MATERIAL SAFETY DATA SHEET POOLKARE CHEMICALS COMBAT

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SECTION 1: IDENTIFICATION OF THE SUBSTANCE:

Product Name: **POOLKARE CHEMICALS COMBAT**

Relevant Use: Spa water balancer to raise pH and Alkalinity, Filter aid and Corrosion inhibitor in heated swimming pools and spas.

Company: Wobelea Pty Ltd
Address: 18 Embrey Court, Pakenham
Phone: 61 + (3) 5940 1077

Emergency Telephone: Poison Information Australia 13 11 26
Emergency Other: Poison Information New Zealand 0800 764 766
Emergency: 61 + (3) 5997 1690 AH
Emergency other number: 0427 367 561

SECTION 2: HAZARDS IDENTIFICATION

Classification of the mixture

Hazardous Chemical and Non Dangerous Good according to WHS Regulations and the ADG Code.
Poisons Schedule: Not applicable
Classification: Low rating – Skin irritation, Respiratory irritation maybe experienced, Eye irritation category 2A, specific target organ toxicity. Classification drawn from HSIS and Wobelea Pty Ltd.

Label Elements

GHS Label elements
SIGNAL WORD **WARNING**

Hazard Statement

May cause skin irritation
May cause serious eye irritation
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause respiratory irritation

May cause skin dryness and cracking

Supplementary statement Not applicable

Precautionary Statements Prevention

Use in a well ventilated area or wear respiratory protection
Keep/store away from heat/sparks/open flames – No smoking
Take precaution to avoid mixing with combustibles/organic material
Avoid breathing dust fumes
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements Response

IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing
Take off contaminated clothing and wash before reuse.
If swallowed, rinse mouth. Do NOT induce vomiting.
If experiencing respiratory systems: Call a POISON CENTRE or a doctor
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so.
Continue rinsing. If eye irritation persists seek medical advice.
In case of fire use alcohol resistant foam or fine spray/water fog for extinction
IF ON SKIN: Wash with plenty of soap and water. Seek medical advice
Call a POSION CENTRE or doctor if you feel unwell.

Precautionary Statement Storage

Store locked up
Store in a well ventilated place. Keep container tightly closed

Precautionary Statement Disposal

Dispose of contents / container in accordance with local regulations

SECTION 3: COMPOSTION / INFORMATION ON INGREDIENTS

Substances

CAS Number	% (weight)	Name
10124-56-8	< 10%	Sodium Hexametaphosphate
7778-18-9	< 40%	Calcium Sulphate
14808-60-7	< 1%	Crystalline Silica
144-55-8	< 80%	Sodium Bicarbonate

SECTION 4: FIRST AID

Eye Contact: If this product comes into contact with eye:

- Wash out immediately with fresh water for at least 15 minutes
- 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
- Seek medical attention without delay; if pain persists or recurs seek medical advice
- Removal of contact lenses after an eye injury should only be undertaken by a skilled person.

Skin Contact: If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear
- Flush skin and hair with running water and soap if available
- Seek medical attention in event of irritation

Inhalation: If inhalation occurs:

- If fumes, aerosols or combustion products are inhaled remove from contaminated area
- Move from area and give fresh air
- Lay patient down. Keep warm and rested. Seek medical attention if breathing becomes difficult
- Prostheses such as false teeth, which may block airway should be removed where possible prior to initiating first aid.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, doctor without delay.
- Advise under 10% of mixture is comprised of BCDMH (Bromine) – which may cause lung damage eg lung oedema, fluid in lungs. This reaction may not present until after 24 hours from exposure. A spray containing dexamethasone derivative or beclomethasone derivative maybe considered. This can only be administered by Doctor or other medical personnel.

