

1. IDENTIFICATION

Product Name	Mono Calcium Phosphate
Other Names	Calcium bis(dihydrogen phosphate); Calcium bis(dihydrogenorthophosphate); MONOCAL N
Uses	<ul style="list-style-type: none">- Feed materials- Fertilizer- Fire-retarding agent- Fire extinguishing medium
Chemical Family	No Data Available
Chemical Formula	No Data Available
Chemical Name	Mono Calcium Phosphate
Product Description	Substance/mono-constituent

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details


For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not Scheduled

Globally Harmonised System

Hazard Classification	Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)		
Hazard Categories	Serious Eye Damage/Irritation - Category 2A		
Pictograms			
Signal Word	Warning		
Hazard Statements	H319	Causes serious eye irritation.	
Precautionary Statements	Prevention	P264	Wash hands thoroughly after handling.
		P280	Wear eye protection/face protection.
	Response	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P337 + P313	If eye irritation persists: Get medical advice/attention.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications

Health Hazards	6.3A	Substances that are irritating to the skin
	6.4A	Substances that are irritating to the eye

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Calcium bis(dihydrogenorthophosphate)	No Data Available	7758-23-8	>80 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	Rinse mouth with water. Consult a doctor/medical service if you feel unwell.
Eye	Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.
Skin	Rinse with water. Soap may be used. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.
Inhaled	Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
Advice to Doctor	Treat symptomatically.

Medical Conditions Aggravated by Exposure No information available.

5. FIRE FIGHTING MEASURES

General Measures	Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Dilute toxic gases with water spray. Take account of precipitation water.
Flammability Conditions	Non-combustible.
Extinguishing Media	Adapt extinguishing media to the environment.
Fire and Explosion Hazard	No information available.
Hazardous Products of Combustion	At very high temperature: release of toxic/corrosive/combustible gases/vapours (phosphine).
Special Fire Fighting Instructions	No information available.
Personal Protective Equipment	Gloves. Protective goggles. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Prevent dust cloud formation. Do not touch or walk through spilled material. Stop leak if safe to do so.
Clean Up Procedures	Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
Containment	Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray.
Environmental Precautionary Measures	Use appropriate containment to avoid environmental contamination.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
Personal Precautionary Measures	Gloves. Protective goggles. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.

7. HANDLING AND STORAGE

Handling	Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Avoid raising dust.
Storage	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Keep away from oxidizing agents, (strong) acids, (strong) bases.
Container	Suitable packaging material: Polyethylene, paper. Non suitable packaging material: Aluminium.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	Safe Work Australia Exposure Standard for Rogue dust (inspirable dust): TWA = 10 mg/m ³
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Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	Avoid raising dust. Carry operations in the open/under local exhaust/ventilation or with respiratory protection
Personal Protection Equipment	RESPIRATORY PROTECTION: Dust mask with filter type P1 (AS 1715/1716). EYE PROTECTION: Safety glasses. In case of dust production: protective goggles (AS 1336/1337). HANDS: Rubber gloves (AS 2161). CLOTHING: Long-sleeved protective clothing and safety footwear (AS 3765/2210).
Special Hazards Precautions	CAUSES SERIOUS EYE IRRITATION: Wear eye protection; wash hands thoroughly after handling.
Work Hygienic Practices	Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke during work.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystalline
Odour	Odourless
Colour	Off-White
pH	3.6 - 4.1%
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	>450 °C EU Method A.1
Freezing Point	No Data Available
Solubility	1.8 g/100 ml 20°C
Specific Gravity	2.27 EU Method A.3
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No Data Available
Potential for Dust Explosion	No information available.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.

Properties That May Initiate or Contribute to Fire Intensity	No information available.
Reactions That Release Gases or Vapours	No information available.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	Substance has acid reaction.
Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Avoid raising dust.
Materials to Avoid	Oxidizing agents, (strong) acids, (strong) bases.
Hazardous Decomposition Products	At very high temperature: release of toxic/corrosive/combustible gases/vapours (phosphine).
Hazardous Polymerisation	No information available.

