Mountain Cleaning Products

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MATERIAL SAFETY DATA SHEET

Product : **CONCRETE CLEANING POWDER**
Date of Issue : FEB 2008

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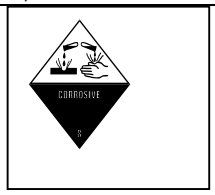
SECTION 1 – STATEMENT OF CHEMICAL PRODUCT AND COMPANY IDENTIFICATION			
SUPPLIER:	**MOUNTAIN CLEANING PRODUCTS**		
ADDRESS:	7/7 Snow Street, South Lismore, NSW, 2480		
Trade Name:	**CONCRETE CLEANING POWDER**		
TELEPHONE:	(02) 66228733	**FAX:**	(02) 66228744
AH EMERGENCY TELEPHONE:	13 1126 in Australia	**ABN:**	43 283 503 302
Substance:	Water based cleaner	**Product Use:**	Alkaline Detergent
Creation Date:	FEB 2008	**Revision Date:**	FEB 2013
Product Code: 6344			

SECTION 2 – HAZARDS 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 6 Poison** according to the SUSDP.			
Approved Criteria Classification (calculated)	C - CORROSIVE. R35 - Causes severe burns. S(1/2) – Keep locked up and out of reach of children. S24/25 – Avoid contact with skin and eyes. S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection. S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible). S50 – Do not mix with acids.		
UN Number	1759	**ADG Classification**	8
Shipping Name	CORROSIVE SOLID, N.O.S.	**ADG Subsidiary Risk**	none allocated
Hazchem Code	4W	**Packing Group**	III
SUSDP Classification	S6 POISON		
EMERGENCY OVERVIEW			
Colour	WHITE POWDER	**Odour**	nil odour
Physical Description	POWDER	**Viscosity**	POWDER
Major Health Hazards	CORROSIVE – 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**
Disodium metasilicate	6834-92-0	10 – 30% w/w	Not set – REC: 2 mg/m3 ceiling	not set
Sodium carbonate	497-19-18	10 – 30% w/w	Not set – REC: 10 mg/m3	not set
Sodium hydroxide	1310-73-2	> 60% w/w	2 mg/m^3 Peak	Peak STEL 2 mg/m^3
Ingredients determined to be non-hazardous	various	10 - 30 % 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 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 if handling in quantity.
Inhalation	Remove victim to fresh air away from exposure - avoid becoming a casualty. Seek 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	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	Not combustible. However if involved in a fire will emit toxic fumes.
Extinguishing Media	Use an extinguishing media suitable for surrounding fires.
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 : **4W** **4** = dry agent – water must not be allowed to come into contact with the dangerous goods at risk. **W** = Yes, risk of violent reaction or explosion, wear full protective clothing, Contain spills.
Occupational Release	Minor spills do not normally need any special clean-up measures. Rinse with water. 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 should be shoveled up into appropriately labelled drums for disposal by an approved agent according to local conditions. Flush spill area with water to remove residues – may use acids (vinegar, dry acid) to neutralize. Residual deposits will remain slippery. 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.
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.

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 dusts of the product. Use only in a well-ventilated area. Ensure airflow, where this product is used, is directed away from the operators.
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	Free flowing powder	**Colour**	white
Odour	faint odour.	**Specific Gravity**	1.1 – 1.2 @ 25 °C
Boiling Point	Not available	**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**	13 - 14 @ 1% sol'n
Volatile Organic Compounds (VOC)	0 % v/v.	**Coefficient of Water/Oil Distribution**	Not available.
Viscosity	Not available.	**Odour Threshold**	Not available.
Evaporation Rate	Not available.	**Per Cent Volatile**	Ca 5 % v/v.

SECTION 10 – STABILITY AND REACTIVITY	
Chemical Stability	Stable at normal temperatures and pressure. Contamination of product and exposure to light and heat will accelerate decomposition.
Conditions to Avoid	Avoid adding water – exothermic! ACIDS: 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. Reacts slowly with ambient air (particularly carbon dioxide) which may cause certain insoluble salts top form in solutions.

Incompatible Materials	Reacts vigorously with acids. Exothermic reaction when added to water. Reacts with metal salts, peroxides 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 acids. Exothermic reaction when added to water.