Ingestion: **If ingested:**

- If swallowed do NOT induce vomiting
- Contact a Poisons Centre or a doctor to seek further advice
- Never give liquid to a person showing signs of being sleepy or with reduced awareness – becoming unconscious
- Only give a glass of water and/or induce vomiting if you are advised by Poisons Centre or Doctor.
- Urgent hospital treatment may be needed
- Qualified first aid personnel should treat patient following observation and employing supportive measures as indicated by the patients condition
- If the services of a medical officer or doctor are available the patient should be placed in their care and a copy of SDS provided. Further action will be the responsibility of the medical specialist.
- If medical attention is not available on the worksite or surroundings send the patient to a hospital with a copy of SDS as soon as possible.
- Only give a glass of water and/or induce vomiting if you are advised by Poisons Centre or Doctor.

Indication of any immediate medical attention and special treatment needed:
Eye wash and shower and a general washing facility should be available immediately adjacent to the work area.
Treat symptomatically.
The severity of the symptoms described will vary dependent on the concentration and the length of exposure. If adverse symptoms develop the casualty should be transferred to hospital as soon as possible with a copy of SDS
As in all cases of suspected poisoning follow the ABCDE's of emergency medicine (airway, breathing, circulation, disability, exposure) then the ABCDE's of toxicology (antidotes, basics, change absorption, change distribution, change elimination).
The formulation is

SECTION 5: FIRE FIGHTING MEASURES

General Measures: Clear area of all non-emergency personnel. Avoid generating dust. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from the fire area if it can be done without risk. Do NOT allow firefighting water to reach waterways, drains or sewers. Store fire-fighting water for treatment.

Extinguishing media

Fire: USE FLOODING QUANTITIES OF WATER FROM A PROTECTED POSITION

Special hazards arising from the substrate or mixture

Fire incompatibility

- Avoid storage with reducing agents

Advice for Fire Fighters
Fire Fighting

- Alert fire brigade and tell them location and nature of hazard
- Use fire-fighting procedures suitable for surrounding area

- May be reactive and/or explosively reactive
- Wear full body protective clothing with breathing apparatus
- Prevent by any means available spillage from entering drains or water courses

Fire explosion/ hazard

- Will not burn but increases intensity of fire
- Not considered a significant fire risk, however containers may burn
- Heating may cause expansion or decomposition leading to rupture of containers
- May omit corrosive and poisonous fumes such as phosphorous oxides (Pox), sulfur oxides, carbon monoxide (CO), carbon dioxide (CO2), metal oxides and other products typical of burning organic material.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills

- Clean up all spills immediately
- Avoid breathing dust and contact with skin and eyes
- Wear protective clothing, gloves safety glasses and dust respirator
- Use dry clean up procedures and avoid generating dust
- Try to ensure that drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material.
- No smoking

Major spills **Moderate hazard**

- CAUTION Advise personnel in area to move upwind from fire
- Alert emergency services and tell them location and nature of hazard
- May be reactive
- Control personal contact by wearing protective clothing**.**
- See Section 12 for environmental information
- Local authorities should be advised if significant spillages cannot be contained.

Personal protect equipment advice is contained in Section 8 of the SDS

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Safe Handling

- Avoid all personal contact including inhalation
- Wear protective clothing when risk of exposure occurs
- Use in a well ventilated area
- Always wear protective equipment and wash off any spillage from clothing
- Keep material away from light, heat, flammables or combustibles
- Prevent concentration in hollows and sumps

- Minimise airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks and flame
- Establish good housekeeping practices
- Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds

Other Information

- **Store in original containers**
- **Keep containers sealed**
- **Store in cool dry area protected from environmental extremes**
- Store away from incompatible materials and foodstuff containers

