



SAFETY DATA SHEET

SECTION 1 IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

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| Product Identifier | PHOSPHORIC ACID 81% |
| Other Names | Orthophosphoric Acid, Hydrogen Phosphate |
| Manufacturer's Product Code | 21026 |
| Recommended Use | Manufacture of phosphate fertilizers and salts, detergents, corrosion inhibitors, water treatment |

Details of Supplier/Manufacturer

| | |
|----------|---|
| Company: | Recochem Inc. ABN: 69 010 485 999 |
| Address: | 1809 Lytton Road, Lytton, Queensland 4178 |
| Phone: | (07) 3308 5200 Fax: (07) 3308 5201 |
| Website: | www.recochem.com.au |


Emergency Telephone Numbers

| | |
|----------------------|---|
| Business Hours: | (07) 3308 5200 |
| After Hours: | 1300 131 001 |
| Poisons Information: | Australia: 13 11 26 New Zealand: 0800 764 766 |

SECTION 2 HAZARDS IDENTIFICATION

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|---------------------------|---|
| Hazardous chemical | <i>according to classification by Safe Work Australia</i> |
| Dangerous goods | <i>according to the Australian Code for the Transport of Dangerous Goods by Road and Rail</i> |

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| Signal Word | DANGER |
|--------------------|---------------|

| GHS Classification | Pictogram | Hazard statement |
|--|--|--|
| Skin Corrosion/Irritation, Category 1B |  CORROSION | H314 Causes severe skin burns and eye damage |

Precautionary statements:

| GENERAL | |
|---------|--|
| P101 | If medical advice is needed, have product container or label at hand |
| P102 | Keep out of reach of children |
| P103 | Read label before use |

Product: PHOSPHORIC ACID 81%

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| <i>PREVENTATIVE</i> | |
| P260 | Do not breathe dusts or mists |
| P264 | Wash thoroughly after handling |
| P280 | Wear protective gloves/eye protection/face protection |
| <i>RESPONSE</i> | |
| P301 + P330 + P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off contaminated clothing and wash before reuse. Rinse skin with water/shower |
| P304 + P340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing |
| P310 | Immediately call a POISON CENTER or doctor/physician |
| P363 | Wash contaminated clothing before reuse |
| <i>STORAGE</i> | |
| P405 | Store locked up |
| <i>DISPOSAL</i> | |
| P501 | Dispose of contents/container in accordance with local regulations |

SECTION 3 COMPOSITION AND INFORMATION ON INGREDIENTS**Ingredients Names and Proportions**

| Chemical Entity | CAS Number | Proportion (%) |
|-----------------|------------|----------------|
| Phosphoric Acid | 7664-38-2 | 85 |
| Water | 7732-18-5 | 15 |

SECTION 4 FIRST AID MEASURES**Description of necessary first aid measures**

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| Inhalation: | Remove victim from exposure if safe to do so. Remove contaminated clothing. Seek immediate medical advice |
| Skin Contact: | DO NOT DELAY. If spilt on large area of skin or hair, immediately drench with running water and remove contaminated clothing. Continue to wash skin and hair with plenty of water until advised to stop by the Poisons Information Centre or a doctor. Seek medical attention. |
| Eye Contact: | DO NOT DELAY. If in eyes, hold eyes open, flood with water for at least 15 minutes or until advised by the Poisons Information Centre or a doctor. Seek immediate medical attention |
| Ingestion: | Immediately rinse mouth with copious amounts of water. Seek immediate medical attention |

Symptoms caused by exposure

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| Inhalation: | May cause respiratory irritation and possible harmful corrosive effects, including breathing difficulty, lung inflammation, sneezing and throat swelling |
| Skin: | A severe irritant. Will cause redness, itching, irritation, severe pain and chemical burns |
| Eye: | A severe irritant. May include pain or burning sensation, redness, swelling and/or blurred vision. Concentrated solutions can cause permanent eye damage |
| Ingestion: | May cause burns to the mouth and throat, pain in the stomach, difficulty in breathing, nausea, vomiting diarrhoea, and convulsions. It may cause gastric or oesophageal perforation |

Product: PHOSPHORIC ACID 81%

Medical attention and special treatment

Treat symptomatically.

