

# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name:** Phosphoric Acid 81%

**Other Identifier:** Phosphoric acid, >=70% aqueous solution

**Recommended Use:** Food additives; Intermediate; Laboratory chemicals; Descaling compound/Scale solvent; Corrosion inhibitors; pH corrective agent; Processing aid; Degreasing agent; Fertiliser; Metal surface treatment.

**Supplier:** Big Bubble  
**ABN:** 51 290 656 636

**Street Address:** 18 Elliott Street  
Midvale  
Western Australia

**Telephone Number:** +61 08 9274 1992

**Poisons Information Centre:** 131 126 Australia

## 2. HAZARDS IDENTIFICATION

**Road and Rail;** Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; DANGEROUS GOODS.

### Globally Harmonised System

#### Hazard Classification

Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

#### Hazard Categories

Corrosive to Metals - Category 1  
Acute Toxicity (Oral) - Category 4  
Skin Corrosion/Irritation - Category 1B  
Serious Eye Damage/Irritation - Category 1

#### Pictogram



**Name of pictogram**  
Corrosive

Exclamation

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## Signal Word

Danger

## Hazard Statements

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

## Precautionary Statement

### Prevention

P260 Do not breathe mist/vapour/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P270 Do not eat, drink or smoke when using this product.

### Response

P303 + P361 + P353 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.

P310 Immediately call a POISON CENTER or doctor/physician.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P390 Absorb spillage to prevent material damage.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P363 Wash contaminated clothing before reuse.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

### Storage

P406 Store in corrosive resistant container with a resistant inner liner.

P405 Store locked up.

### Disposal

P501 Dispose of contents/container in accordance with local / regional / national / international regulations.

**Poisons Schedule: S6**

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion
Phosphoric acid	7664-38-2	81 %
Water	7732-18-5	19%

## 4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor at once.

**Ingestion:** IF SWALLOWED: Rinse mouth, then drink plenty of water. Do NOT induce vomiting. Immediately call a Poison Centre or doctor/physician. Never give anything by mouth to an unconscious person.

**Eye Contact:** IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids.

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Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. Immediately call a Poison Centre or doctor/physician. Transport promptly to hospital or medical centre.

**Skin Contact:** IF ON SKIN: Remove contaminated clothing and shoes immediately. Immediately flush skin with running water for at least 15 minutes. For minor skin contact, avoid spreading material onto unaffected skin. Immediately call a Poison Centre or doctor/physician. Wash contaminated clothing and shoes before reuse.

**Inhalation:** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a Poison Centre or doctor/physician. Apply resuscitation if victim is not breathing - Do not use direct mouth-to-mouth method if victim ingested or inhaled the substance; use alternative respiratory method or proper respiratory device. Administer oxygen if breathing is difficult.

**Medical attention and special treatment:** Keep victim calm and warm - Obtain immediate medical care. Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves. Treat symptomatically; Symptoms may be delayed - Medical supervision for at least 48 hours. No information available.

## 5. FIRE FIGHTING MEASURES

**General** If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out. Avoid getting water inside containers.

**Flammability Conditions** Non-combustible; Material does not burn.

**Suitable Extinguishing Media:** Use dry chemical, Carbon dioxide, foam or water spray - Do not use water jets.

**Fire and Explosion Hazards** Containers may explode when heated. Contact with metals may evolve flammable hydrogen gas.

**Hazardous combustion products:** Fire or heat will produce irritating, toxic and/or corrosive gases, including oxides of Phosphorus.

**Precautions for fire fighters and special protective equipment:** Contain runoff from fire control or dilution water - Runoff may be toxic and/or corrosive and may pollute waterways. Liquid-tight chemical protective clothing (splash suit) in combination with self-contained breathing apparatus (SCBA) should be used.

**Hazchem Code** 2R

## 6. ACCIDENTAL RELEASE MEASURES

**General Response Procedures:** Ventilate enclosed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames). Do not touch or walk through spilled material. Do not breathe vapours; Prevent contact with

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eyes, skin and clothing.

<b>Personal precautions:</b>	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (see SECTION 8).
<b>Emergency procedures:</b>	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground.
<b>Environmental Precautions:</b>	Small spillages and decontamination run-off may be washed to drains with large quantities of water - Due care must be exercised to avoid unnecessary pollution of watercourses.
<b>Methods and materials for Containment and clean up:</b>	Absorb with earth, sand or other non-combustible material and transfer to a suitable container for disposal (see SECTION 13). Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas.

