

# Material Safety Data Sheet

## Inorganic Phosphorus

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Inorganic Phosphorus

**Catalog Numbers:** TR30021, TR30026, TR30098, 1610-250, 1610-500, 1610-400H, BU3001-BP, UV3001xxxx-BP, VT3001xxxx, VC3001xxxx

**Use:** This reagent is intended for in vitro quantitative determination of inorganic phosphorus in human serum, plasma or urine.

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**Contact Point**

Australia  
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Tel: +61 3 9790 4100  
Mon – Fri 9:00am to 5:00pm

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1-800-255-3924

### 2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO EU CRITERIA

**Hazard Classification:** HAZARDOUS SUBSTANCE, DANGEROUS GOODS.

**Hazard Category:** Irritant

**RISK PHRASES**

R38 Irritating to skin.  
R41 Risk of serious damage to eyes.

**SAFETY PHRASES**

S24/25 Avoid contact with skin and eyes.

**Poison Schedule:** S6

This material is a Scheduled (S6) Poison and must be stored, handled and used according to the appropriate regulations.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

| SUBSTANCE NAME                           | Proportion | CAS Number  |
|------------------------------------------|------------|-------------|
| SULFURIC ACID                            | 1 - 5 %    | 7664-93-9   |
| SURFACTANT                               | ~ 1 %      | Proprietary |
| WATER AND OTHER NON HAZARDOUS SUBSTANCES | Balance    | Mixture     |

All other ingredients determined not to be hazardous according to the EU criteria.

### 4. FIRST AID MEASURES

**Swallowed:**

If swallowed, **DO NOT** induce vomiting. If victim is conscious give water to drink. Immediately transport to hospital or doctor.

**Eye:**

If material is splashed into eyes, flush with plenty of water for at least 15 minutes, ensuring eye lids are held open. Seek medical aid immediately.

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### 4. FIRST AID MEASURES (continued)

**Skin:**

If material is splashed onto the skin, remove any contaminated clothing and wash skin thoroughly with water and soap. Immediately transport to hospital or doctor.

**Inhaled:**

Remove victim to fresh air. Do not use mouth-to-mouth method if victim inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult.

**First Aid Facilities:**

Eye wash fountain, safety shower and normal wash room facilities.

**Advice to Doctor:**

In case of poisoning, contact Poisons Information Centre

**In Australia call Tel: 131126**

**In New Zealand Tel: 034747000**

### 5. FIRE-FIGHTING MEASURES

**Fire/Explosion Hazard**

**CAUTION:** Use of water spray when fighting fire may be inefficient.

**EXTINGUISHING MEDIA:** Use dry chemical, carbon dioxide, foam or water fog.

**SPECIAL FIRE FIGHTING PROCEDURES:** Self-contained breathing apparatus (SCBA) required for fire-fighting personnel. If possible to do so safely, shut off fuel to fire. Use water spray to spray to cool fire-exposed surfaces and to protect personnel.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** If tanks, drums or containers of this material are heated, they may rupture and project corrosive materials over a wide area.

**Flammability**

Heat or damage to containers may release toxic fumes of sulfur and sulfur oxides and oxides of nitrogen.

### 6. ACCIDENTAL RELEASE MEASURES

**EMERGENCY ACTION:**

Keep unnecessary people away; Isolate hazard area and deny entry. Stay upwind; Keep out of low areas. Wear appropriate eye, skin and respiratory protection as outlined in this MSDS. **Caution, this material is severely irritating.**

**SPILL OR LEAK PROCEDURE:**

Remove all non-ferrous metals and their alloys from area (aluminium, zinc and magnesium), if product has spilt on these metals immediately, flush them with plenty of water and shut off ignition sources, no smoking or flames in hazard area. Stop leak if you can do it without risk. Water spray may reduce vapour; but it may not prevent ignition in closed spaces.

**SMALL SPILLS:**

Take up with sand, dirt or vermiculite. **DO NOT** use sawdust. Use non-sparking tools. Place into labeled plastic drum(s) for later disposal.

**LARGE SPILLS:**

Notify Emergency Services (Police or Fire Brigade). Tell them exact location, nature, hazards, quantities, type of vehicle and any other information that would be helpful. Contain spill. Remove all ignition sources and safely stop flow of spill. Bund area. Trained personnel should wear Personal Protective equipment as highlighted in this MSDS. Blanket the spill with foam or use water fog to disperse vapour clouds. Consult an expert regarding disposal of this product.

