkalis.

SECTION 11 – TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Ingestion	
short term exposure	Highly corrosive and toxic if swallowed. Swallowing can result in corrosion of the gastrointestinal tract, vomiting, diarrhoea, and abdominal pain.
long term exposure	No information available.
Skin contact	
short term exposure	Corrosive to skin. Can cause severe skin burns.
long term exposure	Prolonged and repeated skin contact with diluted solutions may induce eczematoid dermatitis.
Eye contact	
short term exposure	Corrosive to eyes. May cause severe and permanent damage.
long term exposure	Repeated overexposure may lead to chronic conjunctivitis.
Inhalation	
short term exposure	Vapours are pungent and corrosive. Can cause tissue damage to respiratory tract. May cause nausea, increased respiration and lung disease. Exposure to high vapour concentrations or the acid as a mist may lead to lung damage including pulmonary oedema. Effects may be delayed. Vapour is irritant to mucous membranes and respiratory tract above 35 ppm HCl.
long term exposure	Repeated exposure to low levels may produce erosion of the teeth and ulceration of the nose and gums.
Carcinogen Status	
NOHSC	No significant ingredient is classified as carcinogenic by NOHSC.
NTP	No significant ingredient is classified as carcinogenic by NTP.
IARC	No significant ingredient is classified as carcinogenic by IARC.
Medical conditions aggravated by exposure	Persons with pre-existing skin disorders or eye problems, or impaired kidney or respiratory function may be more susceptible to the effects of the substance.

PRODUCT MIXTURE INFORMATION

Local Effects	Corrosive and Toxic : eye, skin, inhalation and ingestion.
Target Organs	Eyes, mucous membranes, skin, lungs.

CLASSIFICATION OF INDIVIDUAL INGREDIENTS

Ingredients	R-Phrases.
Hydrochloric acid	R35, R23
Oxalic acid	R21/22
Quaternary ammonium compounds	R34, R21/22,R41
Sulphamic acid	R36/38

Individual Ingredient Information

NOTE : This information relates to each individual ingredient, when evaluated as pure undiluted chemical. See Section 3 for proportions of ingredients present in the product.

Mountain Cleaning Products

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MATERIAL SAFETY DATA SHEET

Product: TYDIE

Date of Issue: JULY 2011

Page: 5 of 7

Email: support@mountaincleaning.com.au

Hydrochloric acid	
Irritation Data	Corrosive and toxic in case of skin contact, of ingestion, of inhalation (lung irritant).
Toxicity Data	Oral LD50 = 900 mg/kg (rabbit). Inhalation LC50 = 3124 ppm (1 hour) (rat). Inhalation lowest lethal concentration (human) = 1300 ppm/30 minutes. Inhalation lowest lethal concentration (human) = 3000 ppm/5 minutes. Mist or vapour concentrations of 50-100 ppm are barely tolerated for up to 1 hour. A report on hydrogen chloride exposure in humans found exposure at 50-100 ppm for 1 hour was barely tolerable, 35 ppm caused irritation of the throat on short exposure, and 10 ppm was the maximum concentration allowable for prolonged exposure.
Local Effects	Corrosive and toxic: ingestion, inhalation, skin, eye.
Target Organs	Eyes, skin, mucous membranes, respiratory system.
Acute Toxicity Level	Toxic: ingestion, inhalation.
Mutagenic Data	No available information.
Reproductive Effects	No available information.
Chronic Toxicity	Repeated exposure to low levels may produce erosion of the teeth and ulceration of the nose and gums.
Oxalic acid	
Irritation Data	Harmful in contact with skin. Irritant and caustic effects, tissue damage. Danger of skin absorption. Solutions of 5-10% acid are irritating to the skin after prolonged exposure and can cause corrosive injury. Excessive contact may produce a delayed localized pain, discolouration of the skin becoming brittle and blue-coloured, ulcers and gangrene.
Toxicity Data	LD50 (male rat, oral): 475 mg/kg. LD50 (female rat, oral): 375 mg/kg. LD50 (rabbit, skin): 20000 mg/kg. LD50 (rat, oral, 5% solution): 9.5 mg/kg (Vernot).
Local Effects	Corrosive and harmful: inhalation, skin, eye, ingestion
Chronic Toxicity	Long-term exposure to oxalic acid solutions, by ingestion, skin absorption and inhalation, is linked to stone formation (insoluble crystals of calcium oxalate salt or calculi) in the kidney and urinary tract. Painful abdominal spasms during the passing of the stone and painful and difficult urination may occur. Secondary products cause: Damage to kidneys.
Target Organs	Skin, mucous membranes, eyes, kidneys.
Acute Toxicity	Slightly Toxic: ingestion
Reproductive Effects	Evidence of reproductive effects.
Mutagenic Data	No available information.
Carcinogenic Data	No available information.
Sulphamic acid	
Irritation Data	Causes skin irritation. May cause redness and pain. Severe burns may occur. Extremely destructive to tissues of the mucous membranes and upper respiratory tract. Symptoms may include burning sensation and irritation symptoms in the respiratory tract, coughing, wheezing, laryngitis, dyspnoea, headache, nausea and vomiting. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Causes eye irritation. May cause blurred vision, redness, pain and severe tissue burns and eye damage.
Toxicity Data	Toxic by ingestion. May cause severe burns of the mouth, throat, and stomach leading to death. Causes irritations of mucous membranes in the mouth, pharynx, oesophagus, gastrointestinal tract. May cause sore throat, vomiting and diarrhea. LD50 oral (mus): 1312 mg/kg LD50 oral (rat): 3160 mg/kg
Local Effects	Corrosive and harmful: inhalation, skin, eye, ingestion
Chronic Toxicity	No available information.
Target Organs	Skin, mucous membranes, eyes.
Acute Toxicity	Slightly Toxic: ingestion
Reproductive Effects	No available information.
Mutagenic Data	No available information.
Carcinogenic Data	No available information.

