CHEM ALERT REPORT
Full Report

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name: CHEM-SUPPLY PTY LTD
Address: 38 - 50 Bedford Street, Gillman, SA, AUSTRALIA, 5013
Telephone: (08) 8440 2000
Fax: (08) 8440 2001
Emergency: (08) 8440 2000
Email: info@chemsupply.com.au

Synonym(s): ORTHOPHOSPHORIC ACID • PA000 - PRODUCT CODE • PA384 - PRODUCT CODE • PHOSPHORIC ACID 85% AR • PHOSPHORIC ACID 85% LR • PHOSPHORIC ACID 85% TG • PL000 - PRODUCT CODE • PP000 - PRODUCT CODE • PT000 - PRODUCT CODE

Use(s): ACIDIC CLEANING AGENT • ACIDIFIER • FERTILISER MANUFACTURE • PH MODIFIER

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

RISK PHRASES
R34 Causes burns.

SAFETY PHRASES
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S45 In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

UN No. 1805  DG Class 8  Subsidiary Risk(s) None Allocated
Packing Group III  Hazchem Code 2R

3. COMPOSITION/ INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Formula</th>
<th>CAS No.</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHOSPHORIC ACID</td>
<td>H3-P-O4</td>
<td>7664-38-2</td>
<td>85%</td>
</tr>
<tr>
<td>NON HAZARDOUS INGREDIENTS</td>
<td>Not Available</td>
<td>Not Available</td>
<td>remainder</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Eye: If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

Inhalation: If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

Skin: If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

Ingestion: For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

Advice to Doctor: CORROSIVE POISONING TREATMENT: Immediate treatment preferably in a hospital is mandatory. It is also important to attempt to discover the chemical substances ingested. In treating corrosive poisoning, DO NOT INDUCE VOMITING; DO NOT ATTEMPT GASTRIC LAVAGE; and DO NOT ATTEMPT TO NEUTRALISE THE CORROSIVE SUBSTANCE. Vomiting will increase the severity of damage to the oesophagus as the corrosive substance will again come in contact with it. Attempting gastric lavage may result in perforating either the oesophagus or stomach. Immediately dilute the corrosive substance by having the patient drink milk or water. If the trachea has been damaged tracheostomy may be required. For oesophageal burns begin broad-spectrum antibiotics and corticosteroid therapy. Intravenous fluids will be required if oesophageal or gastric damage prevents ingestion of liquids. Long-range therapy will be directed toward preventing or treating oesophageal scars and strictures.

First Aid Facilities: Eye wash facilities and safety shower should be available.
Product Name: PHOSPHORIC ACID 85%

5. FIRE FIGHTING MEASURES

Flammability: Non flammable. May evolve toxic gases (phosphorus oxides) when heated to decomposition. Contact with most metals may evolve flammable hydrogen gas.

Fire and Explosion: Treat as per requirements for surrounding fires. Evacuate area and contact emergency services. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

Extinguishing: Use an extinguishing agent suitable for the surrounding fire.

Hazchem Code: 2R

6. ACCIDENTAL RELEASE MEASURES

Spillage: Contact emergency services where appropriate. Use personal protective equipment. Clear area of all unprotected personnel. Ventilate area where possible. Contain spillage, then cover / absorb spill with sodium bicarbonate or 50-50 mixture of sodium carbonate and calcium hydroxide. Collect for complete neutralisation and appropriate disposal.

7. STORAGE AND HANDLING

Storage: Store in a cool, dry, well ventilated area, removed from alkalis, metals, nitromethane, sodium tetrahydroborate, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Also store removed from alcohols, aldehydes, amides, amines, ammonia, cyanides, glycols, ketones, carbamates, esters, fluorides, nitromethane, mercaptins, phenols.

Handling: Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

<table>
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<tr>
<th>Ingredient</th>
<th>Reference</th>
<th>TWA</th>
<th>STEL</th>
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</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>ASCC (AUS)</td>
<td>1 mg/m³</td>
<td>3 mg/m³</td>
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</table>

Biological Limits: No biological limit allocated.

Engineering Controls: Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard.

PPE: Wear splash-proof goggles, full-length nitrile or full-length viton (R) or full-length neoprene or full-length butyl or full-length rubber or full-length PVC gloves and coveralls. When using large quantities or where heavy contamination is likely, wear: a PVC apron, rubber boots and full face protection. Where an inhalation risk exists, wear: a Type B (Inorganic gases and vapours) respirator. If spraying, with prolonged use, or if in confined areas, wear: an Air-line respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance: VISCOUS CLEAR LIQUID
- Odour: ODORLESS
- pH: 1.0 (100 g/L solution)
- Vapour pressure: 2.2 hPa
- Vapour density: 3.4 (Air = 1)
- Boiling point: 158°C
- Melting point: 21°C
- Solubility (water): SOLUBLE
- Specific gravity: 1.685
- % Volatiles: NOT AVAILABLE
- Flammability: NON FLAMMABLE
- Flash Point: NOT RELEVANT
- Upper Explosion Limit: NOT RELEVANT
- Lower Explosion Limit: NOT RELEVANT
Product Name: PHOSPHORIC ACID 85%

Evaporation rate: NOT AVAILABLE
Autoignition Temperature: NOT AVAILABLE
Partition Coefficient: NOT AVAILABLE
Decomposition Temperature: NOT AVAILABLE
Viscosity: NOT AVAILABLE

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under recommended conditions of storage.

