

## Safety Data Sheet PHOSPHORIC ACID 25 - 85%

SDS no. 085KAWB4 • Version 1.0 • Date of issue: 2024-08-26

### SECTION 1: Identification

#### GHS Product identifier

Product name PHOSPHORIC ACID 25 - 85%

#### Other means of identification

Product	Product Code
PHOSPHORIC ACID 85% AR	PA000
PHOSPHORIC ACID 85% LR	PL000
PHOSPHORIC ACID 85% FCC	PP000
PHOSPHORIC ACID 85% TG	PT000
PHOSPHORIC ACID 25% w/w AR Orthophosphoric Acid	PA384

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

Fertilizer; manufacturer of phosphate fertilizers and salts, polyphosphates, soil stabiliser, detergents, pharmaceutical chemicals, activated carbon, animal feed, ceramics, food additive, food processing, soap, rust inhibitors, wax and rubber latex; also used in electropolishing, engraving and photoengraving, printing, opal glasses, cotton dyeing, metal cleaning, sugar refining and water treatment. Petrol additive, soft drinks, and laboratory reagent.

#### Supplier's details

Name	ChemSupply Australia Pty Ltd
Address	38-50 Bedford Street 5013 Gillman South Australia Australia
Telephone	08 8440 2000
email	<a href="http://www.chemsupply.com.au">www.chemsupply.com.au</a>

#### Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

### SECTION 2: Hazard identification

#### General hazard statement

Classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

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.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Serious eye damage/eye irritation, Cat. 1
- Skin corrosion/irritation, Cat. 1B
- Corrosive to metals, Cat. 1

GHS label elements, including precautionary statements

Pictograms



Signal word

Danger

Hazard statement(s)

H314  
H290

Causes severe skin burns and eye damage  
May be corrosive to metals

Precautionary statement(s)

P234  
P260  
P280  
P301+P330+P331  
P303+P361+P353

Keep only in original packaging.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Wear protective gloves/protective clothing/eye protection/face protection.  
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
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/doctor/physician  
Wash contaminated clothing before reuse.  
Absorb spillage to prevent material-damage.  
Store locked up.  
Store in a corrosive resistant/... container with a resistant inner liner.  
Dispose of contents/container to an approved waste disposal facility

P304+P340  
P305+P351+P338

P310  
P363  
P390  
P405  
P406  
P501

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 98

Components

Component	CAS no.	Concentration
Phosphoric acid (EC no.: 231-633-2; Index no.: 015-011-00-6)	7664-38-2	25 - 85 % (weight)
CLASSIFICATIONS: Skin corrosion/irritation, Cat. 1B. HAZARDS: H314 - Causes severe skin burns and eye damage. [SCLs/M-factors/ATEs]: Skin Corr. 1B; H314: C ≥ 25 %; Skin Irrit. 2; H315: 10 % ≤ C < 25 %; Eye Irrit. 2; H319: 10 % ≤ C < 25 %		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	First Aid Facilities: Maintain eyewash fountain in work area.
If inhaled	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Consult a physician.
In case of skin contact	Immediately remove contaminated clothing and wash affected area with water for at least 15 minutes. Ensure contaminated clothing is washed before re-use. Seek medical advice /attention depending on the severity.
In case of eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. In all cases of eye contamination it is a sensible precaution to seek medical advice.
If swallowed	DO NOT INDUCE VOMITING. Wash out mouth with water, afterwards drink plenty of water. Seek immediate medical attention.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**Indication of immediate medical attention and special treatment needed, if necessary**

For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

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**SECTION 5: Fire-fighting measures**

**Suitable extinguishing media**

Small fire: Use dry chemical, CO<sub>2</sub> or water spray.

Large fire: Use water spray, fog or foam - Do NOT use water jets.

If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after the fire is out. Avoid getting water inside the containers.

**Specific hazards arising from the chemical**

Hazards from Combustion Products: Phosphoric acid forms toxic phosphorous oxide fumes on combustion.

Material does not burn. Fire or heat will produce irritating, poisonous and/or corrosive gases. Containers may explode when heated.

**Special protective actions for fire-fighters**

Wear SCBA and chemical splash suit. Fully encapsulating, gas-tight suits should be worn for maximum protection. Structural firefighter's uniform is NOT effective for these materials.

