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SALES & SERVICES

Material Safety Data Sheet

1. IDENTIFICATION OF THE PRODUCT AND THE SUPPLIER

1.1 Product identifiers

Product name : PHOSPHORIC ACID 75 – 90%

1.2 Other means of identification

Orthophosphoric acid

1.3 Recommended use of the product 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 dying, metal cleaning, sugar refining and water treatment. Petrol additive, soft drinks and laboratory reagent.

1.4 Details of supplier of the safety data sheet

Company	**:** AGent Sales & Services Pty Ltd
Street address	**:** 38 May Holman Drive, Bassendean, Western Australia 6054
Telephone	**:** (+61 8) 6270 4500
Fax	**:** (+61 8) 6270 4544

1.5 Emergency telephone number

Telephone **:** 1300 883 844

2. HAZARDS IDENTIFICATION

2.1 GHS Classification

Corrosive to metals (Category 1)
Skin corrosion / irritation (Category 1B)
Serious eye damage / eye irritation (Category 1)

2.2 GHS Label elements, including precautionary statements

Pictogram :

Signal word **:** Danger

Hazard statement(s)

H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

Precautionary statement(s)

Prevention

P234	Keep only in original container.
P261	Do not breathe dust / fume / gas / mist / vapours / spray.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

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

P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363	Wash contaminated clothing before re-use.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P390	Absorb spillage to prevent material damage.

Storage

P405	Store locked up.
P406	Store in corrosive resistant / container with a resistant inner liner.

Disposal

P501	Dispose of contents/ container to an approved waste disposal plant.

Other hazards
None

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	Classification	Concentration (%)
Phosphoric acid	7664-38-2	Met. Corr. 1; Skin Corr. 1; Eye Dam. 1; H290, H314, H318	≥ 75 - ≤ 90
Water	7732-18-5	Not listed	Balance

For the full text of the H-Statements mentioned in this section, see Section 16

4. FIRST AID MEASURES

4.1 Description of First Aid measures

General advice
Contact the Poisons Information Centre (Phone: Australia 131 126; New Zealand 0800 764 766) or consult a doctor/physician. Show this safety data sheet to the doctor in attendance.

If inhaled
Remove victim from exposure to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek immediate medical advice.

In case of skin contact
Remove contaminated clothing and wash affected areas with soap and running water for at least 15 minutes. Seek immediate medical attention. Launder clothing before reuse.

In case of eye contact
Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Seek immediate medical attention.

If swallowed
Rinse mouth with water. Give water to drink provided person is conscious. Do NOT induce vomiting. Seek medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in Section 2.2 and/or Section 11.

4.3 Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

4.4 First Aid facilities
Eye wash facilities and safety shower should be available.

5. FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media
Use water fog (or if unavailable, fine water spray), alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the chemical

Non-combustible. Thermal decomposition may produce toxic fumes of phosphorus oxides and/or phosphine Oxides of phosphorus

5.3 Special protective equipment and precautions for fire fighters
Wear self-contained breathing apparatus and suitable protective clothing.

5.4 Hazchem code
2R

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Slippery when spilt. Avoid accidents, clean up immediately. Evacuate all non-essential personnel from affected area. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. If contamination of sewers or waterways has occurred, advise local emergency services. Observe all local and national regulations.

6.3 Methods and materials for containment and cleaning up
Slippery when spilt. Avoid accidents, clean up immediately. Contain - prevent run off into drains and waterways. Neutralise spilled product with lime or soda. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. Ventilate area and wash spill site after material pick up is complete.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin, eyes and clothing. Do not inhale product vapours, mist and aerosol. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Keep out of reach of children. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

For precautions see Section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in a secured, cool, dry, well ventilated area, away from alkali, H vesicant, tinder, active metal powder. Ensure containers are adequately labelled, protected from physical damage, sealed when not in use and stored upright. Check regularly for leaks or damage. Store away from incompatible materials listed in Section 10.

This material is classified as a Dangerous Goods Class 8 Corrosive Substance by the criteria of the ADG Code and must be stored and handled in accordance with the relevant regulations.

This material is a Scheduled Poison S6 and must be stored, maintained and used in accordance with the relevant regulations.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Chemical Name	Reference	TWA – Peak Limitation		STEL		Carcinogen Category	Notices
		ppm	mg/m^3	ppm	mg/m^3		
Phosphoric acid (7664-38-2)	ASCC	-	1	-	3	-	-

As published in "*Workplace Exposure Standards for Airborne Contaminants, December 2011"* by SWA.

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.

Biological Limits
None allocated for this product.

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. 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

Personal protective equipment (PPE)

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.

Eye/face protection
Face shield, safety glasses with side shields or splash-proof goggles. See Australian Standards (AS/NZS 1336 & 1337).

Skin protection
Wear protective gloves (rubber or neoprene) and protective clothing (splash apron or equivalent chemical impervious outer garment and rubber boots) appropriate for the risk of exposure. See Australian Standards (AS 2161 & 2919 and AS/NZS 2210).

Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use. Wash and dry hands.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with suitable filter for acid gases and vapours. See Australian Standards (AS/NZS 1715 & 1716).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Form : Liquid
	Colour : Clear, colourless
Odour:	Odourless
Odour Threshold:	No data available
pH:	1.5
Freezing Point:	-18 to 21ºC
Boiling Point/Range:	135 - 158ºC
Decomposition Temperature:	No data available
Evaporation Rate:	No data available
Flash Point:	Not applicable
Flammability Limits:	Not applicable
Specific Gravity:	1.685 @ 25ºC
Vapour Density (air=1):	No data available
Vapour Pressure:	5.65 to 2.16 mm Hg torr @ 20ºC
% Volatiles:	No data available
Solubility in water:	Miscible in water

10. STABILITY AND REACTIVITY

10.1 Reactivity

Hygroscopic. Reacts exothermically with water. Corrodes metals. Violent exothermic reaction with some bases. Violent to explosive reaction with many compounds e.g. with strong oxidisers and with strong reducers.

10.2 Chemical stability
Product is stable under normal conditions of use, storage and temperature

10.3 Possibility of hazardous reactions
Polymerisation is not expected to occur. Reacts with metals liberating flammable hydrogen gas.

10.4 Conditions to avoid
Avoid excessive heat, moisture, sparks, open flames and other ignition sources.

10.5 Incompatible materials
Incompatible with strong oxidising agents, reducing agents, strong alkali, active powdered metals, fluorine, sulphur trioxide, phosphorus pentoxide and metals.

10.6 Hazardous decomposition products
Oxides of phosphorus

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
LD_{50} Oral (rat) : 1530 mg/kg
LD_{50} Dermal (rabbit) : 2740 mg/kg

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
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

Health Effects
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:

Eye contact : Causes burns. Corrosive. Mists may cause eye irritation. Causes tissue destruction, permanent damage to the cornea, blindness.

Skin contact : Corrosive to skin; contact can cause irritation, redness, pain, itching, scaling, occasional blistering and severe skin burns.

Ingestion : Causes burns. Harmful by ingestion. Can cause nausea, diarrhoea, corrosion, burns to mouth and oesophagus, abdominal pain, chest pain, shortness of breath, seizures, and death.

Inhalation : May be harmful by inhalation. Inhalation may result in spasm, inflammation and oedema of the larynx and bronchi, chemical phenomenon, and pulmonary oedema. Material is extremely destructive to tissue of the mucous membranes

and upper respiratory tract, eyes, and skin. Mists may cause lung irritation, shortness of breath, fluid in lungs.

11.2 Information on possible routes of exposure
The substance can be absorbed into the body by ingestion, inhalation of its vapour, mist or aerosol, skin and eyes contact.

11.3 Additional Information
RTECS: Not available

12. ECOGICAL INFORMATION

12.1 Ecotoxicity
Avoid contaminating waterways.

Toxicity to fish:
LC_{50} (Fish) = 138 mg/L, 96h

12.2 Persistence and degradability
No data available.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Other adverse effects
No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Disposal methods and containers
Ensure waste disposal conforms to relevant local, state and federal authority waste disposal regulations. All empty packaging should be disposed of as unused product as required under the ADG Code

13.3 Special precautions for landfill or incineration
Contact a specialist disposal company or the local waste regulator for advice.

14. TRANSPORT INFORMATION

Classified as a Dangerous Goods by the criteria of the ADG Code for transport by road or rail
Classified as a Dangerous Goods by the criteria of the IMDG Code for transport by sea
Classified as a Dangerous Goods by the criteria of the IATA Code for transport by air

14.1 UN number
ADG : 1805 **IMDG :** 1805 **IATA :** 1805

14.2 Proper shipping name
ADG : PHOSPHORIC ACID, SOLUTION
IMDG : PHOSPHORIC ACID, SOLUTION
IATA : PHOSPHORIC ACID, SOLUTION

14.3 Transport hazard class
ADG : 8 Corrosive **IMDG :** 8 Corrosive **IATA :** 8 Corrosive

14.4 Packing group
ADG : III **IMDG :** III **IATA :** III

14.5 Environmental hazards
ADG : No **IMDG Marine Pollutant :** No **IATA :** No

14.6 Special precautions for users No data

14.7 Hazchem code
ADG : 2R **IMDG EMS :** F-A, S-B

14.8 Dangerous goods initial emergency response guide (SAA/SNZ HB76:2010) 37

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)
Poisons Schedule : S6

Carcinogen classification under WHS Regulations 2011, Schedule 10
Not listed

Notification status
AICS On the inventory, or in compliance with the inventory.

SECTION 16 OTHER INFORMATION

Key / legend to abbreviations and acronyms used in the MSDS

ADG	Australian Dangerous Goods
ASCC	Australian Safety and Compensation Council
DEC	Department of Environment and Conservation
GHS	Globally Harmonised System of Classification & Labelling of Chemicals
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
IUCLID	International Uniform Chemical Information Database
NOHSC	National Occupational Health and Safety Commission
SUSDP	Standard for the Uniform Scheduling of Drugs and Poisons
RTECS	Registry of Toxic Effects of Chemical Substances.
Eye Dam.	Eye damage
Met Corr.	Corrosive to metals
Skin Corr.	Skin corrosion
Peak Limitations	A ceiling concentration that should not be exceeded over a measurement period, which should be as short as possible, but not exceeding 15 minutes
TWA	Time weighted average
STEL	Short term exposure level
SWA	Safe Work Australia
LD_{50}	Lethal dose 50. The single dose of a substance that causes the death of 50% of an animal population from exposure to the substance by any route other than inhalation
LC_{50}	Lethal concentration that kills 50% of an animal population within a specified time
TD Lo	The lowest dose of a substance known to have produced signs of toxicity
mg/m^3	Milligrams per cubic metre
mg/kg	Milligrams per kilogram
pH	Relates to hydrogen ion concentration - this value will relate to a scale of 0 - 14, where 0 is highly acidic and 14 is highly alkaline

Literature references
"Workplace Exposure Standards for Airborne Contaminants, December 2011" by SWA Work Health and Safety Regulations 2011

"Registry of Toxic Effects of Chemical Substances". Ed. D. Sweet, US Dept. of Health & Human Services: Cincinatti, 2012.

Reason(s) for Issue:
Revised primary SDS
Alignment to GHS requirements

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