



Infosafe No™	1CHN0	Issue Date : May 2018	RE-ISSUED by CHEMSUPP
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Product Name : **tri-CALCIUM ORTHOPHOSPHATE**

Not classified as hazardous

1. Identification

GHS Product Identifier	tri-CALCIUM ORTHOPHOSPHATE		
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	Ceramics, calcium acid phosphate, phosphorus and phosphoric acid, polishing powder, cattle foods, clarifying sugar syrups, medicine, mordant (dyeing textiles with Turkey red), fertilisers, dentifrices, stabiliser for plastics, meat tenderisers, anticaking agent in foods, buffer, nutrient supplement, removal of 90Sr from milk and laboratory reagent.		
Other Names	<u>Name</u>	<u>Product Code</u>	
	TCP		
	Tertiary calcium phosphate		
	Calcium phosphate, tribasic		
	Calcium phosphate hydroxide		
	Hydroxyapatite		
	Hydroxylapatite		
Other Information	tri-CALCIUM ORTHOPHOSPHATE AR	CA030	
	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	Classified as non-Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia. Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).
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3. Composition/information on ingredients

Chemical	Solid			
Characterization				
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	<u>Hazard Symbol</u> <u>Risk Phrase</u>
	tri-Calcium Orthophosphate	7758-87-4	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. Seek medical attention in severe cases, if symptoms develop, or if breathing is difficult.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.
Skin	Wash affected area thoroughly with copious amounts of running water. Remove contaminated clothing and wash before reuse. Seek medical attention in severe cases, or if irritation develops.
Eye contact	In case of contact with eyes, wash with running water holding eyelids open. Take care not to rinse contaminated water into a non-affected eye. In all cases of eye contamination it is a sensible precaution to seek medical advice.
First Aid Facilities	Maintain eyewash fountain and drench facilities in work area.
Advice to Doctor	Treat symptomatically and supportively.
Other Information	For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.



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5. Fire-fighting measures

Hazards from Combustion Toxic and/or irritating smoke, fumes and gases including phosphine, phosphorus oxides (e.g. P₂O₅) and calcium oxide.

Products

Specific Methods Use extinguishing media most appropriate for the surrounding fire.

Decomposition Temp. 1570 °C; 1670 °C (melting point).

6. Accidental release measures

Personal Protection Wear protective clothing specified for normal operations (see Section 8)

Clean-up Methods - Small Spillages Sweep up and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

Environmental Precautions Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for Safe Handling Avoid ingestion and inhalation of dust. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities Store in tightly closed, labelled containers, in a cool, dry, well-ventilated area away from incompatible substances. Protect against physical damage, direct sunlight and moisture. Store away from oxidizing agents.

Storage Temperatures Store at room temperature (15 to 25 °C recommended).

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/m³ 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 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.

Personal Protective Equipment The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

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.

9. Physical and chemical properties

Form Solid

Appearance White, crystalline powder.

Odour Odourless.

Decomposition Temperature 1570 °C; 1670 °C (melting point).



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Melting Point	1670 °C
Solubility in Water	Of low solubility (2.5 mg/100 g water at 25 °C).
Solubility in Organic Solvents	Practically insoluble in alcohol and acetic acid; soluble in dilute hydrochloric or nitric acids.
Specific Gravity	3.14.
pH	6 - 8 (50 g/l H ₂ O suspension, 20 °C).
Flammability	Non combustible material.
Molecular Weight	502.32
Other Information	Taste: Tasteless. Refractive index: 1.629; 1.626. Bulk density: 0.6 g/cm ³ .

10. Stability and reactivity

Chemical Stability	Stable in air, under normal temperatures, pressures and conditions of use and storage. Product loses its potency/performance above 45 °C.
Conditions to Avoid	Dust generation, excess heat, light and incompatible materials.
Incompatible Materials	Strong oxidising agents.
Hazardous Decomposition Products	Toxic and/or irritating smoke, fumes and gases including phosphine, phosphorus oxides (e.g. P ₂ O ₅) and calcium oxide.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Ingestion	Ingestion of large amounts may cause gastrointestinal irritation, with nausea, headache, vomiting, cramps, diarrhoea and abdominal pain.
Inhalation	Dust may cause irritation to the mucous membrane of the respiratory tract. Symptoms may include coughing, sneezing and shortness of breath. Inhalation could cause chemical pneumonitis.
Skin	May cause mild skin irritation, which may result in redness, pain and possible dermatitis.
Eye	May cause slight eye irritation resulting in redness, swelling, stinging and possible corneal damage.
Carcinogenicity	Not listed in the IARC Monographs.
Chronic Effects	Prolonged or repeated exposure will result in skin irritation leading to possible dermatitis, and may aggravate existing respiratory disorders. Inorganic phosphorus compounds may cause irritation and haemorrhages in the stomach as well as liver and kidney damage. Bone structure may be attacked, especially the jaw and teeth.

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	Quantitative data on the ecological effect of this product are not available. Depending on the concentration, phosphates may contribute to the eutrophication of water supplies.
Environmental Protection	Avoid contaminating waterways.

13. Disposal considerations

Disposal Considerations	Dispose 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



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16. Other Information

Literature	'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia.
References	Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007. Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010. Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'. Safe Work Australia, 'Hazardous Substances Information System, 2005'. Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'. Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'. Contact Person/Point Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT: 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. Empirical Formula & Structural Formula Ca ₅ (PO ₄) ₃ OH. ...End Of MSDS...

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