## 7. HANDLING AND STORAGE

This material must be stored, maintained and used in accordance with the relevant regulations.

<b>Conditions for safe storage:</b>	Store in a cool, dry and well-ventilated place, away from sources of heat and direct sunlight. Protect from freezing. Keep containers closed when not in use - check regularly for leaks. Protect from physical damage. Keep away from incompatible materials (see SECTION 10), food and feedstuffs. Store locked up. May be corrosive to metals - Keep only in the original container/corrosive resistant container with resistant inner liner.
<b>Precautions for safe 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 generation of mists/aerosols. Do not breathe mist/vapours/spray and prevent contact with eyes, skin and clothing. Wear protective gloves/protective clothing/eye protection/face protection (see SECTION 8). Absorb spillage to prevent material damage. When diluting, the acid should always be added slowly to water and in small amounts. Never use hot water and never add water to the acid - Water added to acid can cause uncontrolled boiling and splashing.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Exposure control measures:</b>	COMPONENT: Phosphoric acid (CAS No. 7664-38-2): - Safe Work Australia Exposure Standard: TWA = 1 mg/m <sup>3</sup> ; STEL = 3 mg/m <sup>3</sup> . - New Zealand Workplace Exposure Standard (WES): TWA = 1 mg/m <sup>3</sup> . - OSHA PEL: TWA = 1 mg/m <sup>3</sup> . - NIOSH REL: TWA = 1 mg/m <sup>3</sup> ; STEL = 3 mg/m <sup>3</sup> . - Immediately dangerous to life or health (IDLH) concentration: 1,000 mg/m <sup>3</sup> .
<b>Biological</b>	No information available.

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## Monitoring

### Engineering Controls

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.

## Personal Protective Equipment

### Eye and Face

Wear appropriate eye protection to prevent eye contact. Recommended: Chemical goggles; Face-shield.

### Skin

Wear protective gloves. Recommended: Elbow-length impervious gloves, e.g. Butyl rubber (0.7 mm), Chloroprene rubber (0.5 mm), Viton (0.4 mm), Natural rubber (0.5 mm), Neoprene (0.5 mm). Do not use leather gloves. Wear appropriate personal protective clothing to prevent skin contact. Recommended: Overalls, splash apron or equivalent chemical impervious (acid-resistant) outer garment, rubber boots.

### Respiratory

Wear respiratory protection if, determined by a risk assessment, an inhalation risk exists. Recommended: Wear a suitable particulate/mist filter, full-facepiece respirator; Any supplied-air respirator with a full facepiece or self-contained breathing apparatus (refer to AS/NZS 1715 & 1716).

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b>	Liquid
<b>Colour:</b>	Clear Liquid
<b>Auto Ignition temperature:</b>	No Data Available
<b>Decomposition Temperature:</b>	No Data Available
<b>Evaporation Rate:</b>	No Data Available
<b>Flammability:</b>	No Data Available
<b>Flash Point:</b>	No Data Available
<b>Boiling Point:</b>	135 - 158 °C
<b>Melting/Freezing Point:</b>	No Data Available
<b>Freezing Point</b>	No Data Available
<b>Odour:</b>	Odourless
<b>Odour Threshold:</b>	No Data Available
<b>Partition coefficient: n-octanol/water</b>	No Data Available
<b>pH:</b>	<2

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<b>Relative Density:</b>	No Data Available
<b>Solubility:</b>	Miscible with water
<b>Specific Gravity</b>	1.58 - 1.81
<b>Upper Flammability Limit</b>	No Data Available
<b>Lower Flammability Limit:</b>	No Data Available
<b>Explosive limits:</b>	No Data Available
<b>Vapour density:</b>	>1 Air = 1
<b>Vapour pressure;</b>	0.75 kPa (for 75%) (@ 20 °C)
<b>Viscosity:</b>	No Data Available
<b>Biopersistence:</b>	No Data Available
<b>Crystallinity:</b>	No Data Available
<b>Dustiness:</b>	No Data Available
<b>Particle size:</b>	No Data Available
<b>Redox potential:</b>	No Data Available
<b>Release of invisible flammable vapours and gases</b>	Contact with metals may evolve flammable hydrogen gas.
<b>Reactions That Release Gases or Vapours</b>	Fire or heat will produce irritating, toxic and/or corrosive gases, including oxides of Phosphorus.
<b>Saturated Vapour Concentration</b>	No Data Available