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MATERIAL SAFETY DATA SHEET

Product: TYDIE

Date of Issue: JULY 2011

Page: 6 of 7

Email: support@mountaincleaning.com.au

QUATERNARY AMMONIUM COMPOUNDS

Irritation Data	Very hazardous in case of skin contact (irritant), of ingestion, Hazardous in case of skin contact (corrosive), of eye contact (corrosive), of inhalation (lung corrosive). Skin – moderate irritant (rabbit), Eyes – severe irritant (rabbit)
Toxicity Data	Acute oral toxicity (LD50): 240 mg/kg [Rat].
Local Effects	corrosive: inhalation, skin, eye.
Target Organs	May cause damage to the following organs: kidneys, liver, heart, gastrointestinal tract, cardiovascular system, central nervous system (CNS).
Acute Toxicity Level	No available information.
Mutagenic Data	Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.
Reproductive Effects Data	Classified Reproductive system/toxin/female - [POSSIBLE], Reproductive system /toxin/male [POSSIBLE]. May affect genetic material (mutagen) and cause adverse reproductive effects (fetotoxicity, fertility (female)) based on laboratory experiments on animals.
Carcinogenicity	Not classed as a carcinogen by NOHSC.

SECTION 12 – ECOLOGICAL INFORMATION

Fish toxicity	None available.
Algae toxicity	None available.
Invertebrates toxicity	None available.
Toxicity to Bacteria	None available.
OECD Biological degradation	Individual components stated to be biodegradable.
General	Product miscible in all proportions with water. DO NOT DISCHARGE BULK QUANTITIES INTO DRAINS, WATERWAYS, SEWER OR ENVIRONMENT. Inform local authorities if this occurs. The pH drop is responsible for the environmental effect on the aquatic life. If not neutralized, this product can be toxic for aquatic organism because of its acidity.

SECTION 13 – DISPOSAL CONSIDERATIONS

	Refer to State Land Waste Management Authority. Transfer product residues to a labelled, sealed container for disposal or recovery. Waste disposal must be by an accredited contractor. Do not put down the drain.
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SECTION 14 – TRANSPORT INFORMATION

UN Number	1760	ADG Classification	8
Shipping Name	CORROSIVE LIQUID, N.O.S.	ADG Subsidiary Risk	none allocated
Hazchem Code	2X	Packing Group	III
Packaging Method	3.8.8	Special Provisions	SP109, SP185, SP274
Segregation	This material is a Class 8 Corrosive Substance according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. Class 8 - Corrosive Substances are incompatible in a placard load with any of the following: Class 1, Explosives, Class 4.3, Dangerous When Wet Substances, Class 5.1, Oxidizing Agents & Class 5.2 Organic Peroxides, Class 6, Toxic Substances (where the Toxic substances are cyanides and the corrosives are acids), Class 7, Radioactive Substances, Class 8, Corrosive Substances (concentrated strong acid is to be segregated from strong alkali), and are incompatible with food and food packaging in any quantity.		

SECTION 15 – REGULATORY INFORMATION

AICS	All ingredients present on AICS.
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MATERIAL SAFETY DATA SHEET

Product: TYDIE

Date of Issue: JULY 2011

Page: 7 of 7

Email: support@mountaincleaning.com.au

SECTION 16 – OTHER INFORMATION			
Labeling Details	HAZARD	C	CORROSIVE, Xn – Harmful
	RISK PHRASES	R35 R20/21/22	Causes severe burns. Harmful by inhalation, in contact with skin and if swallowed.
	SAFETY PHRASES	S(1/2)	Keep locked up and out of reach of children.
		S9	Keep container in a well-ventilated place.
		S24/25	Avoid contact with skin and eyes.
		S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
		S28	After contact with skin, wash immediately with plenty of soap-suds.
		S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
		S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible).
	SUSDP	S5	CAUTION
	ADG Code	8	CORROSIVE LIQUID, N.O.S.
Acronyms	SUSDP	Standard for the Uniform Scheduling of Drugs and Poisons.	
	ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail.	
	CAS Number	Chemical Abstracts Service Registry Number.	
	UN Number	United Nations Number.	
	R-Phrases	Risk Phrases.	
	HAZCHEM	An emergency action code of numbers and letters which gives information to emergency services.	
	NOHSC	National Occupational Health and Safety Commission.	
	NTP	National Toxicology Program (USA).	
	IARC	International Agency for Research on Cancer.	
	AICS	Australian Inventory of Chemical Substances.	
	TWA	Time Weighted Average	
	STEL	Short Term Exposure Limit	
Literature References	List of Designated Hazardous Substances [NOHSC:10005(1999)]		
	Australian Code For The Transport Of Dangerous Goods By Road And Rail – Sixth Edition.		
	Standard for the Uniform Scheduling of Drugs and Poisons.		
	National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC:2011(2003)]		
	Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(1999)]		
	Material Safety Data Sheets – individual raw materials – Suppliers.		
	HSIS – Hazardous Substance Information System – National Worksafe Data Base.		
Revision Information	New Issue to standard : 2nd Edition [NOHSC:2011(2003)].		
Note	Safety Data Sheets are updated frequently. Please ensure that you have a current copy.		
Contact Point	Regulatory Affairs Manager.	Telephone	(02) 6622 8733
Issue Date	JULY 2011	Supersedes Issue Date	JULY 2006
This MSDS summarizes at the date of issue our best knowledge of the health and safety hazard information of this product, and in particular how to safely handle and use this product in the workplace. Since the supplier 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. If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this supplier.			