



chem-supply

Safety Data Sheet

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Infosafe No™	1CH6C	Issue Date : October 2017	RE-ISSUED by CHEMSUPP
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Product Name : **mono-SODIUM PHOSPHATE**

Not classified as hazardous

1. Identification

GHS Product Identifier	mono-SODIUM PHOSPHATE		
Company Name	CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)		
Address	38 - 50 Bedford Street GILLMAN SA 5013 Australia		
Telephone/Fax Number	Tel: (08) 8440-2000 Fax: (08) 8440-2001		
Recommended use of the chemical and restrictions on use	pH buffer; buffering agent (electroplating baths); acid cleansers; builder (industrial cleaning formulations); metal phosphatising reagent; mineral supplement; softening/conditioning agent (boiler water treatment; inactivation of metallic ions, to prevent interference with necessary food-processing reactions; textile dyeing/printing auxiliary; phosphate source for micro-organisms in effluent treatment; removal of halogen from waste gases; laxative; urinary acidifier; additive for animal feeds; in the curing of red meats; sequestrant in cheese, milk, fish and meat products; acidulant (processed meats, egg products, powdered drinks); baking powders; emulsifier, nutritional supplement in food; food additive (E 339) in other applications; dentrifice formulations; for pharmaceuticals synthesizing; vitreous enamel frits; analytical chemistry, laboratory reagent.		
Other Names	<u>Name</u>	<u>Product Code</u>	
	mono-SODIUM PHOSPHATE Anhydrous LR	SL061	
	mono-SODIUM PHOSPHATE Anhydrous AR	SA061	
	mono-SODIUM PHOSPHATE Dihydrate AR	SA328	
	Sodium dihydrogen orthophosphate, Sodium phosphate monbasic.		
Other Information	EMERGENCY CONTACT NUMBER: +61 08 8440 2000 Business hours: 8:30am to 5:00pm, Monday to Friday.		

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture	Not classified as hazardous according to the Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004) 3rd Edition, Safe Work Australia. Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).
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3. Composition/information on ingredients

Chemical Characterization	Solid				
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	<u>Hazard Symbol</u>	<u>Risk Phrase</u>
	Sodium dihydrogen phosphate anhydrous	7558-80-7	100 %		
	Sodium dihydrogen orthophosphate dihydrate	13472-35-0	100 %		

4. First-aid measures

Inhalation	Remove from exposure, rest and keep warm. If breathing has stopped, apply artificial respiration. If breathing is difficult, give oxygen. If symptoms develop, obtain medical attention.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. Give water to drink. DO NOT INDUCE VOMITING. Seek medical advice if symptoms persist.
Skin	Wash affected area thoroughly with copious amounts of running water. Remove contaminated clothing and wash before reuse. Seek medical attention if effects persist.
Eye contact	If contact with the eye(s) occurs, wash with copious amounts of water for approximately 15 minutes holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. Seek medical attention.



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First Aid Facilities	Eye wash and normal washroom facilities.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Other Information	For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Hazards from Combustion Products	Highly toxic and/or irritating fumes, smoke and gases, including oxides of phosphorus and sodium oxide.
Specific Methods	Use extinguishing media most appropriate for the surrounding fire. No limitations to the type of extinguishing media.
Decomposition Temp.	204 °C (anhydrous); 225 °C (dihydrate), forms sodium acid pyrophosphate @ 225-250 °C and sodium metaphosphate @ 350-400 °C.

6. Accidental release measures

Personal Precautions	Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)
Clean-up Methods - Small Spillages	Sweep up (avoid generating dust) and using clean non-sparking tools transfer to a clean, suitable, clearly labelled container for disposal in accordance with local regulations.

7. Handling and storage

Conditions for safe storage, including any incompatibilities	Store in tightly closed, labelled containers, in a cool, dry, well-ventilated area away from incompatible substances. Store away from heat, sources of ignition and oxidising agents. Protect against physical damage, direct sunlight and moisture. Store separately from organic solvents and strong bases.
Corrosiveness	Mildly corrosive to steel and aluminium.
Storage Temperatures	Store at room temperature (15 to 25 °C recommended).
Unsuitable Materials	Steel and aluminium.

8. Exposure controls/personal protection

Other Exposure Information	A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established by Safe Work Australia for this product. There is a blanket limit of 10 mg/m ³ for dusts when limits have not otherwise been established.
Appropriate engineering controls	In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.
Respiratory Protection	Usually not required. Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.
Eye Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
Hand Protection	Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance. Recommendation: Silver Shield gloves Plastic or rubber gloves.
Personal Protective Equipment	Final choice of personal protective equipment will depend on individual circumstances and/or according to risk assessments undertaken.
Footwear	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
Body Protection	Clean clothing or protective clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.