## 10. STABILITY AND REACTIVITY

<b>Chemical stability:</b>	Stable under normal ambient and anticipated storage and handling conditions.
<b>Conditions to avoid:</b>	Avoid formation of mists/aerosols. Avoid overheating. The substance is a medium-strong acid; Reacts violently with bases. Reacts with metals liberating flammable hydrogen gas.
<b>Incompatible materials:</b>	Incompatible/reactive with strong oxidising agents, reducing agents, sulfides, phosphides, cyanides, acetylides, fluorides, silicides, carbides, strong caustic material, alloys, glass, leather, natural rubber, fluorine gas, arsenic trioxide.
<b>Hazardous decomposition products:</b>	Fire or heat will produce irritating, toxic and/or corrosive gases, including oxides of Phosphorus.
<b>Hazardous reactions or Polymerisation:</b>	Will not occur.

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## 11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

### Exposure Limits:

**Ingestion:** Harmful if swallowed. May be harmful in contact with skin and if inhaled. Corrosive on ingestion, may cause abdominal pain, burning sensation, shock or collapse.

**Eye contact:** Causes serious eye damage. Corrosive to eyes, may cause redness, pain, corneal burns resulting in permanent eye injury.

**Skin contact:** Causes severe skin burns. Contact with skin may cause redness, pain, blisters, skin burns.

**Inhalation:** No information available.

**Acute Toxicity:** STOT - single exposure: Product mists or aerosols may cause respiratory irritation, burning sensation, cough, shortness of breath, sore throat. Prolonged exposures can cause necrosis of nasal passages and oedema of lungs.  
STOT - repeated exposure: No information available.

**Germ cell mutagenicity:** No information available.

**Carcinogenicity:** No information available.

**Reproductive toxicity:** No information available.

**Aspiration toxicity:** No information available.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** No information available.

**Persistence and degradability** No information available.

**Bioaccumulative potential** No information available.  
**Mobility**

## 13. DISPOSAL CONSIDERATIONS

**Disposal methods:** Contaminated packaging: Containers of this material may be hazardous when empty since they retain product residues (vapours, liquid); Observe all warnings and precautions listed for the product.

Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility. Or refilled at Big Bubble in Midvale.

## 14. TRANSPORT INFORMATION

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## Road and Rail Transport

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

**UN number:** 1805  
**Proper shipping name:** PHOSPHORIC ACID, SOLUTION  
**DG Class** 8 Corrosive Substances  
**Packing group** III  
**EPG** 37 Toxic And/Or Corrosive Substances Non-Combustible  
**Environmental hazards for transport purposes**  
**Special Precaution for user**  
**Hazchem** 2R

## Marine Transport

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.

## Air Transport

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.

## 15. REGULATORY INFORMATION

**Poisons Schedule:** Schedule 6

Standard Statements:

A - For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor (at once).

G3 - If swallowed, do NOT induce vomiting.

E2 - If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor, or for at least 15 minutes.

S1 - If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.



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## 16. OTHER INFORMATION

Revision date: 02/10/2021

Reason for issue: Update 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

**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 insoluble 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

**LC<sub>50</sub>** LC stands for lethal concentration. LC<sub>50</sub> 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.

**LD<sub>50</sub>** LD stands for Lethal Dose. LD<sub>50</sub> 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

**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

**PEL** Permissible Exposure Limit

**Pa** Pascal

**ppb** Parts per Billion

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**ppm** Parts per Million<sup>[1][1]</sup><sub>SEP</sub>  
**ppm/2h** Parts per Million per 2 Hours<sup>[1][1]</sup><sub>SEP</sub>  
**ppm/6h** Parts per Million per 6 Hours<sup>[1][1]</sup><sub>SEP</sub>  
**psi** Pounds per Square Inch<sup>[1][1]</sup><sub>SEP</sub>  
**R** Ranking<sup>[1][1]</sup><sub>SEP</sub>  
**RCP** Reciprocal Calculation Procedure  
**STEL** Short Term Exposure Limit  
**TLV** Threshold Limit Value<sup>[1][1]</sup><sub>SEP</sub>; the Tonne<sup>[1][1]</sup><sub>SEP</sub>  
**TWA** Time Weighted Average  
**ug/24H** Micrograms per 24 Hours  
**UN** United Nations  
**wt** Weight

This material safety data sheet has been prepared by Midland Chemicals

This MSDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. No liability is accepted whether direct or indirect from its application since the conditions of final use are outside Midland Chemicals control. The end user is obliged to conform to relevant government regulations and/or patent laws applicable in their respective States of Countries.