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**SECTION 6: Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

Avoid inhalation and ingestion. Avoid contact with skin, eyes and clothing. Evacuate the area of all non-essential personnel.

Wear protective clothing specified for normal operations (see Section 8)

**Methods and materials for containment and cleaning up**

Absorb or contain liquid with sand, earth or spill control material. Shovel up using non sparking tools and place in a labelled, sealable container for subsequent safe disposal. Put leaking containers in a labelled drum or overdrum.

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**SECTION 7: Handling and storage**

**Precautions for safe handling**

## Safety Data Sheet

### PHOSPHORIC ACID 25 - 85%

SDS no. 085KAWB4 • Version 1.0 • Date of issue: 2024-08-26

Avoid prolonged or repeated contact with skin, eyes and clothing . Wash hands and face thoroughly after working with material. Use with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment If you feel unwell, seek medical attention and show the label when possible. Keep away from incompatibles.

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

Corrosiveness: Extremely corrosive in presence of copper, brass and stainless steel. Highly corrosive in presence of aluminium. Mild corrosive effect on bronze. Corrosive to ferrous metals and alloys. Non-corrosive in presence of glass.

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## SECTION 8: Exposure controls/personal protection

#### Appropriate engineering controls

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

#### Individual protection measures, such as personal protective equipment (PPE)

##### Eye/face protection

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

##### Skin protection

Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hand Protection: Ensure hand protection complies with AS 2161, Occupational protective gloves - Selection, use and maintenance.

##### Body protection

Footwear: Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

Body Protection: Clean clothing or protective clothing should be worn, preferably with and apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

##### Respiratory protection

Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

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## SECTION 9: Physical and chemical properties

#### Basic physical and chemical properties

Physical state	Liquid
Appearance	Clear, colourless, syrupy liquid.
Color	No data available.
Odor	Odourless.
Odor threshold	No data available.
Melting point/freezing point	21 °C (85% phosphoric acid)
Boiling point or initial boiling point and boiling range	158 °C (85% phosphoric acid)
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Flash point	No data available.
Explosive properties	No data available.

# Safety Data Sheet

## PHOSPHORIC ACID 25 - 85%

SDS no. 085KAWB4 • Version 1.0 • Date of issue: 2024-08-26

Auto-ignition temperature  
Decomposition temperature  
Oxidizing properties  
pH  
Kinematic viscosity  
Solubility  
Partition coefficient n-octanol/water (log value)  
Vapor pressure  
Evaporation rate  
Density and/or relative density  
Relative vapor density  
Particle characteristics

No data available.  
No data available.  
No data available.  
1 (100 g/l, H<sub>2</sub>O, 20 °C)  
No data available.  
Solubility in Water: Soluble in water.  
No data available.  
2.2 hPa (85% phosphoric acid)  
No data available.  
Specific Gravity: 1.685 (85% phosphoric acid)  
3.4 (85% phosphoric acid)  
No data available.

### Supplemental information regarding physical hazard classes

No data available.

### Further safety characteristics (supplemental)

No data available.

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## SECTION 10: Stability and reactivity

### Reactivity

Stable under normal conditions of storage and handling.

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

Phosphoric acid decomposes under formation of toxic fumes on contact with alcohols, cyanides, ketones, phenols, esters, sulfides, mercaptans and halogenated organic compounds. Liberates explosive hydrogen gas when reacting with chlorides and stainless steel. Exothermic reactions with aldehydes, amines, amides, alcohols and glycols, azo-compounds, carbamates, esters, caustics, phenols and cresols, organophosphates, epoxides, explosives, combustible materials, unsaturated halids, sodium tetrahydroborate, organic peroxides.

### Conditions to avoid

Avoid storing in direct sunlight and avoid extremes of temperature. Incompatibles

### Incompatible materials

Acetulides, alcohols, aldehydes, amides, amines, ammonia or bleach, azo-compounds, carbides, carbamates, caustics, hlorides, combustible materials, cyanides, esters, epoxides, fluorides, glycols, halogenated organics, ketones, mercaptins, nitromethane, organic peroxides, organophosphates, phenols and cresols, phosphides, silicides, sodium tetrahydroborate, strong caustics, stainless steel, sulfides and unsaturated halides.