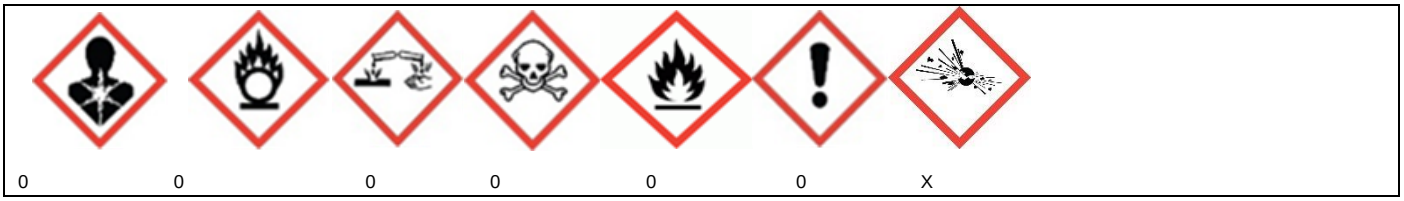
Conditions for safe storage, including any incompatibilities

Suitable container

- Do not repack. Use containers supplied by manufacturer
- Lined metal can, lined metal pail/can, plastic pail, poly-liner drum
- For solids and materials with a viscosity of at least 2680 cST (23 deg.C) removable head packaging and cans with friction closures may be used

Storage incompatibility

- Avoid strong acids, acid chlorides, acid anhydrides and chloroformates
- Avoid reaction with oxidising agents
- Trifluorides are hypergolic oxidizers. They ignite on contact (without external heat or ignition) with recognized fuels. Contact with these materials following an ambient or slightly elevated temperature is often violent and may produce ignition.
- Phosphates are incompatible with oxidizing and reducing agents
- Phosphates are susceptible to formation of highly toxic and flammable phosphine gas in the presence of strong reducing agents such as hydrides.
- Partial oxidation of phosphate by oxidizing agents may result in the release of toxic phosphorous oxides.
- Avoid reaction with oxidizers



0 0 0 0 0 0 X

X – Must not be stored together

‘0 - May be stored together with specific preventions

+ - May be stored together

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material Name	TWA	STEL	Peak	Notes
Safe Work Australia	Diacel	Diacel 150	10 mg/M3 for inspirable dust			TWA calculated over 5 day week/ 8 hr
Safe Work Australia	Diacel	Diacel 150	3 mg/M3 for respirable dust			
			TEEL -1	**TEEL -2**	**TEEL-3**	
Australia Exposure Standards	Sodium bicarbonate	Sodium bicarbonate	13 mg/m3	140 mg/m3	840 mg/m3	
Australia Exposure Standards	Sodium hexametaphosphate	Sodium phosphate, tribasic, (Sodium hexametaphosphate; Calgon)	19 mg/m3	200mg/m3	1200 mg/m3	

Component	EU OEL	Austria	Australia	Denmark
Calcium sulfate	Not determined	Not determined	10 mg/m^3 TWA (containing no asbestos and <1% crystalline silica, inspirable dust)	Not determined
Crystalline silica (impurity)	Not determined	Not determined	0.1 mg/m^3 TWA	0.1mg/m^3
Component	**Malaysia**	**France**	**Germany**	**Hungary**
Calcium sulfate	10 mg/m^3 TWA	10 mg/m^3	1.5 mg/m^3 MAK 4 mg/m^3 MAK	Not determined
Crystalline silica (impurity)	0.1 mg/m^3 TWA	0.1 mg/m^3	Not determined	Not determined
Component	**New Zealand**	**Italy**	**Netherlands**	**Norway**
Calcium sulfate	10 mg/m^3 TWA	Not determined	Not determined	Not determined
Crystalline silica (impurity)	0.2 mg/m^3 TWA Known or presumed human carcinogen	Not determined	0.075 mg/m^3	0.3 mg/m^3 TWA total dust 0.1 mg/m^3 TWA respirable dust 0.9 mg/m^3 STEL total dust 0.3 mg/m^3 STEL respirable dust Carcinogen
Component	**Poland**	**Portugal**	**Romania**	**Russia**
Calcium sulfate	10.0 mg/m^3 TWA <2% free crystalline silica and containing no asbestos total inhalable dust	10 mg/m^3 TWA inhalable fraction	Not determined	Not determined
Crystalline silica (impurity)	2 mg/m^3 TWA >50% free crystalline silica total inhalable dust 0.3 mg/m^3 TWA >50% free crystalline silica respirable dust 4.0 mg/m^3 TWA 2% to 50% free crystalline silica total inhalable dust 1.0 mg/m^3 TWA 2% to 50% free crystalline silica respirable dust	0.025 mg/m^3 TWA respirable fraction	Not determined	1 mg/m^3 MAC 3 mg/m^3 STEL 1 mg/m^3 TWA aerosol Fibrogenic substance
Component	**Spain**	**Switzerland**	**Turkey**	**UK**