Conditions to Avoid: Avoid heat, sparks, open flames and other ignition sources.

Material to Avoid: Incompatible with alkalis (eg. hydroxides) and metals. Also incompatible with alcohols, aldehydes, amides, amines, ammonia, cyanides, glycols, ketones, carbamates, esters, fluorides, nitromethane, mercaptins, phenols.

Hazardous Decomposition Products: May evolve toxic gases (phosphorus oxides) when heated to decomposition.

Hazardous Reactions: Polymerization is not expected to occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary: Highly corrosive. This product has the potential to cause serious adverse health effects. Use safe work practices to avoid eye or skin contact and inhalation. Over exposure may result in severe skin, eye and respiratory burns with permanent lung and tissue damage. Upon dilution, the potential for adverse health effects may be reduced.

Eye: Highly corrosive. Contact may result in irritation, lacrimation, pain, redness and corneal burns with possible permanent damage.

Inhalation: Corrosive - toxic. Over exposure may result in irritation of the nose and throat, coughing and bronchitis. High level exposure may result in ulceration of the respiratory tract, lung tissue damage, chemical pneumonitis and pulmonary oedema. Effects may be delayed.

Skin: Corrosive. Contact may result in irritation, redness, pain, rash, dermatitis and possible burns. Prolonged or repeated contact may result in ulceration.

Ingestion: Highly corrosive. Ingestion may result in burns to the mouth and throat, nausea, vomiting, ulceration of the gastrointestinal tract, oedema, rapid pulse, shock, unconsciousness, convulsions and death.

Toxicity Data: PHOSPHORIC ACID (7664-38-2)
LD50 (ingestion): 1530 mg/kg (rat)
LD50 (skin): 2740 mg/kg (rabbit)

12. ECOLOGICAL INFORMATION

Environment: Phosphoric acid is hazardous to aquatic life at high concentrations. While acidity may be reduced by natural water minerals, the phosphate may persist indefinitely. When spilled onto soil, it will permeate downward, and may dissolve some of the soil matter, especially carbonate-based materials. Some acid will be neutralised, however significant amounts will remain for transport to groundwater.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Wearing the protective equipment detailed above, neutralise to pH 6-8 by SLOW addition to a saturated sodium bicarbonate solution or similar basic solution. Dilute with excess water and flush to drain. Waste disposal should only be undertaken in a well ventilated area.

Legislation: Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION
**PHOSPHORIC ACID 85%**

**CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE**

<table>
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<th>Shipping Name</th>
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<td>1805</td>
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<td>8</td>
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<tr>
<td>Subsidiary Risk(s)</td>
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<td>GTEPG</td>
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<td>Hazchem Code</td>
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**15. REGULATORY INFORMATION**

**Poison Schedule**

Classified as a Schedule 6 (S6) Poison using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

**AICS**

All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

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**16. OTHER INFORMATION**

**Additional Information**

ACIDS: When mixing acids with water (diluting), caution must be taken as heat will be generated which causes violent spattering. Always add a small volume of acid to a large volume of water, NEVER the reverse.

RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

**ABBREVIATIONS:**

ADB - Air-Dry Basis.

BEI - Biological Exposure Indice(s)

CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.

CNS - Central Nervous System.

EC No - European Community Number.

IARC - International Agency for Research on Cancer.

M - moles per litre, a unit of concentration.

mg/m3 - Milligrams per cubic metre.

NOS - Not Otherwise Specified.

NTP - National Toxicology Program.

OSHA - Occupational Safety and Health Administration.

pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).

ppm - Parts Per Million.

RTECS - Registry of Toxic Effects of Chemical Substances.

TWA/ES - Time Weighted Average or Exposure Standard.

**HEALTH EFFECTS FROM EXPOSURE:**

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a Chem Alert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

**PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:**

The recommendation for protective equipment contained within this Chem Alert report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.
PHOSPHORIC ACID 85%

COLOUR RATING SYSTEM: RMT has assigned all Chem Alert reports a colour rating of Green, Amber or Red for the sole purpose of providing users with a quick and easy means of determining the hazardous nature of a product. Safe handling recommendations are provided in all Chem Alert reports so as to clearly identify how users can control the hazards and thereby reduce the risk (or likelihood) of adverse effects. As a general guideline, a Green colour rating indicates a low hazard, an Amber colour rating indicates a moderate hazard and a Red colour rating indicates a high hazard.

While all due care has been taken by RMT in the preparation of the Colour Rating System, it is intended as a guide only and RMT does not provide any warranty in relation to the accuracy of the Colour Rating System. As far as is lawfully possible, RMT accepts no liability or responsibility whatsoever for the actions or omissions of any person in reliance on the Colour Rating System.

Report Status

This Chem Alert report has been independently compiled by RMT’s scientific department utilising the original Safety Data Sheet (‘SDS’) for the product provided to RMT by the manufacturer. The information is based on the latest chemical and toxicological research and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. It is an independent collation by RMT of information obtained from the original SDS for this product. Its content has not been authorised or verified by the manufacturer / distributor of the chemical to which it relates.

This Chem Alert report does not constitute the manufacturer’s original SDS and is not intended to be a replacement for same. It is provided to subscribers of Chem Alert as a reference tool only, is not all-inclusive and does not represent any guarantee as to the properties of the product. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer.

While RMT has taken all due care to include accurate and up-to-date information in this Chem Alert report, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this Chem Alert report.

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End of Report