

### 1. IDENTIFICATION

<b>Product Name</b>	<b>Monopotassium phosphate (MKP)</b>
<b>Other Names</b>	Monopotassium dihydrogen phosphate; Potassium acid phosphate; Potassium dihydrogenorthophosphate; Potassium phosphate, monobasic
<b>Uses</b>	Fertiliser; Food additive; Fungicide; Buffering agent.
<b>Chemical Family</b>	No Data Available
<b>Chemical Formula</b>	KH <sub>2</sub> PO <sub>4</sub>
<b>Chemical Name</b>	Phosphoric acid, monopotassium salt
<b>Product Description</b>	mono-constituent substance (inorganic).

### 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
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766

### 2. HAZARD IDENTIFICATION

**Poisons Schedule (Aust)** Not Scheduled

### Globally Harmonised System

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

**Signal Word** None

### Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015



<b>HSNO Classifications</b>	Health Hazards	<b>6.1D</b>	Substances that are acutely toxic - Harmful
		<b>6.4A</b>	Substances that are irritating to the eye
	Environmental Hazards	<b>9.3C</b>	Substances that are harmful to terrestrial vertebrates

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

*Ingredients*

Chemical Entity	Formula	CAS Number	Proportion
Monopotassium phosphate	KH <sub>2</sub> PO <sub>4</sub>	7778-77-0	<=100 %

### 4. FIRST AID MEASURES

*Description of necessary measures according to routes of exposure*

<b>Swallowed</b>	IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not induce vomiting unless directed to do so by medical personnel. Get medical advice/attention if you feel unwell. Never give anything by mouth to an unconscious person.
<b>Eye</b>	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.
<b>Skin</b>	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.
<b>Inhaled</b>	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.
<b>Advice to Doctor</b>	Treat symptomatically.
<b>Medical Conditions Aggravated by Exposure</b>	No information available.

### 5. FIRE FIGHTING MEASURES

<b>General Measures</b>	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
<b>Flammability Conditions</b>	Non-combustible; Material itself does not burn.
<b>Extinguishing Media</b>	If material is involved in a fire, use dry chemical, Carbon dioxide (CO <sub>2</sub> ), foam or water spray for extinction. Use extinguishing media appropriate to surrounding fire conditions.
<b>Fire and Explosion Hazard</b>	Decomposes on heating, emitting toxic fumes.
<b>Hazardous Products of Combustion</b>	Fire or heat may produce irritating, toxic and/or corrosive fumes, including oxides of Phosphorus.
<b>Special Fire Fighting Instructions</b>	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
<b>Personal Protective Equipment</b>	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. SCBA and structural firefighter's uniform may provide limited protection.
<b>Flash Point</b>	No Data Available
<b>Lower Explosion Limit</b>	No Data Available
<b>Upper Explosion Limit</b>	No Data Available
<b>Auto Ignition Temperature</b>	No Data Available
<b>Hazchem Code</b>	No Data Available



## 6. ACCIDENTAL RELEASE MEASURES

<b>General Response Procedure</b>	Ensure adequate ventilation. Do not touch or walk through spilled material. Avoid dust formation. Avoid breathing dust and contact with eyes, skin and clothing.
<b>Clean Up Procedures</b>	Collect material (sweep or vacuum up) and place into suitable containers for recycling or disposal (see SECTION 13).
<b>Containment</b>	Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas.
<b>Decontamination</b>	Rinse with plenty of water.
<b>Environmental Precautionary Measures</b>	Prevent entry into drains and waterways.
<b>Evacuation Criteria</b>	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
<b>Personal Precautionary Measures</b>	Use personal protective equipment as required (see SECTION 8).

## 7. HANDLING AND STORAGE

<b>Handling</b>	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate 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). Avoid overheating (decomposition).
<b>Storage</b>	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed when not in use. Protect from moisture (hygroscopic). Keep away from incompatible materials (see SECTION 10).
<b>Container</b>	Keep in the original container.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>General</b>	No specific exposure standards are available for this product. For dusts from solid substances without specific occupational exposure standards: - Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m <sup>3</sup> (measured as inhalable dust). - New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m <sup>3</sup> ; TWA = 3 mg/m <sup>3</sup> (respirable dust).
<b>Exposure Limits</b>	No Data Available
<b>Biological Limits</b>	No information available.
<b>Engineering Measures</b>	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
<b>Personal Protection Equipment</b>	- Respiratory protection: 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). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses. - Hand protection: Handle with gloves. Recommended: Impervious gloves. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Overalls, safety shoes.
<b>Special Hazards Precautions</b>	No information available.
<b>Work Hygienic Practices</b>	Do not eat, drink or smoke when using this product. Wash hands before breaks and at the end of the workday. Take off contaminated clothing and wash before storage or reuse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Solid
<b>Appearance</b>	Crystalline or granular powder
<b>Odour</b>	Odourless