Calcium sulfate	10 mg/m^3 VLA-ED this value is for the particulated matter that is free from Asbestos and contains less than 1% of Crystalline silica	3 mg/m^3 MAK respirable	Not determined	Not determined
Crystalline silica (impurity)	0.1 mg/m^3 VLA-ED respirable fraction	0.15 mg/m^3 MAK respirable	Not determined	0.3 mg/m^3 STEL calculated respirable 0.1 mg/m^3 TWA respirable

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	**Bingo B**	**Bingo B**	**Not available**	**Not available**	**Not available**	**Not available**

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
Sodium hexametaphosphate	Not Available	Not Available		

Exposure Controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.
Personal protection	
Eye and face protection	Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.
Skin protection	See Hand protection below
Hands/feet protection	The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and.has to be observed when making a final choice. Suitability and durability of glove type is dependent on usage. Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present. polychloroprene. nitrile rubber. butyl rubber. Polyvinyl chloride (PVC) Wear safety footwear or safety gumboots E.g Rubber Note: This chemical is in a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application. Check with manufacturer of PPE if unsure for further advice.
Body protection	See Other protection below
Other protection	Overalls. P.V.C. apron. Barrier cream. Eye wash unit For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets). Non sparking safety or conductive footwear should be considered. Conductive footwear describes a boot or shoe with a sole made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot and shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds.
Thermal hazards	Not Available

Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:000 & 149:001, ANSI Z88 or national equivalent)

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	P1 Air-line*	- -	PAPR-P1 -
up to 50 x ES	Air-line**	P2	PAPR-P2
up to 100 x ES	-	P3	-
		Air-line*	-
100+ x ES	-	Air-line**	PAPR-P3

* - Negative pressure demand ** - Continuous flow

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E =Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
- The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurementdata, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may begovernment mandated or vendor recommended.
- Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a completerespiratory protection program.

Use approved positive flow mask if significant quantities of dust becomes airborne. Try to avoid creating dust conditions.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	White, very faint halogen smell , fluffy fine powder. Decomposes in the presence of alcohol, moist air/water.

Physical state	Divided Solid	**Relative density (Water = 1)**	Not available
Odour	Very Faint halogen smell	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not available.
pH (as supplied)	Not Applicable	**Decomposition temperature**	Not available
Melting point / freezing point (°C)	70 – 600 expected to Decompose	**Viscosity (cSt)**	Not Applicable
Initial boiling point and boiling range (°C)	Not available.	**Molecular weight (g/mol)**	Not available
Flash point (°C)	Non Flammable	**Taste**	Not Available
Evaporation rate	Not Applicable	**Explosive properties**	Not Available
Flammability	Non Flammable	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Applicable	**Surface Tension (dyn/cm or mN/m)**	Not Applicable
Lower Explosive Limit (%)	Not Applicable	**Volatile Component (%vol)**	Not available
Vapour pressure (kPa)	Not available.	**Gas group**	Not Available
Solubility in water (g/L)	Miscible	**pH as a solution**	8.0
Vapour density (Air = 1)	Not available.	**VOC g/L**	Not Available