**Warning: Products that contain mineral acids must be kept away from non-ferrous metals, as extremely flammable hydrogen gas will be generated and if the appropriate flammability limits are reached and a source of ignition is present, a violent explosion will occur.**

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### 7. HANDLING AND STORAGE

Avoid prolonged breathing of vapors and skin or eye contact. Store in a cool place and out of direct sunlight. Store away from sources of heat or ignition. Store away from oxidizing agents and strong alkalis. Store at 2-25°C and the reagent will be stable until the expiry date stated on the bottle and kit box labels. Keep containers tightly closed, when not using the product. Store in original packages as approved by manufacturer.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Exposure Standards

No exposure standards are available for this product, however, the following exposure standards have been assigned by the National Occupational Health & Safety Commission (NOHSC) to the following component of the product:

#### **SULFURIC ACID**

(Worksafe Australia)

[TWA] 1 mg/m<sup>3</sup>

[STEL] 3 mg/m<sup>3</sup>

Notices: H

(ACGIH)

[TWA] 1 mg/m<sup>3</sup>

[STEL] 3 mg/m<sup>3</sup>

#### Engineering Controls

Maintain adequate ventilation at all times. In most circumstances natural ventilation systems are adequate unless the material is heated, reacted or otherwise changed in some type of chemical reaction, then the use of a local exhaust ventilation system is recommended.

#### Personal Protection Equipment

**GLOVES:** Not normally required, however, if product has spilt, or package is broken, then the use of PVC or neoprene gloves is recommended.

**EYES:** Chemical goggles or glasses to protect eyes.

**RESPIRATORY PROTECTION:** Avoid breathing of vapours. The use of a respirator is not normally required, however, if entering spaces where the airborne concentration of a contaminant is unknown then the use of a Self-contained breathing apparatus (SCBA) with positive pressure air supply complying with AS/NZS 1715 / 1716, or any other acceptable International Standard is recommended. Select and use respirators in accordance with AS/NZS 1715/1716

### 9. PHYSICAL AND CHEMICAL PROPERTIES

|                             |                                 |
|-----------------------------|---------------------------------|
| <b>Appearance:</b>          | Clear liquid with a mild odour. |
| <b>Boiling Point:</b>       | Not available.                  |
| <b>Vapour Pressure:</b>     | Not available.                  |
| <b>Specific Gravity:</b>    | Not available.                  |
| <b>Flash Point:</b>         | Not applicable.                 |
| <b>Flammability Limits:</b> | Not applicable.                 |
| <b>Solubility in Water:</b> | Completely soluble.             |

#### Other Properties

pH: 0.4 ± 0.1 @ 19 - 22°C

### 10. STABILITY AND REACTIVITY

#### STABILITY:

Stable under normal conditions of use.

#### HAZARDOUS DECOMPOSITION PRODUCTS:

Emits oxides of sulfur and oxides of nitrogen when heated to decomposition.

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### 10. STABILITY AND REACTIVITY (continued)

**HAZARDOUS POLYMERIZATION:**

Will not occur.

**INCOMPATIBILITIES:**

Strong alkalis/bases, zinc, aluminium, magnesium their alloys and oxidizing agents.

**CONDITIONS TO AVOID:**

Incompatibles, especially reaction with zinc, aluminium or magnesium, which may release flammable hydrogen gas which could be ignited by heat, flames, ignition sources and led to an explosion.

### 11. TOXICOLOGICAL INFORMATION

There is no toxicological information available for this product, however, for the ingredients:

**SULFURIC ACID:**

According to OECD Guideline for the Testing of Chemicals (OECD 405) for eye corrosion and OECD Guideline for the Testing of Chemicals (OECD 404) for skin corrosion, both test procedures have been utilized to determine that sulfuric acid is a confirmed corrosive substance.

This product contains less than the amount of sulfuric acid which is considered a hazardous substance according to Worksafe Australia, however, we anticipated that this product will cause severe eye irritation and significant skin irritation especially if the duration of exposure is prolonged or repeated.

**ACUTE HEALTH EFFECTS****Swallowed:**

May cause irritation to mouth, throat and stomach with effects including mucous build up, irritation to the tongue and lips and pains in the stomach, which may lead to nausea, vomiting and diarrhoea.

**Eye:**

Will cause severe irritation to the eyes with effects including: tearing, pain, corneal opacity and blurred vision. If prompt action is not taken permanent eye damage may occur.

**Skin:**

Will cause irritation to the skin, with effects including; Redness and itchiness. The product is not anticipated to be absorbed through the skin.

**Inhaled:**

May cause irritation to the nose, throat and respiratory system. However, this is only anticipated to occur if the product is heated.

**Chronic:**

Prolonged or repeated skin contact may lead to drying / defatting and possible dermatitis in some susceptible individuals.

### 12. ECOLOGICAL INFORMATION

No information is available for this product, however, for sulfuric acid component:

**Water pollution:**

**Persistence:** pH will be neutralized slowly by natural alkalinity and carbon dioxide.

**Effect on water treatment process:** May prevent coagulation by some agents through pH reduction.

**Water uses threatened:** All uses.

**Industrial fouling potential:** Highly corrosive to equipment. pH is often a very important parameter in industrial water use.

Avoid contaminating drains, sewers or waterways.

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### 13. DISPOSAL CONSIDERATIONS

Refer to appropriate authority in your State. Advise on acidic nature. Normally suitable for disposal by approved waste disposal agent.

### 14. TRANSPORT INFORMATION

**UN Number:** 3264

**Proper Shipping Name:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(SULFURIC ACID)

**Dangerous Goods Class:** 8

**Packing Group:** III

**Hazchem Code:** 2X

Classified as a CLASS 8 (CORROSIVE) Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail, 6th Edition.

Dangerous goods of Class 8 (Corrosive) are incompatible in a placard load with any of the following:

- Class 1
- Class 4.3
- Class 5
- Class 6, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids
- Class 7

and are incompatible with food and food packaging in any quantity.

**Emergency information(Transport):**

Dangerous Goods - Initial Emergency Response Guide (SAA/SNZ HB76:1997)

For TOXIC AND/OR CORROSIVE Guide No: 37

This product is classified as a Dangerous Good according to ICAO/IATA regulations:

**PROPER SHIPPING NAME:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(SULFURIC ACID)

**UN No:** UN3264

**CLASS:** 8

**PACK GROUP:** III

### 15. REGULATORY INFORMATION

**Poison Schedule:** None allocated.

**Inventory Status:**

|                        |   |
|------------------------|---|
| Australia (AICS)       | Y |
| United States (TSCA)   | Y |
| Canada (DSL)           | Y |
| Europe (EINECS/ELINCS) | Y |
| Japan (MITI)           | Y |
| South Korea (KECL)     | Y |

Y = all ingredients are on the inventory.

### 16. OTHER INFORMATION

Issue date: August, 2004

**Reasons for Update:**

1. Alignment with the 2<sup>nd</sup> Edition of National Code of Practice for the Preparation of Material Safety Data Sheets [NOHSC:2001(2003).
2. Changes and /or addition made to all sections.

**Key Legend Information:**

NOHSC - National Occupational Health & Safety Commission [Aust]

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### 16. OTHER INFORMATION (continued)

TWA - Time Weighted Average [Int]

STEL - Short Term Exposure Limit [Int]

AICS - Australian Inventory of Chemical Substances

EPA - Environmental Protection Agency [Int]

NIOSH - National Institute for Occupational Safety and Health [US]

AS/NZS 1715 - Selection, use and maintenance of respiratory protective devices. [Aust]

AS/NZS 1716 - Respiratory protective devices. [Aust]

IATA - International Aviation Transport Authority [Int]

ICAO - International Civil Aviation Organization

IMO - International Maritime Organisation. [Int]

IMDG - International Maritime Dangerous Goods

United Nations Recommendations for the Transport of Dangerous Goods and Globally Harmonized System for the classification and labelling of Chemicals. [Int]

EU - European Union

[Aust/NZ] = Australian/New Zealand

[Int] = International

[US] = United States of America

#### Principal References:

Information supplied by manufacturer, reference sources including the public domain.

#### Disclaimer

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

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**END OF MSDS**