<b>Colour</b>	White
<b>pH</b>	4.2 - 4.8 (1% soln.)
<b>Vapour Pressure</b>	No Data Available
<b>Relative Vapour Density</b>	No Data Available
<b>Boiling Point</b>	400 °C
<b>Melting Point</b>	253 °C
<b>Freezing Point</b>	No Data Available
<b>Solubility</b>	Soluble in water
<b>Specific Gravity</b>	No Data Available
<b>Flash Point</b>	No Data Available
<b>Auto Ignition Temp</b>	No Data Available
<b>Evaporation Rate</b>	No Data Available
<b>Bulk Density</b>	No Data Available
<b>Corrosion Rate</b>	No Data Available
<b>Decomposition Temperature</b>	No Data Available
<b>Density</b>	No Data Available
<b>Specific Heat</b>	No Data Available
<b>Molecular Weight</b>	No Data Available
<b>Net Propellant Weight</b>	No Data Available
<b>Octanol Water Coefficient</b>	No Data Available
<b>Particle Size</b>	No Data Available
<b>Partition Coefficient</b>	No Data Available
<b>Saturated Vapour Concentration</b>	No Data Available
<b>Vapour Temperature</b>	No Data Available
<b>Viscosity</b>	No Data Available
<b>Volatile Percent</b>	No Data Available
<b>VOC Volume</b>	No Data Available
<b>Additional Characteristics</b>	Hygroscopic.
<b>Potential for Dust Explosion</b>	No information available.
<b>Fast or Intensely Burning Characteristics</b>	No information available.
<b>Flame Propagation or Burning Rate of Solid Materials</b>	No information available.
<b>Non-Flammables That Could Contribute Unusual Hazards to a Fire</b>	No information available.
<b>Properties That May Initiate or Contribute to Fire Intensity</b>	Non-combustible; Material itself does not burn.
<b>Reactions That Release Gases or Vapours</b>	Fire or heat may produce irritating, toxic and/or corrosive fumes, including oxides of phosphorus, Potassium oxides.
<b>Release of Invisible Flammable Vapours and Gases</b>	No information available.

**10. STABILITY AND REACTIVITY**

<b>General Information</b>	No information available.
<b>Chemical Stability</b>	Stable under normal conditions of use.
<b>Conditions to Avoid</b>	Avoid dust formation. Avoid overheating (decomposition). Protect from moisture.
<b>Materials to Avoid</b>	Incompatible/reactive with acids, alkalis and strong oxidising agents.
<b>Hazardous Decomposition Products</b>	Fire or heat may produce irritating, toxic and/or corrosive fumes, including oxides of phosphorus, Potassium oxides.



**Hazardous Polymerisation** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

### General Information

Information on possible routes of exposure:

- Ingestion: May cause abdominal pain, nausea, vomiting, diarrhoea.
- Eye contact: May cause physical irritation/discomfort.
- Skin contact: May cause skin irritation.
- Inhalation: Dust may cause respiratory tract irritation.

Chronic effects: May sequester calcium, causing calcium phosphate deposits in the kidneys.

### Acute

#### Ingestion

Acute toxicity (Oral):  
- LD50, Rat: >2,000 mg/kg

#### Other

Acute toxicity (Dermal):  
- LD50, Rabbit: >4,640 mg/kg

### Carcinogen Category

None

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

No information available.

### Persistence/Degradability

The substance, when dissolved in water, will effectively separate into phosphate and potassium ions.

### Mobility

No information available.

### Environmental Fate

Prevent entry into drains and waterways.

### Bioaccumulation Potential

Bioaccumulation is not expected.

### Environmental Impact

No Data Available

## 13. DISPOSAL CONSIDERATIONS

### General Information

Recycle if possible; Dispose of contaminated material in accordance with local/regional/national regulations.

**Special Precautions for Land Fill** No information available.

## 14. TRANSPORT INFORMATION

### Land Transport (New Zealand)

NZS5433

#### Proper Shipping Name

Monopotassium phosphate (MKP)

#### 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



**Comments** NON-DANGEROUS GOODS: Not regulated for LAND transport.

**Sea Transport**

IMDG Code

**Proper Shipping Name** Monopotassium phosphate (MKP)  
**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  
**Comments** NON-DANGEROUS GOODS: Not regulated for SEA transport.

**Air Transport**

IATA DGR

**Proper Shipping Name** Monopotassium phosphate (MKP)  
**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  
**Comments** NON-DANGEROUS GOODS: Not regulated for AIR transport.