SECTION 11 – TOXICOLOGICAL INFORMATION	
PRODUCT MIXTURE INFORMATION	
Local Effects	Corrosive: eye, skin, inhalation and ingestion.
Target Organs	Eyes, mucous membranes, skin, lungs.
POTENTIAL HEALTH EFFECTS	
Ingestion	
short term exposure	Corrosive. Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain, convulsions, chemical burns, loss of conciousness and possible death. Ingestion of dry or liquid formulations containing 10% or higher concentration of the product can result serious injury to health.
long term exposure	No information available.
Skin contact	
short term exposure	Corrosive to skin - may cause skin burns, severe irritation. Corrosion will continue until removed. Severity depends on the concentration and duration of exposure. Burns are not immediately painful; onset of pain may be minutes to hours.
long term exposure	Prolonged and repeated skin contact may induce eczematoid dermatitis.
Eye contact	
short term exposure	Corrosive to eyes; contact can cause corneal burns. Permanent eye damage, including loss of sight, may occur.
long term exposure	No information available.
Inhalation	
short term exposure	Inhalation of dusts, mists or aerosols can produce mucous membrane and respiratory irritation. Exposure to high concentrations of the product in liquid form or as a mist may lead to possible harmful corrosive effects including lesions of the nasal septum, pulmonary edema, pneumonitis and emphysema.
long term exposure	Prolonged or repeated exposure to dusts may result in respiratory disorders.
Carcinogen Status	Not classified as a carcinogen by Worksafe Australia. Potassium and sodium hydroxide have been implicated as a cause of cancer of the esophagus in individuals who have ingested it. The cancer may develop 12 to 42 years after the ingestion incident. Similar cancers have been observed at the sites of severe thermal burns. These cancers may be due to tissue destruction and scar formation rather than the action of the hydroxide itself.
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.

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.

CLASSIFICATION OF INDIVIDUAL INGREDIENTS

Ingredients	**R-Phrases.**
Sodium carbonate	R36
Disodium metasilicate	R34, R37
Sodium Hydroxide	R35

SODIUM CARBONATE 100%

Irritation Data	Repeated or prolonged skin contact may result in dermatitis and/or ulceration of the skin. Prolonged inhalation may lead to perforation of the nasal septum. SKIN IRRITATION (rabbit): Moderate skin irritant (500 mg; 24 hr-exposure). EYE IRRITATION (rabbit): Severe eye irritant (100 mg; 24 hr-exposure) Male rats exposed to an aerosol of a 2% aqueous solution of sodium carbonate (particle size less than 5 microns in diameter) for 4 hours/day, 5 days/week for 3 1/2 months showed no pronounced effects. Exposure to extremely high concentrations (approx. 70 mg/m3) resulted in reduction in weight gain and cellular changes in the lungs (probably due to irritation). SKIN: 50% aqueous solution applied to intact and abraded skin of rabbits, guinea pigs and human volunteers. No effect on intact skin. Abraded guinea pig skin affected minimally. Abraded rabbit and human skin showed mild irritation. Pregnant mice, rats and rabbits orally intubated (intragastric administration) with low to very high doses of aqueous sodium carbonate solution. No positive findings reported.
Toxicity Data	Lethal dose (rat, oral): 4000 mg/kg LC50 (rat, inhalation): 2100-2500 mg/m3; duration of exposure, 2 hr. (91% sodium carbonate aerosol); whole body exposure (3). LC50 (mouse, inhalation): 1200 mg/m3; duration of exposure, 2 hr. (95% sodium carbonate aerosol); whole body exposure (3). LC50 (guinea pig, inhalation): 800 mg/m3; duration of exposure, 2 hr. (95% sodium carbonate aerosol); whole body exposure (3).
Local Effects	Corrosive/Irritant: inhalation, skin, eye.
Target Organs	Eyes, skin, mucous membranes.
Acute Toxicity Level	No available information.
Mutagenic Data	No available information.
Reproductive Effects Data	No available information.
Sodium Hydroxide 100%	
Irritation Data	Corrosive to skin – can cause burns. Corrosive to eyes – can cause permanent injury and possible loss of sight. Inhalation of dusts or mists of the solution can result in respiratory irritation and possible corrosive effects.
Toxicity Data	Intraperitoneal LD50 (mouse): 40mg/kg ; Oral lowest lethal dose (rabbit): 500mg/kg ;Skin (rabbit): severe irritation 500mg/24H ; Eyes (rabbit): severe irritation 1mg/30sec rinse.
Local Effects	Corrosive: skin, eye, inhalation (of aerosol) and ingestion.
Target Organs	Skin, mucous membranes, eyes.
Reproductive Effects	No available information.
Acute Toxicity	Toxic : ingestion, skin, inhalation (of aerosol or dust).
Carcinogen Data	Potassium and sodium hydroxide have been implicated as a cause of cancer of the oesophagus in individuals who have ingested it. The cancer may develop 12 to 42 years after the ingestion incident. Similar cancers have been observed at the sites of severe thermal burns. These cancers may be due to tissue destruction and scar formation rather than the action of the hydroxide itself. Not classified as a carcinogen by Worksafe Australia.
Mutagenic Data	No available information.
Disodium metasilicate 100%	
Irritation Data	Hazardous in case of skin contact (corrosive), of ingestion (corrosive), of inhalation (lung irritant). Causes burns Eye: Risk of serious damage to eyes. Respiratory: Irritating to respiratory system. Sensitization: No sensitizing (30% w/w in a formulation). 250 mg/24 hour(s) skin-human : severe 250 mg/24 hour(s) skin-rabbit : severe 250 mg/24 hour(s) skin-guinea pig : moderate.
Toxicity Data	1153 mg/kg oral-rat LD50; 770 mg/kg oral-mouse LD50; 250 mg/kg oral-dog LDLo; 250 mg/kg oral-pig LDLo; 200 mg/kg intraperitoneal-guinea pig LDLo. Other toxicological information: The toxic effects of the product are caused by the alkalinity and not by substance specific corrosive nature of the product.
Local Effects	Corrosive: inhalation, skin, eye, ingestion
Target Organs	Skin, mucous membranes, eyes.
Acute Toxicity Level	Moderately Toxic: ingestion
Mutagenic Data	Gentoxicity: Not mutagenic (in vitro)