11. TOXICOLOGICAL INFORMATION

General Information	<p>ACUTE SYMPTOMS: INHALATION OF DUST: Slight irritation. EXPOSURE TO HIGH CONCENTRATIONS: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. SKIN CONTACT: Not irritating. EYE CONTACT: Irritation of the eye tissue. INGESTION OF HIGH QUANTITIES: Nausea. Vomiting. Irritation of the gastric/intestinal mucosa. DELAYED SYMPTOMS: No effects known.</p>
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Acute	
Ingestion	Oral - Rat (female): LD50 >2,000 mg/kg bw (OECD 420; Literature)
Other	Dermal - Rabbit (male/female): LD50 >2,000 mg/kg bw (72 h) (EPA OPPTS 870.1200; Read-across).
Inhalation	Inhalation (dust) - Rat (male/female): LC50 >2.6 mg/l (4 h) (OECD 403; Read-across).
Eyelirritant	<p>Route of Exposure: Eye (30/75/120/180/240 minutes) Species: Isolated chicken eye Result: Moderately irritating Method: OECD 438; Experimental value.</p>
SkinIrritant	<p>Route of exposure: in vitro test Species: Reconstructed human epidermis Exposure time: 15 minutes Result: Not irritating (Experimental value).</p>
Sensitisation	<p>Route of exposure: Skin Species: Mouse (female) Result: Not sensitising Method: OECD 429 (Read-across).</p>
Mutagenicity	<p>Test substrate (in vitro): Mouse (lymphoma L5178Y cells) Result: Negative (No effect) Method: OECD 476 (Read-across).</p>
Reproduction	<p>Developmental toxicity - Rat: NOAEL >410 mg/kg bw/day (10 days); No effect (Read-across). Maternal toxicity - Rat: NOAEL >410 mg/kg bw/day (10 days); No effect (Read-across). Effects on fertility - Rat (male/female): NOAEL >=500 mg/kg bw/day (6-8 weeks); No effect; OECD 422 (equivalent) (Read-across).</p>

Chronic

Ingestion	<p>SPECIFIC TARGET ORGAN TOXICITY Route of exposure: Stomach tube Species: Rat (male/female); Exposure time: 6 - 8 weeks Value: NOAEL = 250 mg/kg bw/day (No effect) Method: OECD 422 (Read-across).</p>
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Acute toxicity fishes: LC50 >100 mg/l (96 h) Oncorhynchus mykiss; Semi-static system; Fresh water (OECD 203; Read-across; GLP). Acute toxicity crustacea: EC50 >100 mg/l (48 h) Daphnia magna; Static system; Fresh water (OECD 202; Read-across; GLP). Acute toxicity algae: ErC50 >100 mg/l (72 h) Desmodesmus subspicatus; Static system; Fresh water (OECD 201; Read-across; GLP). Acute toxicity aquatic micro-organisms: NOEC = 1000 mg/l (3 h) Activated sludge; Static system; Fresh water (OECD 209; Read-across; GLP).
Persistence/Degradability	Not applicable.
Mobility	No information available.
Environmental Fate	Slightly harmful to fishes. Slightly harmful to crustacea. Slightly harmful to algae. pH shift. No inhibition of activated sludge. Not classified as dangerous for the environment
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container in accordance with all local, state and federal regulations.
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	Mono Calcium Phosphate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Land Transport (Malaysia)

ADR

Proper Shipping Name	Mono Calcium Phosphate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	Mono Calcium Phosphate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name	Mono Calcium Phosphate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Sea Transport

IMDG Code

Proper Shipping Name	Mono Calcium Phosphate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No

Air Transport

IATA DGR

Proper Shipping Name	Mono Calcium Phosphate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	Not Scheduled

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	HSR006703
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National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Listed
China (IECSC)	Listed
Europe (EINECS)	231-837-1
Europe (REACH)	01-2119490065-39-XXXX
Japan (ENCS/METI)	1-183
Korea (KECI)	KE-04474
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Listed
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Listed
USA (TSCA)	Listed

16. OTHER INFORMATION

Related Product Codes	MOCAPH0202, MOCAPH0203, MOCAPH0204, MOCAPH0205, MOCAPH0420, MOCAPH1000, MOCAPH1001, MOCAPH1002, MOCAPH1003, MOCAPH1004, MOCAPH1005, MOCAPH1006, MOCAPH1007, MOCAPH1008, MOCAPH1100, MOCAPH1150, MOCAPH1160, MOCAPH1200, MOCAPH1300, MOCAPH1301, MOCAPH1400, MOCAPH1401, MOCAPH1500, MOCAPH1550, MOCAPH1600, MOCAPH2000, MOCAPH2001, MOCAPH2002, MOCAPH2100, MOCAPH2400, MOCAPH2500, MOCAPH2600, MOCAPH2700, MOCAPH2800, MOCAPH3000, MOCAPH3001, MOCAPH3002, MOCAPH3500, MOCAPH3600, MOCAPH4000, MOCAPH5000, MOCAPH5100, MOCAPH5300, MOCAPH5400, MOCAPH5500, MOCAPH5600, MOCAPH6000, MOCAPH6010, MOCAPH8200, MOCAPH8300, MOCAPH8400, MOCAPH8800, MOCAPH9000, MOCAPH9100, MOCAPH9200
Revision	3
Revision Date	03 Oct 2016

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
EPA (New Zealand) Environmental Protection Authority of New Zealand
deg F (°F) Degrees Farenheit
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 insoluable in each other.
inHg Inch of Mercury
inH₂O Inch of Water
K Kelvin
kg Kilogram
kg/m³ Kilograms per Cubic Metre
lb Pound
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
mmH₂O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Heath and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight