

# Material Safety Data Sheet

## Inorganic Phosphorus (R1)

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Inorganic Phosphorus Reagent (R1)

**Catalog Numbers:** 7500-118

**Use:** This reagent is intended for in vitro quantitative determination of phosphorus.

THERMO ELECTRON  
189 - 199 Browns Rd  
NOBLE PARK VIC 3174  
AUSTRALIA  
Tel: +61 3 9790 4100  
Fax: +61 3 9790 4155  
E-mail: [info.clinicalchemistry@thermo.com](mailto:info.clinicalchemistry@thermo.com)

THERMO ELECTRON  
171 Industry Drive  
Pittsburgh, PA, 15275  
U.S.A  
Tel: (800) 558 9115  
Fax: (412) 788 6833  
E-mail: [info.clinicalchemistry@thermo.com](mailto:info.clinicalchemistry@thermo.com)

#### Contact Point

##### Australia

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

##### U.S.A

Chemtel  
24 Hour Emergency Assistance  
1-800-255-3924  
813-248-0585

### 2. HAZARD IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO ASCC/NOHSC/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.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**Poison Schedule:** None allocated

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE NAME	Proportion	CAS Number
SULFURIC ACID	1 to 2 %	7664-93-9
WATER AND OTHER NON HAZARDOUS INGREDIENTS	Balance	Mixture

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

### 4. FIRST AID MEASURES

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

**Eye:** If material is splashed into eyes, immediately, flush with plenty of water for 15 minutes, ensuring eye lids are held open. Immediately transport to hospital or doctor.

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

**Inhaled:** Move victim to fresh air. Apply resuscitation if victim is not breathing.

**First Aid Facilities:** Eye wash fountain, safety shower and normal wash room facilities.

**Advice to Doctor:** Treat symptomatically.

In case of poisoning, contact Poisons Information Centre

**In Australia call Tel: 131126**

**In New Zealand Tel: 034747000**

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### 5. FIRE-FIGHTING MEASURES

**Fire/Explosion Hazard**

If safe to do so, move undamaged containers from fire area.

**Hazardous Decomposition Products:** Emits oxides of sulfur and oxides of nitrogen when heated to decomposition.

**Fire Fighting Procedures:** Fire fighters to wear Self-contained breathing apparatus (SCBA) in confined spaces, in oxygen deficient atmospheres or if exposed to products of decomposition. Full protective clothing is also recommended.

**Extinguishing Media:** Use extinguishing media suitable for surrounding fire situation.

**Hazchem Code:** None allocated

**Flammability**

This material is not a flammable or combustible liquid.

### 6. ACCIDENTAL RELEASE MEASURES

**Emergency Procedures:**

Keep unnecessary people away; Isolate hazard area and deny entry. Ventilate area. If product spills onto floors it will represent a slip hazard, walk cautiously. Wear protective equipment to prevent skin and eye contact, as outlined under personal protection in this MSDS.

**Methods and Materials for Containment and Clean Up Procedures:**

Dike area using with an absorbent such as diatomaceous earth - to prevent run off into drains and waterways. Throw further absorbent (diatomaceous earth or other inert material) on top of spill, then shovel up and seal in properly labeled containers for disposal. Remainder of material on floor can be neutralized by cautiously adding sodium bicarbonate or soda ash. Collect this material after foaming/effervescence ceases and place into above labeled container.

### 7. HANDLING AND STORAGE

**Precautions for Safe Handling:**

Avoid breathing of vapours. Store away from sources of heat or ignition. Store away from caustics or alkalis. For further information please refer to the Engineering Controls of this MSDS.

**Conditions for Safe Storage:**

Keep containers tightly closed, when not using this product. Store at 2-8°C and the reagent will be stable until the expiry date stated on the bottle and kit box labels. Store in original packaging, 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

**Engineering Controls**

Maintain adequate ventilation at all times. In most circumstances natural ventilation systems are adequate.

**Personal Protection Equipment**

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

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Clear to pale blue liquid mild odour.
<b>Boiling Point:</b>	Not available.
<b>Freezing 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 miscible.