SECTION 5 FIRE FIGHTING MEASURES

Suitable extinguishing equipment

Not combustible, however, if material is involved in a fire use: foam, dry chemical powder, carbon dioxide, water spray or water fog (do not use water jets).

Specific hazards arising from the chemical

Will decompose in fire conditions, releasing toxic and irritating oxides of phosphorus. Contact with common metals produces hydrogen which may form flammable mixtures with air.

Special protective equipment and precautions for fire fighters

Wear full protective clothing and self-contained breathing apparatus. Hazchem code 2R.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid contact with spilled or released material. Shut off leaks, if possible without personal risks. Isolate hazard area and deny entry to unnecessary or unprotected personnel. Wear protective equipment to prevent skin and eye contact and breathing mist. Work upwind or increase ventilation. Caution – heat may be evolved on contact with water.

Environmental precautions

Use appropriate containment to avoid environmental contamination. Prevent from spreading and entering waterway using sand, earth or other appropriate barriers. If contamination of sewers or waterways has occurred advise local emergency services.

Methods and materials for containment and cleaning up

Cover with absorbent inert material, sand or soil. Sweep or vacuum up, but avoid generating mists.

For small spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow any residues to evaporate or use an appropriate absorbent material and dispose of safely.

For larger spills (> 1 drum), transfer by means such as a vacuum truck to a salvage tank for recovery or disposal. Do not flush residues with water. Retain as contaminated waste. Allow any residues to evaporate or use an appropriate absorbent material and dispose of safely.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Non-combustible material. Avoid skin and eye contact and breathing mists. Handle and open containers with care in a well-ventilated area. Ensure that the workplace is ventilated such that the Occupational Exposure limit is not exceeded. Wash thoroughly after handling. Do not eat, drink or smoke in contaminated areas. Before eating, drinking or smoking, remove contaminated clothing and wash hands. When preparing or diluting acid solutions, the acid should be added slowly to water with plenty of careful stirring to prevent overheating, splashing and splattering of the acid.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry and well-ventilated area, away from sunlight, ignition sources and other sources of heat. Keep containers closed when not in use – check regularly for spills. Have emergency equipment (for fires, spills, leaks etc.) readily available. Keep away from incompatible materials (see SECTION 10).

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure control measures

From National Occupational Health & Safety Commission (NOHSC) Worksafe Australia - Phosphoric Acid: 3mg/m³ STEL, 1mg/m³ TWA

Product: PHOSPHORIC ACID 81%**Biological monitoring**

No biological limit allocated.

Engineering controls

Ensure that adequate ventilation is provided. Maintain air concentrations below recommended exposure standards. Avoid generating and inhaling mists and vapours. Keep containers closed when not in use.

Individual protection measures

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| Eye and face protection: | Wear safety goggles. |
| Skin protection: | Use solvent resistant gloves, nitrile for longer term protection or PVC and neoprene for incidental splashes. |
| Respiratory protection: | If work practices do not maintain airborne level below the exposure standard, use appropriate respiratory protection equipment. When using respirators, select an appropriate combination of mask and filter. Select a filter for organic gases and vapours (boiling point > 65°C). Respirators should comply with AS1716 or an equivalent approved by a state/territory authority. |
| Thermal hazards: | Not applicable. |

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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|---|---------------------------------|
| Appearance: | Clear, colourless syrupy liquid |
| Odour: | Odourless |
| Odour threshold (ppm): | Data not available |
| pH: | 1.5 (1% solution in water) |
| Melting point/freezing point (°C): | 21 |
| Initial boiling point and boiling range (°C): | 158 |
| Flash point (°C): | Data not available |
| Evaporation rate (Butyl acetate = 1): | Data not available |
| Flammability: | Non-combustible |
| Upper/lower flammability or explosive limits (%): | Data not available |
| Vapour pressure (kPa @ 20°C): | Data not available |
| Vapour density (air = 1 @ 15°C): | Data not available |
| Density (g/ml @ 20°C): | 1.685 |
| Solubility (kg/m ³): | Miscible with water |
| Partition coefficient: n-octanol/water: | Data not available |
| Auto-ignition temperature (°C): | Data not available |
| Decomposition temperature (°C): | Data not available |
| Kinematic viscosity (mm ² /s @ 25°C): | Data not available |

SECTION 10 STABILITY AND REACTIVITY**Reactivity**

Stable under normal conditions of use.

