

## Section 1: Identification

### Product identifier

**Product Name** PHOSPHOROUS ACID

**Product Code(s)** 000033372101

### Other means of identification

**CAS No.** 10294-56-1

### Recommended use of the chemical and restrictions on use

**Recommended use** Chemical intermediate.

**Uses advised against** No information available

### Details of the supplier of the safety data sheet

#### Supplier

Ixom Operations Pty Ltd (Incorporated in Australia)  
 NZBN: 9429041465226 Address: 166 Totara Street  
 Mt Maunganui South  
 New Zealand

Telephone Number: +64 9 368 2700

Facsimile: +64 9 368 2710

### Emergency telephone number

**Emergency Telephone** 0 800 734 607 (ALL HOURS)

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## Section 2: Hazard identification

Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

Classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

### GHS Classification

Corrosive to metals	Category 1
Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1

### Label elements



**Signal word**

Danger

**Hazard statements** H290 - May be corrosive to metals

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

**Precautionary Statements - Prevention**

Keep only in original packaging.

Do not breathe dusts or mists.

Wash face, hands and any exposed skin thoroughly after handling.

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

Wear protective gloves/clothing and eye/face protection.

**Precautionary Statements - Response**

Specific treatment (see First aid on this SDS).

**Eyes**

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

Immediately call a POISON CENTER or doctor/physician.

**Skin**

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Immediately call a POISON CENTER or doctor/physician.

Wash contaminated clothing before reuse.

**Inhalation**

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

**Ingestion**

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Rinse mouth.

**Spill**

Absorb spillage to prevent material damage.

**Precautionary Statements - Storage**

Store locked up.

Store in corrosion resistant container with a resistant inner liner.

**Precautionary Statements - Disposal**

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

**Other hazards which do not result in classification**

No information available.

**Section 3: Composition/information on ingredients**

Chemical name	CAS No.	Weight-%
Phosphorous acid	10294-56-1	<=100

**Section 4: First-aid measures****Description of first aid measures****General advice**

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

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<b>Inhalation</b>	Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. If swallowed, call a poison control center or physician immediately.

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms</b>	Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness). Burning.
<b>Effects of Exposure</b>	No information available.

**Indication of any immediate medical attention and special treatment needed**

<b>Note to physicians</b>	Can cause corneal burns. Treat symptomatically.
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**Section 5: Fire-fighting measures**

<b>Hazchem code</b>	2X.
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**Suitable Extinguishing Media**

<b>Suitable Extinguishing Media</b>	Dry chemical, CO2, water spray or alcohol-resistant foam.
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<b>Unsuitable extinguishing media</b>	No information available.
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**Specific hazards arising from the chemical**

<b>Specific hazards arising from the chemical</b>	Corrosive hazard. Wear protective gloves/clothing and eye/face protection. Phosphorous acid is capable of absorbing moisture from the air to form a corrosive solution. Yellow deposits may form in this solution which are spontaneously flammable in air.
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**Special protective actions for fire-fighters**

<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.
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**Section 6: Accidental release measures****Personal precautions, protective equipment and emergency procedures**

<b>Personal precautions</b>	Avoid contact with skin and eyes. Do not breathe dust. Ensure adequate ventilation. Evacuate personnel to safe areas. Do not touch or walk through spilled material. Use personal protective equipment as required. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.
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<b>For emergency responders</b>	Use personal protection recommended in Section 8.
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**Environmental precautions**

**Environmental precautions** See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Use appropriate personal protective equipment (PPE). Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust.

**Precautions to prevent secondary hazards**

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## **Section 7: Handling and storage**

**Precautions for safe handling**

**Advice on safe handling** Avoid contact with skin, eyes or clothing. Do not breathe dust. Do not eat, drink or smoke when using this product. Ensure adequate ventilation. Use personal protection equipment. Wash thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep in a dry, cool and well-ventilated place. Keep container closed when not in use.

**Incompatible materials** Alkalis. Strong bases. Metals. Water.

## **Section 8: Exposure controls/personal protection**

**Control parameters**

**Exposure Limits** No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority. However, Workplace Exposure Standard(s) for particulates:.

Particulates not otherwise classified: 8hr WES-TWA 10 mg/m<sup>3</sup> (inhalable dust) or 3 mg/m<sup>3</sup> (respirable dust)

As published by the New Zealand Workplace Health & Safety Authority.

WES - TWA (Workplace Exposure Standard - Time Weighted Average) - The eight-hour, time-weighted average exposure standard is designed to protect the worker from the effects of long-term exposure.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

**Appropriate engineering controls**

**Engineering controls** Ensure that eyewash stations and safety showers are close to the workstation location. Apply technical measures to comply with occupational exposure limits.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and

the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

#### Individual protection measures, such as personal protective equipment

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, DUST MASK.



Eye/face protection



Hand protection



Skin and body protection



Respiratory protection



Environmental exposure controls

Tight sealing safety goggles.

Elbow-length impervious gloves.

Overalls. Boots. Wear suitable protective clothing.

If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

No information available.

## Section 9: Physical and chemical properties

### Information on basic physical and chemical properties

Physical state	Solid
Appearance	Crystalline
Color	White
Odor	Faint. Characteristic.
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	<1.0 @20°C	None known
Melting point / freezing point	63-74°C at 1.013 hPa	None known
Boiling point / boiling range	No data available	None known
Flash point	Not applicable	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	<0.1 hPa at 20°C	None known
Vapor density	No data available	None known
Relative density	1.651	None known
Water solubility	Soluble in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	Not applicable	None known
Decomposition temperature		None known

Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information  
Particle characteristics

## Section 10: Stability and reactivity

### Reactivity

**Reactivity** Corrosive to metals. Hygroscopic.

### Chemical stability

**Stability** Stable under normal conditions.

### Explosion data

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

### Possibility of hazardous reactions

**Possibility of hazardous reactions** Corrosive to metals.

### Conditions to avoid

**Conditions to avoid** Heat. Protect from moisture. Exposure to air. Exposure to water. Dust formation.

### Incompatible materials

**Incompatible materials** Alkalis. Strong bases. Metals. Water.

### Hazardous decomposition products

**Hazardous decomposition products** Phosphorus oxides. Phosphine. Phosphoric acid.

## Section 11: Toxicological information

### Acute toxicity

#### Information on likely routes of exposure

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

**Inhalation** May cause irritation.

**Eye contact** Causes serious eye damage.

**Skin contact** Causes burns.

**Ingestion** Can burn mouth, throat, and stomach.

**Symptoms** Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness). Burning.

### Acute toxicity

**Numerical measures of toxicity****On basis of test data**

Oral LD50 1560-1580 mg/kg (rat)

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Skin corrosion/irritation** Causes burns.**Serious eye damage/eye irritation** Causes serious eye damage.**Respiratory or skin sensitization** No information available.**Germ cell mutagenicity** Not mutagenic in AMES Test.**Carcinogenicity** Not listed as carcinogenic according to IARC.  
(IARC - International Agency for Research on Cancer).**Reproductive toxicity** No information available.**STOT - single exposure** No information available.**STOT - repeated exposure** No information available.**Aspiration hazard** No information available.**Data used to identify the health effects** Refer to Section 16 for Key literature references and sources for data used to compile the SDS.**Section 12: Ecological information****Ecotoxicity****Aquatic ecotoxicity** Keep out of waterways.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Phosphorous acid	-	96hr LC50 (carp): >100 mg/L	48hr EC50 (Daphnia magna): >1000 mg/L

**Terrestrial ecotoxicity** There is no data for this product.**Persistence and degradability** Biodegradation is not an applicable endpoint since the product is an inorganic substance.

**Bioaccumulative potential**

**Bioaccumulation** There is no data for this product.

**Mobility in soil**

**Mobility** No information available.

**Other adverse effects**

No information available.

**Section 13: Disposal considerations****Waste treatment methods****Waste from residues/unused products**

Dispose of product in packaging in a way that is consistent with the EPA Consolidation 30 April 2021 of the Hazardous Substances (Disposal) Notice 2017 and the Act.

Treat the substance using a method that changes the characteristics or composition of the substance so that the substance is no longer a hazardous substance; or export the substance from New Zealand as waste.

Class 6 and 8 chemicals – may be discharged into the environment if a tolerable exposure limit has been set for the substance (or a component of that chemical); and the discharge does not, after reasonable mixing, result in the concentration of the substance in an environmental medium exceeding the tolerable exposure limit. If there is not tolerable exposure limit for the substance, then it may only be discharged into the environment if the substance is very rapidly converted to substances that are not hazardous substances..

**Contaminated packaging**

For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from.

Packages may only be reused or recycled if:

- the substance has a physical hazard other than corrosive to metal, and has been treated to remove any residual contents of the hazardous substance;
- or for substances that have a health or environmental hazard, or corrosive to metal, the contents of the residue in the package are below the threshold for the substance to be classified as hazardous in the Hazardous Substances (Hazard Classification) Notice 2020.

**Section 14: Transport information****ROAD AND RAIL TRANSPORT**

Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

**UN number or ID number**  
**Proper shipping name**  
**Transport hazard class(es)**  
**Packing group**  
**Hazchem code**  
**IATA**

2834  
PHOSPHOROUS ACID  
8  
III  
2X  
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

**UN number**  
**UN proper shipping name**  
**Transport hazard class(es)**  
**Packing group**

2834  
PHOSPHOROUS ACID  
8  
III



<b>IMDG</b>	Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.
<b>UN number</b>	2834
<b>UN proper shipping name</b>	PHOSPHOROUS ACID
<b>Transport hazard class(es)</b>	8
<b>Packing group</b>	III
<b>IMDG EMS Fire</b>	F-A
<b>IMDG EMS Spill</b>	S-B
<b>Marine pollutant</b>	Not applicable

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

No information available

**Special precautions for user**

Please refer to the applicable dangerous goods regulations for additional information

**Section 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture**

**EPA New Zealand HSNO approval code or group standard** HSR002491 - Additives, Process Chemicals and Raw Materials (Corrosive)

**National regulations** There are no applicable tolerable exposure limits or environmental exposure limits according to the EPA Controls for Hazardous Substances

**Certified handlers, tracking and controlled substance license requirements** Certified handlers are required for some substances. This includes substances requiring a controlled substance license, and most explosives, vertebrates toxic agents, and certain fumigants. Acutely toxic substances which are a Category 1 or 2, such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information

Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information

Controlled substance licenses are required to possess certain explosives, vertebrate toxic agents and fumigants. See Part 7 of the Health and Safety at Work Regulation 2017 for more information

**International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

**International Inventories**

**NZIoC** This material is listed on the New Zealand Inventory of Chemicals.

**TSCA** Contact supplier for inventory compliance status.

**DSL/NDSL** Contact supplier for inventory compliance status.

**EINECS/ELINCS** Contact supplier for inventory compliance status.

**ENCS** Contact supplier for inventory compliance status.

**IECSC** Contact supplier for inventory compliance status.

**KECL** Contact supplier for inventory compliance status.

**PICCS** Contact supplier for inventory compliance status.

**AIIC** This material is listed on the Australian Inventory of Industrial Chemicals.

**TCSI** Contact supplier for inventory compliance status.

**Legend:****NZIoC - New Zealand Inventory of Chemicals**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

**AIIC- Australian Inventory of Industrial Chemicals**

TCSI - Taiwan Chemical Substance Inventory

**Section 16: Other information**

Supplier Material Safety Data Sheet 10/ 2023

**Prepared By** This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

**Revision date:** 24-Apr-2024

**Reason(s) For Issue:** Change in Fire Management Requirements

**Revision Note:**

\*\*\*Indicates updated data since last publication.

**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

SVHC: Substances of Very High Concern for Authorization:

PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances

vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances

STOT: Specific Target Organ Toxicity

ATE: Acute Toxicity Estimate

LC50: 50% Lethal Concentration

LD50: 50% Lethal Dose

**Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
**	Hazard Designation	+	Sensitizers
C	Carcinogen		

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)

U.S. Environmental Protection Agency ChemView Database

European Food Safety Authority (EFSA)

Environmental Protection Agency

Acute Exposure Guideline Level(s) (AEGL(s))

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

National Institute of Technology and Evaluation (NITE)

Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

NIOSH (National Institute for Occupational Safety and Health)

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

U.S. National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Disclaimer**

This SDS 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. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

**End of Safety Data Sheet**