

SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: Water Softener
Other Identifier: Calgon; Sodium Hexametaphosphate
Recommended Use: For softening of hard water
Supplier: Midland Chemicals
ABN: 91 622 018 986
Street Address: 18 Elliott Street
Midvale
Western Australia
Telephone Number: +61 08 9274 1992
Facsimile: +61 08 9250 1710
Emergency Telephone: 1 800 033 111 (ALL HOURS)

2. HAZARDS IDENTIFICATION

Road and Rail; Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

Hazard Classification

NOT Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Poisons Schedule: Not Scheduled

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion
Ingredients determined not to be hazardous		Up to 100%

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor at once.

Ingestion: IF SWALLOWED: Rinse mouth. Do not induce vomiting unless directed to do so by medical personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical advice/attention. Never give anything by mouth to an unconscious person.

Eye Contact: IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.

Skin Contact: IF ON SKIN: Wash with plenty of soap and water. Remove contaminated clothing and shoes immediately. If skin irritation occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse.

Inhalation: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention. Apply resuscitation if victim is not breathing; Administer oxygen if breathing is difficult.

Medical attention and special treatment: Treat symptomatically and supportively. - The toxicity of phosphates is because of their ability to sequester calcium. Systemic metabolic acidosis may result as this material is believed to be hydrolysed to orthophosphates when ingested (before absorption). Tetany may also occur as a result of reduction in serum level of ionic calcium.

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5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	If material is involved in a fire, use dry chemical, Carbon dioxide (CO ₂), foam or water spray for extinction. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Hazardous combustion products:	Non-combustible; Material does not burn. Decomposes on heating, emitting toxic fumes. Fire or heat may produce irritating, toxic and/or corrosive fumes, including oxides of Phosphorus, oxides of Sodium.
Precautions for fire fighters and special protective equipment:	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out. Wear self-contained breathing apparatus (SCBA) in combination with normal firefighting clothing (full fire kit/turnout gear). Wear SCBA and chemical protective clothing if there is a risk of exposure to products of decomposition. Contain runoff from fire control or dilution water - Runoff may pollute waterways.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
Protective equipment:	Use personal protective equipment as required (see SECTION 8).
Emergency procedures:	Ensure adequate ventilation. ELIMINATE all ignition sources. Do not touch or walk-through spilled material. Avoid dust formation. Avoid breathing dust and contact with eyes, skin and clothing
Environmental Precautions:	Prevent entry into drains and waterways. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for Containment and clean up:	Collect material (take up mechanically) and place into a suitable, properly labelled container for disposal (see SECTION 13); if appropriate, moisten first, or cover with damp absorbent, to avoid generating dust. Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

7. HANDLING AND STORAGE

This material must be stored, maintained and used in accordance with the relevant regulations.

Conditions for safe storage:	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Hygroscopic - Protect from moisture. Keep away from heat and sources of ignition - No smoking. Keep away from food/feedstuffs and incompatible materials (see SECTION 10). Keep in the original container.
Precautions for safe handling:	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate

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ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation. Avoid breathing dust and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). Take precautionary measures against static discharges.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure control measures:	There are no occupational exposure limit values for this substance. For dusts from solid substances without specific occupational exposure standards: Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m ³ (measured as inhalable dust). New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m ³ ; TWA = 3 mg/m ³ (respirable dust).
Biological Monitoring	Derived no-effect levels (DNELs) for Workers: - Long-term, systemic effects (Inhalation): 5.289 mg/m ³ Predicted no-effect concentrations (PNECs): - Freshwater: 0.1 mg/l - Marine water: 0.01 mg/l - Intermittent release: 1 mg/l - Sewage treatment plant (STP): 100 mg/l
Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protective Equipment	
Eye and Face	Wear appropriate eye protection to avoid eye contact. Recommended: Wear safety glasses with side shields (or goggles).
Skin	Handle with gloves. Recommended: Wear protective gloves. Wear appropriate personal protective clothing to avoid skin contact. Recommended: Wear lab coat; Overalls, safety shoes.
Respiratory	Wear respiratory protection in case of inadequate ventilation or if an inhalation risk exists. Recommended: Dust mask/particulate filter respirator (refer to AS/NZS 1715 & 1716).
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash hands before breaks and at the end of workday. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Solid - Crystalline powder, granules, pellets
Colour:	White
Auto Ignition temperature:	No Data Available
Decomposition Temperature:	No Data Available
Evaporation Rate:	No Data Available
Flammability:	No Data Available
Flash Point:	No Data Available

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Boiling Point:	1,500 °C
Melting Point:	>450 °C
Freezing Point	No Data Available
Odour:	Odourless
Odour Threshold:	No Data Available
Partition coefficient: n-octanol/water	No Data Available
pH:	7 (1% solution/water)
Relative Density:	No Data Available
Solubility:	Moderately soluble in water - Insoluble in organic solvents
Specific Gravity	1.25 (Water = 1)
Explosive limits:	No Data Available
Density:	2.484 g/cm ³
Vapour pressure;	No Data Available
Viscosity:	No Data Available
Biopersistence:	No Data Available
Crystallinity:	No Data Available
Dustiness:	No Data Available
Particle size:	No Data Available
Redox potential:	No Data Available
Release of invisible flammable vapours and gases	No Data Available
Saturated Vapour Concentration	No Data Available
Additional Characteristics	Depolymerises in aqueous solutions to form sodium trimetaphosphate and sodium orthophosphates.