### Hazardous decomposition products

No data available.

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## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity

Acute Toxicity - Oral: LD50 (rat): 1,530 mg/kg (anhydrous) (IUCLID)

Ingestion: Burns to the mouth, throat and stomach. Symptoms include sour acrid taste, coughing, difficult breathing and swallowing, conjunctivitis, severe gastrointestinal irritation, nausea, vomiting, bloody diarrhoea, severe abdominal pains, extreme thirst, convulsions.

**Safety Data Sheet**  
**PHOSPHORIC ACID 25 - 85%**

SDS no. 085KAWB4 • Version 1.0 • Date of issue: 2024-08-26

Inhalation: Harmful if inhaled. Vapour or mist can cause irritation of the nose, throat, and upper respiratory tract. Severe exposures can lead to a chemical pneumonitis.

**Skin corrosion/irritation**

Acute Toxicity - Dermal: LD50 (rabbit): 2,740 mg/kg (anhydrous)(IUCRID)

Corrosive. Concentrated acid solutions can cause redness, pain, itching, scaling, occasional blistering, and severe skin burns.

**Serious eye damage/irritation**

Mists may cause eye irritation. Symptoms include of redness, pain, tearing, eyelid spasms, blurred vision, chemical conjunctivitis, burns and permanent eye damage. risk of blindness!

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available.

**Carcinogenicity**

No data available.

**Reproductive toxicity**

No data available.

**Summary of evaluation of the CMR properties**

No data available.

**Specific target organ toxicity (STOT) - single exposure**

No data available.

**Specific target organ toxicity (STOT) - repeated exposure**

No data available.

**Aspiration hazard**

No data available.

**Additional information**

Chronic Effects: Dermatitis may occur from prolonged or repeated skin contact. Prolonged or over exposure to phosphoric acid can increase fluid levels in the lungs (pulmonary oedema). May cause clammy skin and dermantitis, weak and rapid pulse, shallow respiration, very little urine, bronchitis, shortness of breath. Severe exposure to phosphoric acid can lead to shock, circulatory collapse and death.

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**SECTION 12: Ecological information**

**Toxicity**

Information on Ecological Effects: Excessive amounts of phoshphoric acid can affect the pH shift leading to a potential risk to aquatic organisms.

**Bioaccumulative potential**

Phosphate (formed when phosporic acid is dissolved) is unlikely to bioaccumulate in most aquatic species.

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**SECTION 13: Disposal considerations**

**Disposal methods**

**Product disposal**

# Safety Data Sheet

## PHOSPHORIC ACID 25 - 85%

SDS no. 085KAWB4 • Version 1.0 • Date of issue: 2024-08-26

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

### Packaging disposal

Dispose container as hazardous waste.

### Sewage disposal

Phosphate (formed when phosphoric acid is dissolved) is unlikely to bioaccumulate in most aquatic species.

### Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

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## SECTION 14: Transport information

### ADG (Road and Rail)

UN Number: 1805

Class: 8

Packing Group: III

Proper Shipping Name: PHOSPHORIC ACID

### Hazchem emergency action code (EAC)

2R

### IMDG

UN Number: 1805

Class: 8

Packing Group: III

EMS Number:

Proper Shipping Name: PHOSPHORIC ACID

### IATA

UN Number: 1805

Class: 8

Packing Group: III

Proper Shipping Name: PHOSPHORIC ACID

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## SECTION 15: Regulatory information

### Safety, health and environmental regulations specific for the product in question

#### Australia SUSMP

Poison Schedule: S6

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## SECTION 16: Other information

### Further information/disclaimer

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

### Preparation information

**Safety Data Sheet**  
**PHOSPHORIC ACID 25 - 85%**

SDS no. 085KAWB4 • Version 1.0 • Date of issue: 2024-08-26

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia  
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'  
Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.  
Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.  
Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants, December 2019  
Safe Work Australia, Hazardous Chemical Information System (HCIS), [hcis.safeworkaustralia.gov.au](http://hcis.safeworkaustralia.gov.au)  
IATA, Dangerous Goods Regulations (DGR)  
IMO, International Maritime Dangerous Goods Code (IMDG)