Product: PHOSPHORIC ACID 81%

Chemical stability

Stable under normal conditions of use.

Possibility of hazardous reactions

Stable under normal conditions of use.

Conditions to avoid

Will absorb moisture from the atmosphere. Reacts exothermally with water.

Incompatible materials

Incompatible and will react with strong bases, strong oxidising and reducing agents, sulphides, phosphides, cyanides, acetylides, fluorides and carbides releasing flammable or toxic gases.

Hazardous decomposition products

Nature of decomposition products not known.

SECTION 11 TOXICOLOGICAL INFORMATION

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| Acute toxicity: | LD50 Oral (rat) = 1530mg/kg. |
| Skin corrosion/irritation: | LD50 Dermal (rabbit) = 2740mg/kg Contact with skin will result in severe irritation. Corrosive to skin – may cause burns with resultant tissue destruction |
| Serious eye damage/irritation: | Corrosive to eyes. Mists may cause severe eye irritation. Concentrated solutions can cause severe burns, pain and permanent eye damage |
| Respiratory or skin sensitisation: | Not expected to be a sensitiser. |
| Germ cell mutagenicity: | Not expected to be mutagenic. |
| Carcinogenicity: | Not expected to be carcinogenic. |
| Reproductive toxicity: | Not expected to impair fertility. |
| Specific Target Organ Toxicity (STOT) – single exposure: | Ingestion may cause burns to the mouth, and gastric or oesophageal perforation. Inhalation may have possible harmful corrosive effects including lesions of the nasal septum, pulmonary oedema, pneumonitis and emphysema. Prolonged exposures can cause necrosis of nasal passages and oedema of the lungs. |
| Specific Target Organ Toxicity (STOT) – repeated exposure: | Data not available. |
| Aspiration hazard: | Data not available. |

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity

Avoid contaminating waterways. May be harmful to aquatic organisms due to the shift of the pH.

Acute toxicity:

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|------------------------|--------------------|
| Fish – | Data not available |
| Aquatic invertebrate – | Data not available |
| Algae – | Data not available |
| Microorganisms – | Data not available |

Chronic toxicity:

| | |
|--------|--------------------|
| Fish – | Data not available |
|--------|--------------------|

Product: PHOSPHORIC ACID 81%

| | |
|------------------------|--------------------|
| Aquatic invertebrate – | Data not available |
| Algae – | Data not available |
| Microorganisms – | Data not available |

Persistence and degradability

Data not available.

Bioaccumulative potential

Data not available.

Mobility in soil

Miscible with water.

Other adverse effects

Data not available.

SECTION 13 DISPOSAL CONSIDERATIONS

Ensure waste disposal conforms to local waste disposal regulations.

SECTION 14 TRANSPORT INFORMATION

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|--|-----------------|
| UN number: | 1805 |
| Proper shipping name: | PHOSPHORIC ACID |
| Australian Dangerous Goods class: | 8 |
| Australian Dangerous Goods packing group: | III |
| Hazchem code: | 2R |

SECTION 15 REGULATORY INFORMATION

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|---|--------|
| Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP), Poisons Schedule: | 6 |
| Australian Inventory of Chemical Substances (AICS): | Listed |
| Dangerous Goods Initial Emergency Response Guide (SAA/SNZ HB76): | 37 |

SECTION 16 OTHER INFORMATION

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|----------------------------------|----------------------------|
| Date of preparation: | 15/06/2016 |
| Revision number: | 2 |
| Changes in this revision: | Update to GHS SDS standard |

This SDS summarises product safety information at the date of issue, to the best of our knowledge, as a general guide. Recochem cannot anticipate or control the conditions under which the product is used, so prior to usage each user must assess and control the risks associated with their use of the product. Users should also consult the relevant legislation governing the use and storage of this product. We make no warranties, express or implied, and assume no liability in connection with any use of information contained within this document. If clarification or further information is needed, the user should contact Recochem on (07) 3308 5200.