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9. Physical and chemical properties

Form	Solid
Appearance	Slightly hygroscopic, colourless crystals or white crystalline powder.
Odour	Odourless.
Decomposition Temperature	204 °C (anhydrous); 225 °C (dihydrate), forms sodium acid pyrophosphate @ 225-250 °C and sodium metaphosphate @ 350-400 °C.
Melting Point	60 °C, at room temp. crystallizes with 2H ₂ O.
Boiling Point	204 °C (anhydrous).
Solubility in Water	Very soluble (850 g/l @ 20 °C (anhydrous); 487 g/l @ 25 °C (dihydrate)).
Solubility in Organic Solvents	Practically insoluble in alcohol (anhydrous).
Specific Gravity	2.04 (anhydrous); 1.915 (dihydrate).
pH	The aqueous soln is acid; 4.0-6.0 (20 °C, 1 M in H ₂ O). The pKa is 7.20 (anhydrous).
Vapour Pressure	Negligible.
Volatile Component	0 %vol @ 21 °C
Flammability	Non combustible material.
Molecular Weight	Anhydrous - 119.98 Dihydrate - 156.01
Other Information	Index of Refraction: 1.4629.

10. Stability and reactivity

Chemical Stability	Stable under normal temperatures, pressures and conditions of storage and handling. Slightly hygroscopic.
Conditions to Avoid	Heat, ignition sources, dust generation, exposure to air and moisture and incompatible materials.
Incompatible Materials	Oxidizing agents, carbonates, alkalies, magnesium, steel, aluminium and with methenamine in solution.
Hazardous Decomposition Products	Irritating and toxic fumes and gases, including phosphorus oxides, sodium oxides.
Possibility of hazardous reactions	Reacts violently in contact with strong bases and magnesium. Contact with methenamine causes slow evolution of formaldehyde.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Ingestion	Phosphates are slowly and incompletely absorbed when ingested hence, systemic toxicity is unlikely unless massive doses are taken. Effects a cathartic action. Symptoms may include gastrointestinal irritation and diarrhoea, nausea, vomiting, cramps, lethargy, lowered pH of the urine, blood chemistry effects, heart disturbances and central nervous system effects. Severe diarrhoea may result in fluid and electrolyte abnormalities (dehydration and hypokalemia). A mild diuresis may occur following excessive absorption. Old kidney stones may be passed. Ischemic colitis has been reported in patients at risk for atherosclerotic disease receiving cathartics for procedural bowel preparation. Excessive absorption of sodium may aggravate congestive heart failure. Peripheral oedema and congestive heart failure have been reported following cathartic withdrawal. Inorganic phosphate poisoning following ingestion of laxatives that contain phosphate salts has been reported in adults and children. Carpopedal spasm is present in most cases and lethargy is uniquely associated with hypertonia. Within several hours of ingestion, typical electrocardiographic changes of prolonged QT intervals and third degree heart block are observed, both related to a low serum calcium. Brain damage may result if the hypocalcemia is not recognized before the occurrence of acute cardiac arrest.
Inhalation	Inhalation of dusts may irritate the respiratory system. Symptoms may include coughing and shortness of breath. The toxicological properties of this substance have not been fully investigated.
Skin	Contact with skin may cause mild irritation due to its acidic nature. Symptoms may include redness and itching. May cause inflammation and pain on prolonged contact, especially with moist skin.
Eye	May cause mild eye irritation, redness, pain, itching, stinging, tearing and blurred vision.



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Carcinogenicity	Not listed in the IARC Monographs.
Chronic Effects	Prolonged or repeated exposure to dust by inhalation may lead to respiratory disorders, and may aggravate existing respiratory disorders. Prolonged or repeated exposure may result in skin irritation leading to possible dermatitis. May sequester calcium and cause calcium phosphate deposits in the kidneys.
Other Information	The toxicity of phosphates is because of their ability to sequester calcium - toxicity results from reducing the concentration of calcium ion in the circulation and from the precipitation of calcium phosphate in tissues.

12. Ecological information

Ecological Information	No ecological problems are to be expected when the product is handled and used with due care and attention.
Ecotoxicity	Depending on the concentration, phosphates may contribute to the eutrophication of water supplies.
Mobility	Soluble in water.
Biological Properties	Phosphate as nutrient is a limiting factor to plant growth.
Environmental Protection	Do not allow to enter waters, waste water, or soil!

13. Disposal considerations

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and disposed of according to relevant local, state and federal government regulations.
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14. Transport information

Transport Information	Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.
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15. Regulatory information

Regulatory Information	Listed in the Australian Inventory of Chemical Substances (AICS).
Poisons Schedule	Not Scheduled

16. Other Information

Literature References	<p>'Standard for the Uniform Scheduling of Medicines and Poisons No. 15', Commonwealth of Australia, November 2016.</p> <p>Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997.</p> <p>National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007.</p> <p>Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011.</p> <p>Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010.</p> <p>Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.</p> <p>Safe Work Australia, 'Hazardous Substances Information System, 2005'.</p> <p>Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'.</p> <p>Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.</p>
Contact Person/Point	<p>Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT:</p> <p>All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. Chem-Supply accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.</p>
Empirical Formula & Structural Formula	<p>Anhydrous - NaH_2PO_4</p> <p>Dihydrate - $\text{NaH}_2\text{PO}_4 \cdot 2\text{H}_2\text{O}$</p> <p>...End Of MSDS...</p>



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