Reproductive Effects Data	15 gm/kg oral-rat TDLo 14 week(s) male week(s) pre pregnancy/14 week(s) post pregnancy/3 week(s) continuous; 9766 ug/kg subcutaneous-rat TDLo 1 day(s) male; 9766 ug/kg intratesticular-rat TDLo 1 day(s) male.

SECTION 12 – ECOLOGICAL INFORMATION	
Fish toxicity	None available for this specific product. Individual ingredients: The following information relates to Sodium, Silicate, Solution, Molar > 3,2 concentration 35% (IUCLID). Ecotoxicity: Fish: 96h - LC50 (Brachydanio rerio, OECD no. 203) : 3185 mg/l (pH 10.1) Daphnia: 48 h - EC50 (Daphnia magna): 4857 mg/l. Daphnia: 48 h - EC50 (Daphnia magna): 4857 mg/l
Algae toxicity	None available for this specific product.
Invertebrates toxicity	None available.
Toxicity to Bacteria	None available for this specific product. Individual ingredients: The following information relates to Sodium, Silicate, Solution, Molar > 3,2 concentration 35% (IUCLID).Bacteria: 48 h - EC 0 (Pseudomonas putida, OECD no. 209)> 1000mg/l (ph 7.9)
OECD Biological degradation	Individual components stated to be biodegradable. The following information relates to Sodium, Silicate, Solution, Molar > 3,2 concentration 35% (IUCLID). Environmental behaviour: Degradation abiotic: In aqueous solution of pH=< 9 the silicate is mineralized and precipitated. The maximun concentration of soluble silicates at this pH is 120 mg/l. Degradation Biotic: not applicable. Other information: The pH rise is responsible for the environmental effect on the aquatic life. If not neutralized, this product can be toxic for aquatic organism because of its alkalinity. PH >9 has a corrosive effect on fish (possibly causing death). PH >8.5 will result in destruction of algae.
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.

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.

SECTION 14 – TRANSPORT INFORMATION			
UN Number	1759	**ADG Classification**	8
Shipping Name	CORROSIVE SOLID, N.O.S.	**ADG Subsidiary Risk**	none allocated
Hazchem Code	4W	**Packing Group**	III
Packaging Method	3.8.8	**Special Provisions**	SP109, 185, 274
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.	
Labeling Details	**HAZARD**	CORROSIVE
	RISK PHRASES	R35 - Causes severe burns.
	SAFETY PHRASES	(1/2) – Keep locked up and out of reach of children. S24/25 – Avoid contact with skin and eyes. S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection. S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible).

	SUSDP	S6 POISON (SODIUM HYDROXIDE)
	ADG Code	CORROSIVE SOLID, N.O.S.

SECTION 16 – OTHER INFORMATION		
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) 66228733
Issue Date	Feb 2008	**Supersedes Issue Date** May 2003

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.