SECTION 10 – STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical Stability	Product is considered stable under normal handling conditions, good manufacturing practice and normal conditions of use, storage and temperature. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 – TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Inhalation of dust in high concentration may cause irritation of respiratory system. Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled. If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures. Chlorine vapour may be irritating to airways and lungs which may result in a sore throat, coughing and sneezing. Serious effects such as choking, chest pain, difficulty breathing , coughing, headaches, vomiting are not expected due to very low level of chlorine present in final formulation.
Ingestion	Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the formulation may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g. liver, kidney) damage is evident. Ingestion of large quantities may cause abdominal pain and gastro-intestinal distention. Material may produce chemical burns within oral cavity Note inorganic polyphosphates are used extensively in domestic and industrial products. Experiments on rats showed kidney damage, growth retardation and tetany due to low calcium. Use as a food additive indicates good tolerance to this active. Severe Effects for this formulation can include vomiting, tiredness, fever, diarrhoea, low blood pressure, slow pulse, cyanosis, spasms of the wrist, coma and severe body spasms.
Skin contact	This material may cause inflammation of the skin on prolonged contact in some persons. The material may accentuate any pre-existing dermatitis condition Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. Irritation and skin reactions are possible with sensitive skin. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. Undiluted inorganic phosphates may severely irritate the skin, but in typical cosmetic formulations (where they act as chelators) they are only mildly irritating. Even at concentrations of 1%, no irritation was observed in sensitive individuals.
Eye	Limited evidence or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals. Prolonged eye contact may cause inflammation characterised by a temporary redness of the conjunctiva (similar to windburn). Inorganic phosphates may cause eye irritation on contact in some persons. The severity of eye irritation depends on concentration of product in formula.
Chronic	Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. In long-term animal studies, inorganic polyphosphates produced growth inhibition, increased kidney weights, bone decalcification, enlargement of the parathyroid gland, inorganic phosphate in the urine, focal necrosis of the kidney and alterations of muscle fibre size. Inorganic phosphates have not been shown to cause cancer, genetic damage or reproductive or developmental damage in animal tests. Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis, caused by particles less than 0.5 micron penetrating and remaining in the lung. Sodium phosphate dibasic can cause stones in the kidney, loss of mineral from the bones and loss of thyroid gland function. Persulphate exposure commonly manifests itself in the form of a skin rash, eczema and respiratory conditions such as asthma. Allergy may develop after repeated and prolonged exposures depending on concentration of formula.
GENERAL TOXICITY	The following information refers to contact allergens as a group and may not be specific to this product.

INFORMATION	Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested
SODIUM HEXAMETAPHOSPHATE	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. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyper reactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.
GYPSUM	This product does not contain any components suspected to be sensitizing.
SODIUM BICARBONATE	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness,swelling, the production of vesicles, scaling and thickening of the skin. (human-infant) TDLo: 1260 mg/kg Skin (human): 30 mg/3d-I-mild

SECTION 12 – ECOLOGICAL INFORMATION

Toxicity

Ingredient	Endpoint	Test Duration	Species	Value	Source
Sodium hexametaphosphate	LC50 EC50 EC50 NOEC	96 48 72 72	Fish Crustacea Algae or other aquatic plants Algae or other aquatic plants	>100mg/L >485mg/L >100mg/L 32mg/L	2 2 2 2
Sodium bicarbonate	LC50 EC50 EC50 EC50 NOEC	96 4 96 48 1512	Fish Algae or other aquatic plants Algae or other aquatic plants Crustacea Algae or other aquatic plants	658.217mg/L 52mg/L 650mg/L 1020mg/L >45mg/L	3 4 4 2 2
Calcium sulphate	LC50	96	Fish	2980mg/L	
			Algae	No information	
	EC50	120	Daphnia and other invertebrates	3200 mg/L	
Crystalline sulphate	No information		No information	No information	

Legend	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data

Toxicity

Diacel:
Harmless, regarded as environmentally friendly -natural fibres.

