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SAFETY DATA SHEET – Phosphoric Acid

1. IDENTIFICATION

Revision Date	July 2023 (*valid for 5 years from this date)*
Product Name	PHOSPHORIC ACID, SOLUTION
Uses	Salt Cell cleaner
Contact Information	Chlorine Discounters - 43 Clapham Road, Regents Park NSW 2143 P: 02-96454433 F: 02-96454030 E: info@chlorinediscounters.com.au W: www.chlorinediscounters.com.au
Emergency Contact	Managing Director or Operations Manager

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)	6
Globally Harmonised System	
Hazard Classification	Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Hazard Categories	Serious Eye Damage/Irritation - Category 1 Skin Corrosion/Irritation - Category 1A Acute Toxicity (Dermal) - Category 5 Acute Toxicity (Oral) - Category 4
Pictograms	
Signal Word	Danger

Hazard Statements		
	H302	Harmful if swallowed.
	H313	May be harmful in contact with skin.
	H314	Causes severe skin burns and eye damage.
	H318	Causes serious eye damage.
Precautionary Statements		
Prevention	P234	Keep only in original container.
	P260	Do not breathe 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.
	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.
	P321	Specific treatment (see First Aid Measures on Safety Data Sheet).
	P363	Wash contaminated clothing before reuse.
	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 in accordance with local / regional / national / international regulations.
National Transport Commission (Australia)		Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
Dangerous Goods Classification		Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	CAS Number	Proportions (%)
PHOSPHORIC ACID	[7664-38-2]	75.0-95.0
WATER	[7732-18-5]	BALANCE

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	Rinse mouth with water. Give water to drink provided person is conscious. Do NOT induce vomiting. Seek medical attention immediately.
Eye	Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Seek immediate medical attention.

Skin	Remove contaminated clothing. Wash affected area with plenty of flowing clean water for at least 15 minutes. Seek immediate medical attention. Wash clothing before reuse. If burned, treat as burn by acid.
Inhaled	Remove victim from exposure to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek immediate medical advice.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of patient. NOTE: Persons who may have been exposed to contaminated smoke should be immediately examined by a physician and checked for symptoms of poisoning. The symptoms should not be mistaken for heat exhaustion or smoke inhalation.
Medical Conditions Aggravated by Exposure	No information available on medical conditions aggravated by exposure to this product. SIGNS AND SYMPTOMS OF EXPOSURE: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. May cause cyanosis (blue-grey colouring of skin and lips caused by lack of oxygen). Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. TARGET ORGAN INFORMATION: Bone marrow. Blood. Liver. ROUTE OF EXPOSURE: Multiple Routes: May be harmful by inhalation, ingestion, or skin absorption.

5. FIRE FIGHTING MEASURES

Flammability Conditions	Product is a non-flammable liquid.
Extinguishing Media	In case of fire, use Carbon dioxide, dry chemical powder, or appropriate foam.
Hazardous Products of Combustion	Non-combustible liquid. Incompatible with strong oxidizing agents, strong reducing agents, strong alkali, active powdered metals, Fluorine, sulphur trioxide, phosphorus pentoxide, metals, and sources of ignition. This product will release hydrogen on contact with metals, which may cause explosion in the air. Reacts with water to generate heat and form phosphoric acid. The reaction is not violent. Emits toxic fumes under fire conditions. It will produce the virulent gas of oxidation phosphorus at a high temperature. It is corrosive. Hazardous decomposition products may include Phosphine, oxides of phosphorus, and hydrogen gas.
Personal Protective Equipment	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves) or chemical splash suit. Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	2R

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Personnel involved in the clean-up should wear full protective clothing as listed in section 8. Avoid accidents, clean up immediately. Evacuate all unnecessary personnel. Increase ventilation. Avoid walking through spilled product as it is slippery when spilt. Stop leak if safe to do so. Do NOT let

	product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. Use clean, non-sparking tools and equipment. Shut off all possible sources if ignition.
Clean Up Procedures	Neutralize spilled product with lime or soda. Soak up using absorbent material such as sand or soil. When saturated, collect material and transfer to a suitable, labelled, dry chemical-waste containers and dispose of promptly as hazardous waste. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Handling	Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product vapours. Avoid prolonged or repeated exposure. Remove contaminated clothing and wash before reuse. Use only in a chemical fume hood.
Storage	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Protect from direct sunlight, moisture, fire, and heat. Store away from alkali, H vesicant, tinder, active metal powder. This product has a UN classification of 1805 and a Dangerous Goods Class 8 (Corrosive) according to The Australian Code for the Transport of Dangerous Goods by Road and Rail.
Container	Container type/packaging must comply with all applicable local legislation. Store in original packaging as approved by manufacturer.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	The following exposure standard has been established by The Australian Safety and Compensation Council (ASCC); Phosphoric Acid CAS: 7664-38-2 TWA = 1mg/m3 STEL = 3mg/m3 NOTE: The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. These 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 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.
Exposure Limits	No Data Available
Biological Limits	No information available on biological limit values for this product.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection Equipment	RESPIRATOR: Wear an approved full face piece respirator with suitable filter for acid gases and vapours if engineering controls are inadequate (AS1715/1716). EYES: Chemical goggles to prevent splashing in the eyes (AS1336/1337). HANDS: Rubber or neoprene impervious gloves (AS2161). CLOTHING: Chemical-resistant coveralls and safety footwear (AS3765/2210).