#### Other Properties

**pH:** < 1

### 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable under normal conditions of use.

**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.

**Incompatible Materials:** Strong alkalis/bases, zinc, aluminium, magnesium their alloys and oxidizing agents.

**Hazardous Decomposition Products:** Decomposes on heating emitting oxides of sulfur and nitrogen.

**Hazardous Reactions:** Will not occur.

### 11. TOXICOLOGICAL INFORMATION

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

#### 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.

### 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.

### 13. DISPOSAL CONSIDERATIONS

#### Methods of Disposal:

Refer to appropriate authority in your State. Dispose of material through a licensed waste contractor.

#### Packaging:

Containers of this material may retain product residues. Handle contaminated packaging in the same way as the substance itself, by disposing in accordance with all applicable federal, state and local environmental and hazardous waste regulations.

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### 14. TRANSPORT INFORMATION

**UN Number:** None allocated  
**Proper Shipping Name:** NONE ALLOCATED  
**Dangerous Goods Class:** None allocated  
**Subsidiary risk:** None allocated  
**Packing Group:** None allocated  
**Hazchem Code:** None allocated  
**Label:** None allocated

**Road and Rail Transport:**

Not classified as a Dangerous Good according to the United Nations Recommendations for the Transport of Dangerous Goods and Globally Harmonized System for the classification and labelling of Chemicals.

**Marine Transport:**

Not classified as a Dangerous Good according to the International Maritime Organization Rules (Maritime Dangerous Goods Code - IMDG Code) for transport by sea.

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

**PROPER SHIPPING NAME:** CORROSIVE LIQUID, N.O.S.(SULFURIC ACID)  
**UN No:** 1760  
**CLASS:** 8  
**PACK GROUP:** III  
**Hazchem Code:** None allocated  
**Label:** Corrosive (C)

### 15. REGULATORY INFORMATION

**Poison Schedule:** None allocated

**Inventory Status:**

Australia (AICS)	Y
United States (TSCA)	Y
Canada (DSL)	Y
Europe (EINECS/ELINCS)	Y

Y = all ingredients are on the inventory.

If approved for European Communities use, this product is regulated under the In Vitro Diagnostic Medical Devices Directive (98/79/EC).

### 16. OTHER INFORMATION

Issue date: June, 2006.

**Key Legend Information**

NOHSC - National Occupational Health & Safety Commission {Formerly Worksafe}[Aust]  
ASCC - Australian Safety and Compensation Council [Aust]  
SUSDP - Standard for the Uniform Scheduling of Drugs and Poisons [Aust]  
TWA - Time Weighted Average [Int]  
STEL - Short Term Exposure Limit [Int]  
AICS - Australian Inventory of Chemical Substances  
Dangerous Goods - Initial Emergency Response Guide (SAA/SNZ HB76:1997) [Aust]  
EPA - Environmental Protection Agency [Int]  
NIOSH - National Institute for Occupational Safety and Health [US]  
TSCA - Toxic Substances Control Act [US]  
OSHA - Occupational Safety and Health Administration [US]  
AS/NZS 1715 - Selection, use and maintenance of respiratory protective devices. [Aust/NZ]  
AS/NZS 1716 - Respiratory protective devices. [Aust/NZ]  
Hazchem Code - Fire fighters designation [Aust]  
IATA - International Aviation Transport Authority [Int]

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### 16. OTHER INFORMATION

ICAO - International Civil Aviation Organization [Int]

IMO - International Maritime Organisation. [Int]

IMDG - International Maritime Dangerous Goods [Int]

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

EINECS - European Inventory of Existing Commercial Chemical Substances. [Int]

ELINCS - European List of Notified Chemical Substances. [Int]

EU - European Union [Int]

**EU Directives:** The classification criteria used, are adopted from the European Community's (EC) legislation for classifying dangerous substances. The criteria are taken from:

EC Council Directive 67/548/EEC

EC Council Directive 1999/45/EC

[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**