**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** HSR003211

**National/Regional Inventories**

**Australia (AICS)** Listed  
**Canada (DSL)** Not Determined  
**Canada (NDSL)** Not Determined  
**China (IECSC)** Not Determined  
**Europe (EINECS)** 231-913-4  
**Europe (REACH)** Not Determined  
**Japan (ENCS/METI)** Listed



<b>Korea (KECI)</b>	Listed
<b>Malaysia (EHS Register)</b>	Not Determined
<b>New Zealand (NZIoC)</b>	Listed
<b>Philippines (PICCS)</b>	Not Determined
<b>Switzerland (Giftliste 1)</b>	Not Determined
<b>Switzerland (Inventory of Notified Substances)</b>	Not Determined
<b>Taiwan (NCSR)</b>	Not Determined
<b>USA (TSCA)</b>	Not Determined

## 16. OTHER INFORMATION

**Related Product Codes** HEPOPH2000, MOPOPF1000, MOPOPF2000, MOPOPF3000, MOPOPF3001, MOPOPF3002, MOPOPF3030, MOPOPF4000, MOPOPF7000, MOPOPF8000, MOPOTA0890, MOPOTA0999, MOPOTA1000, MOPOTA1001, MOPOTA1002, MOPOTA1003, MOPOTA1004, MOPOTA1005, MOPOTA1006, MOPOTA1007, MOPOTA1008, MOPOTA1009, MOPOTA1010, MOPOTA1011, MOPOTA1012, MOPOTA1013, MOPOTA1014, MOPOTA1015, MOPOTA1016, MOPOTA1017, MOPOTA1018, MOPOTA1019, MOPOTA1020, MOPOTA1021, MOPOTA1023, MOPOTA1024, MOPOTA1025, MOPOTA1026, MOPOTA1027, MOPOTA1028, MOPOTA1029, MOPOTA1030, MOPOTA1032, MOPOTA1100, MOPOTA1101, MOPOTA1110, MOPOTA1150, MOPOTA1200, MOPOTA1300, MOPOTA1301, MOPOTA1302, MOPOTA1332, MOPOTA1400, MOPOTA1500, MOPOTA1600, MOPOTA1700, MOPOTA1705, MOPOTA1800, MOPOTA1801, MOPOTA1802, MOPOTA1803, MOPOTA1804, MOPOTA1825, MOPOTA2000, MOPOTA2100, MOPOTA2101, MOPOTA2200, MOPOTA2500, MOPOTA2510, MOPOTA2800, MOPOTA2801, MOPOTA2802, MOPOTA2805, MOPOTA2862, MOPOTA3000, MOPOTA3001, MOPOTA3002, MOPOTA3300, MOPOTA3301, MOPOTA3305, MOPOTA3306, MOPOTA3310, MOPOTA3312, MOPOTA3315, MOPOTA3320, MOPOTA3325, MOPOTA3350, MOPOTA3355, MOPOTA3360, MOPOTA3362, MOPOTA3500, MOPOTA4000, MOPOTA4001, MOPOTA4500, MOPOTA4501, MOPOTA5000, MOPOTA5100, MOPOTA5102, MOPOTA5105, MOPOTA5106, MOPOTA5110, MOPOTA5115, MOPOTA5120, MOPOTA5155, MOPOTA5500, MOPOTA6000, MOPOTA6001, MOPOTA6300, MOPOTA6400, MOPOTA6401, MOPOTA6500, MOPOTA6600, MOPOTA6700, MOPOTA6800, MOPOTA6801, MOPOTA6802, MOPOTA6803, MOPOTA6804, MOPOTA6805, MOPOTA6806, MOPOTA6807, MOPOTA6808, MOPOTA7000, MOPOTA7001, MOPOTA7500, MOPOTA7600, MOPOTA8000, MOPOTA8100, MOPOTA8200, MOPOTA9000, MOPOTA9001, MOPOTA9002, MOPOTA9100, MOPOTA9101, MOPOTA9200, MOPOTA9300, MOPOTA9500, MOPOTA9501, MOPOTA9600, MOPOTA9700, MOPOTA9705, MOPOTA9770, MOPOTA9771, MOPOTA9772, MOPOTA9773, MOPOTA9800

**Revision** 3

**Revision Date** 10 Nov 2017

**Reason for Issue** updated sds

**Key/Legend**

- < Less Than
- > Greater Than
- AICS** Australian Inventory of Chemical Substances
- atm** Atmosphere
- CAS** Chemical Abstracts Service (Registry Number)
- cm<sup>2</sup>** Square Centimetres
- CO<sub>2</sub>** 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/cm<sup>3</sup>** 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
- inH<sub>2</sub>O** Inch of Water
- K** Kelvin
- kg** Kilogram
- kg/m<sup>3</sup>** 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

**m<sup>3</sup>** Cubic Metre

**mbar** Millibar

**mg** Milligram

**mg/24H** Milligrams per 24 Hours

**mg/kg** Milligrams per Kilogram

**mg/m<sup>3</sup>** Milligrams per Cubic Metre

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

**mm** Millimetre

**mmH<sub>2</sub>O** Millimetres of Water

**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

**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