Work Hygienic Practices	No Data Available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Viscous Liquid
Odour	Odourless
Colour	Transparent, Colourless
pH	1.5
Vapour Pressure	5.65 to 2.16mmHg torr (@ 20 °C)
Relative Vapour Density	No Data Available
Boiling Point	135 - 158 °C
Melting Point	<15°C
Freezing Point	<15 °C
Specific Gravity	Density: 1.58-1.69
Flash Point	No Data Available
Decomposition Temperature	No Data Available
Vapour Temperature	No Data Available
Additional Characteristics	Softening Point: 42.4 Deg C (pure)
Potential for Dust Explosion	Product is a liquid.
Reactions That Release Gases or Vapours	Contact with reactive metals may evolve highly flammable hydrogen gas.

10. STABILITY AND REACTIVITY

Chemical Stability	Product is stable under normal conditions of use, storage and temperature. Corrosive Liquid. Hygroscopic: absorbs moisture or water from the air.
Conditions to Avoid	Avoid excessive heat, direct sunlight, moist air or water.
Materials to Avoid	Incompatible with strong oxidizing agents, strong reducing agents, strong alkali, active powdered metals, Fluorine, sulphur trioxide, phosphorus pentoxide, metals, and sources of ignition.
Hazardous Decomposition Products	This product will release hydrogen on contact with metals, which may cause explosion in the air. Reacts with water to generate heat and form phosphoric acid. The reaction is not violent. Emits toxic fumes under fire conditions. It will produce the virulent gas of oxidation phosphorus at a high temperature. It is corrosive. Hazardous decomposition products may include Phosphine, oxides of phosphorus, and hydrogen gas.
Hazardous Polymerisation	Hazardous Polymerisation May occur. Reacts with water to generate heat and form phosphoric acid. The reaction is not violent. Reacts with Bases.

11. TOXICOLOGICAL INFORMATION

General Information	Oral LD50 Rat: 1530mg/Kg Dermal LD50 Rabbit: 2740mg/Kg
Eye Irritant	Causes burns. Corrosive. Causes tissue destruction, permanent damage to the cornea, blindness.
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	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. May be harmful by inhalation. Mists may cause lung irritation, shortness of breath, fluid in lungs.
Skin Irritant	Causes burns. Causes irritation, burns.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Eco-toxicity	No ecological information available for this product.
Persistence/Degradability	No information available on persistence/degradability for this product.
Mobility	No information available on mobility for this product.
Environmental Fate	Do NOT let product reach waterways, drains and sewers.
Bioaccumulation Potential	No information available on bioaccumulation for this product.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG

UN Number	1805
Shipping Name	PHOSPHORIC ACID, SOLUTION
Dangerous Goods Class	8 Corrosive Substance
Subsidiary Risk	Not applicable.

Pack Group	III
Precaution for User	CORROSIVE
Hazchem Code	2R
EPG	37 TOXIC AND/OR CORROSIVE SUBSTANCES Non-Combustible
Special Provision	Not applicable.



15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	6
National/Regional Inventories Australia (AICS)	Listed

16. OTHER INFORMATION

Literature References	No data available.
Sources for Data	No data available.

Legend to Abbreviations and Acronyms

<	less than
<	greater than
ADG	Australian Dangerous Goods Code
AICS	Australian Inventory of Chemical Substances
CAS	Chemical Abstracts Service (Registry Number)
cm2	square centimetres
CO2	Carbon Dioxide
COD	Chemical Oxygen Demand
deg C ('C)	degrees Celsius
ERMA	Environmental Risk Management Authority
g	gram
g/cm3	grams per cubic centimetre
g/l	grams per litre

HSNO	Hazardous Substance and New Organism
IATA	International Air Transport Association Dangerous Goods Regulations
IDLH	Immediately Dangerous to Life and Health
IMDG	International Maritime Dangerous Goods Code
Immiscible	liquids are insoluble in each other
Kg	kilogram
kg/m3	kilograms per cubic metre
LC50	LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD50	LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals
ltr	Litre
m3	cubic metre
mbar	millibar
mg	milligram
mg/24H	milligrams per 24 hours
mg/kg	milligrams per kilogram
mg/m3	milligrams per cubic metre
Misc	miscible
Miscible	liquids form one homogeneous liquid phase regardless of the amount of either component present
mm	millimetre
mPa.s	milli Pascal per second
N/A	Not Applicable
NOHSC	National Occupational Health and Safety Commission
OECD	Organization for Economic Co-operation and Development
PEL	Permissible Exposure Limit
ppb	parts per billion
ppm	parts per million
ppm/2h	parts per million per 2 hours
ppm/6h	parts per million per 6 hours
RCP	Reciprocal Calculation Procedure
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
tne	tonne
TWA	Time Weighted Average
ug/24H	micrograms per 24 hours
UN	United Nations (number)
wt	weight

This SDS summarises Chlorine Discounters best knowledge of the health and safety hazard information of the selected substance and how to safely handle the selected substance in the workplace however Chlorine Discounters expressly disclaims that the SDS is a representation or guarantee of the chemical specifications for the substance.

Each user should read the SDS and consider the information in the context of how the selected substance will be handled and used in the workplace including its use in conjunction with other substances.