10. STABILITY AND REACTIVITY

Chemical stability:	The product is non-reactive under normal conditions of use, storage and transport. Slightly corrosive in presence of steel.
Conditions to avoid:	Avoid dust formation. Protect from moisture. Keep away from heat and sources of ignition.
Incompatible materials:	Incompatible/reactive with strong oxidising agents, strong acids, strong bases.

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Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced. Fire or heat may produce irritating, toxic and/or corrosive fumes, including oxides of Phosphorus, oxides of Sodium.

Hazardous reactions or Polymerisation: Will not occur

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Exposure Limits: There are no occupational exposure limit values for this substance. For dusts from solid substances without specific occupational exposure standards:
- Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m³ (measured as inhalable dust).
- New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m³; TWA = 3 mg/m³ (respirable dust).

Ingestion: May be harmful if swallowed. This salt appears to be hydrolyzed within the bowel to phosphoric acid. May cause gastrointestinal tract irritation with nausea, vomiting and diarrhoea.

Eye contact: Not irritating/May cause eye irritation.

Skin contact: Not irritating/May cause skin irritation. Not sensitising.

Inhalation: May cause respiratory tract irritation; Symptoms may include coughing and shortness of breath.

Acute Toxicity: Acute toxicity (Oral):
- LD50, Rat: >2,000 mg/kg
Inhalation Acute toxicity (Inhalation):
- LC50, Rat: >3.69 mg/L (4 h) dust/mist.

Chronic effects: Genetic toxicity (Bacterial reverse mutation assay): Negative. The test material was considered devoid of carcinogenic potential. There is no concern with regard to effects of sodium metaphosphate on reproduction. *May affect behavior/central nervous system/peripheral nervous system (somnolence, convulsions, lethargy, flaccid paralysis), urinary system (kidneys: renal failure, acute tubular necrosis). It may also cause heart disturbances (fall in blood pressure, slow pulse) and blood chemistry effects (reduction of serum level of calcium).

Carcinogen Category: None.

12. ECOLOGICAL INFORMATION

Ecotoxicity Aquatic toxicity:
- LC50, Fish (*Oncorhynchus mykiss*): >100 mg/L (96 h) [OECD Guideline 203].
- EC50, Crustacea (*Daphnia magna*): >485 mg/L (48 h) [EPA OTS 797.1300].
- EC50, Algae (*Desmodesmus subspicatus*): >100 mg/L (72 h) [OECD Guideline 201].

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Persistence and degradability	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. The product itself and its products of degradation are not toxic.
Bioaccumulative potential	No bioaccumulation potential.
Mobility	No information available.
Environmental Fate	The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Environmental Impact	No Data Available.

13. DISPOSAL CONSIDERATIONS

Disposal methods: Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility. Or refilled at Big Bubble in Midvale.

14. TRANSPORT INFORMATION

Road and Rail Transport	Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.
UN number:	No Data Available
Proper shipping name:	Sodium Hexametaphosphate
DG Class:	No Data Available
Packing group:	No Data Available
Environmental hazards for transport purposes:	No Data Available
Special Precaution for user:	No Data Available
Hazchem:	No Data Available

Marine Transport

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.

Air Transport

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.

15. REGULATORY INFORMATION

Poisons Schedule: Not Scheduled
AICS: Listed

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16. OTHER INFORMATION

Revision date: 18/09/2021

Reason for issue: Update SDS

Key/Legend:

< Less Than

> Greater Than

AICS Australian Inventory of Chemical Substances

atm Atmosphere

CAS Chemical Abstracts Service (Registry Number)

cm² Square Centimetres

CO₂ Carbon Dioxide

COD Chemical Oxygen Demand

deg C (°C) Degrees Celcius

g Grams

g/cm³ Grams per Cubic Centimetre

g/l Grams per Litre

HSNO Hazardous Substance and New Organism

IDLH Immediately Dangerous to Life and Health

immiscible Liquids are insoluble in each other.

inHg Inch of Mercury

inH₂O Inch of Water

K Kelvin

kg Kilogram

kg/m³ Kilograms per Cubic Metre

LC₅₀ LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.

LD₅₀ LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.

ltr or L Litre

m³ Cubic Metre

mbar Millibar

mg Milligram

mg/24H Milligrams per 24 Hours

mg/kg Milligrams per Kilogram

mg/m³ Milligrams per Cubic Metre

Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.

mm Millimetre

mPa.s Millipascals per Second

N/A Not Applicable

NIOSH National Institute for Occupational Safety and Health

NOHSC National Occupational Health and Safety Commission

OECD Organisation for Economic Co-operation and Development

PEL Permissible Exposure Limit

Pa Pascal

ppb Parts per Billion

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ppm Parts per Million^{[1][1]}_{SEP}
ppm/2h Parts per Million per 2 Hours^{[1][1]}_{SEP}
ppm/6h Parts per Million per 6 Hours^{[1][1]}_{SEP}
psi Pounds per Square Inch^{[1][1]}_{SEP}
R Ranking^{[1][1]}_{SEP}
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value^{[1][1]}_{SEP} the Tonne^{[1][1]}_{SEP}
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight

This material safety data sheet has been prepared by Midland Chemicals

This MSDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. No liability is accepted whether direct or indirect from its application since the conditions of final use are outside Midland Chemicals control. The end user is obliged to conform to relevant government regulations and/or patent laws applicable in their respective States of Countries.