Sodium hexametaphosphate:
May cause long-term adverse effects in the aquatic environment.
Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.
Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

For Phosphate:
The principal problems of phosphate contamination of the environment relates to eutrophication processes in lakes and ponds. Phosphorus is an essential plant nutrient and is usually the limiting nutrient for blue-green algae.
Aquatic Fate: Lakes overloaded with phosphates is the primary catalyst for the rapid growth of algae in surface waters. Planktonic algae cause turbidity and flotation films.
DO NOT discharge into sewer or waterways.

Persistance and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Sodium bicarbonate	Low	Low
Sodium hexametaphosphate	No data available for all ingredients	No data available for all ingredients
Calcium sulphate	Not applicable – Inorganic chemical	

Bio-accumulative potential

Ingredient	Bio-accumulation
Sodium bicarbonate	LOW (logKOW = 0.4605)
Sodium hexametaphosphate	No data available for all ingredients
Calcium sulphate	Not applicable – Inorganic chemical

Mobility in Soil

Ingredient	Mobility
Sodium bicarbonate	HIGH (KOC = 1)
Sodium hexametaphosphate	No data available for all ingredients
Calcium sulphate	Not applicable – Inorganic chemical

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate: Reduction Reuse Recycling Disposal (if all else fails) This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. DO NOT allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal. In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. Where in doubt contact the responsible authority. Recycle wherever possible or consult manufacturer for recycling options. Recycle container or dispose of in an authorised landfill. Consult State Land Waste Management Authority for further information.

SECTION 14 – TRANSPORT INFORMATION

Labels required none

Ingredient	Marine Pollutant	HAZCHEM	Label
Sodium bicarbonate	NO	Not applicable	
Sodium hexametaphosphate	NO	Not applicable	
Calcium sulphate	NO	Not applicable	

Sodium bicarbonate, Sodium hexametaphosphate, Calcium sulphate,
Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
Transport in bulk according to Annex II of MARPOL and the IBC code - Not Applicable

Transport in bulk according to Annex II of MARPOL and the IBC code - Not Applicable

SECTION 14 – TRANSPORT INFORMATION FOR POOLKARE CHEMICALS COMBAT

POOLKARE CHEMICALS COMBAT- Labels Required

Marine Pollutant NO
Hazchem NOT APPLICABLE

Land transport (ADG)

UN numberNOT APPLICABLE
UN proper shipping
name
NOT APPLICABLE

Transport hazard
class(es) Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code
Not Applicable

SECTION 15 – REGULATORY INFORMATION

Safety, Health and Environmental regulations / legislation specific for the substance and/or mixture

No data on full formulation.

Actives as:-

DIACEL – EPA (New Zealand) HSR002512. UN number not regulated

GYPSUM – UN number not regulated

SODIUM BICARBONATE(144-55-8), SODIUM HEXAMETAPHOSPHATE (10124-56-8) ARE FOUND ON THE FOLLOWING REGULATORY LISTS:-

Australia Inventory of Chemical Substances (AICS)

Assorted Actives:-

National Inventory	**Status of Actives as Sodium hexametaphosphate, Sodium bicarbonate and Gypsum**
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (sodium hexametaphosphate), N (sodium bicarbonate),
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	Y
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
Legend:	*Y = All ingredients are on the inventory* *N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets)*

Legend: Y = All ingredients are on the inventory

N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets)

SECTION 16 – OTHER INFORMATION

Definitions and abbreviations
PC—TWA: Permissible Concentration-Time Weighted Average
PC—STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit。
IDLH: Immediately Dangerous to Life or Health Concentrations
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: Bio Concentration Factors BEI: Biological Exposure Index
EPA (NZ) - Environmental Protection Agency – New Zealand

Disclaimer:

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Please note this product is a blended product and is formulated with low concentration of some of the actives. Therefore this SDS should be used a guideline only. Further information can be obtained from the manufacturer if required.
The user should be aware of changing technology, research, regulations, and analytical procedures that may require changes herein. The above data is supplied upon the condition that persons will evaluate this information and then determine its suitability for their use.

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********** END OF SDS **********