Safety Data Sheet

According to CFR1910/1200 and GHS Rev.10
Effective Date: 08 January 2024

Product Name: PHOSPHONATE (HEDP)

Classified for physical and health hazards under GHS.

SECTION 1: IDENTIFICATION OF SUBSTANCE AND OF THE SUPPLIER

Product Name	Phosphonate Hydroxyethylidene Diphosphonic Acid (HEDP)
Other Names	HEDP (A) or HEDPA or ETIDRONIC ACID or 1-Hydroxy Ethylidene-1,1 Diphosphonic Acid or Hydroxyethylidene-1,1-diphosphonicacid(HEDP) or 1-HYDROXYETHYLIDENEDIPHOSPHONIC ACID or 1-hydroxy-1,1-Ethanediyl ester
CAS No.	2809-21-4
Product Code & Size	20LPHO - 20Litre
Recommended Uses	Industrial Water Treatment.
Company Name	Viva Blu Chemical Suppliers
Address	49 Victoria Street, Windsor, QLD, 4030
Phone	+61 402 981 808
Emergency Contact Number	+61 402 981 808 General Information
24 Hour Emergency Contact	If poisoning occurs, contact a doctor or Poisons Information Centre **Australia 131 126** or **New Zealand 0800 764 766**

SECTION 2: HAZARDS IDENTIFICATION

Classification Hazardous chemical according to GHS (Globally Harmonized System)

Hazard Category

Category 1 Corrosive to Metals
Category 4 Acute Toxicity: Oral
Category 1 Serious Eye Damage/ Irritation



Signal word: Danger

Hazard Statements
H290: May be corrosive to metals.
H302: Harmful if swallowed.
H318: Causes serious eye damage.

Precautionary statements
P264: Wash hands and face thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/eye protection/face protection.
P301+P312+P330: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.
P305+P351+P338 +P310: 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.
P406: Store in corrosive resistant container with a resistant liner.
P501: Dispose of contents/container in accordance with local, regional, national, international regulations.

SECTION 3: COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical Entity	CAS Number	Proportions
1-Hydroxy Ethylidene-1, 1-Diphosphonic Acid:	2809-21-4	58-62%
Phosphorous acid:	13598-36-2	≤ 4%
Phosphoric acid:	7664-38-2	≤ 1%
Water:	7732-18-5	Balance%

SECTION 4: FIRST AID MEASURES

Swallowed Rinse mouth thoroughly with water. Do NOT induce vomiting.

	Seek medical attention if irritation, discomfort or vomiting persists.
Eye	Protect unexposed eye. Irrigate with copious quantity of water for 15 minutes. Remove contact lenses if present and easy to do. Seek medical assistance if symptoms persist.
Skin	Remove contaminated clothing and wash before re-use. Wash affected areas with copious quantities of water immediately. If irritation occurs seek medical advice.
Inhaled	Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position in fresh air.
Advice to Doctor	Treat symptomatically based on individual reactions of patient and judgement of doctor.

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

Most important symptoms and effect, both acute and delayed
Irritation, nausea, headache, shortness of breath

Indication of any immediate medical attention and special treatment needed
If seeking medical attention, provide SDS document to physician.

SECTION 5: FIRE FIGHTING MEASURES

Flammability Conditions	Product is a non-flammable liquid.
Extinguishing Media	Use dry chemicals, carbon dioxide, water, foam. Water spray may be used to keep fire exposed containers cool.
Hazards Products of Combustion	Slight fire hazard. Dust air mixture may ignite or explode.
Fire and Explosion Hazard	Contact with metals may evolve flammable hydrogen gas. When heat, container may explode, and vapours may develop explosive mixture with air.

Special Protective Precautions & Equipment for Fire fighters Protective equipment

Fire fighters should wear a self-contained breathing apparatus and full protective clothing along with protective equipment. Use NIOSH-

approved respiratory protection/breathing apparatus. At high temperatures under fire conditions, it may produce toxic or irritating fumes. Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place

Additional Information (precautions)

Move product containers away from fire or keep cool with water spray as a protective measure, where feasible. Use spark proof tools and explosion proof equipment.

Hachem Code 2X

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and Emergency Procedures

Always wear protective equipment when handling the substance and ensure adequate ventilation. Contain spilled material by diking or using absorbent. Transfer to a disposal or recovery container. Keep unprotected people away. Avoid breathing vapour and contact with eyes and skin.

Personnel involved in the cleanup should wear full protective clothing.

Eliminate all sources of ignition. Increase ventilation. Do not allow product to reach drains, sewers, or waterways. If the product does enter a waterway, advise the Environment Protection Authority or your local Waste Management.

Environmental precautions Prevent from reaching drains, sewers, or waterways. Collect contaminated soil for characterization per section 13.

Methods and Materials for Containment and Clean Up

Wear protective clothing. Cover with an inert, non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite). Transfer to a suitable, labeled waste container and hold for safe disposal. Wash spill area with plenty of water after removing the spill. Neutralising agent: Sodium carbonate. If necessary, use trained response staff/contractor.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling Ensure an eye and safety shower are available and ready for use in case of an emergency. To avoid contact with eyes, skin and clothing, wear protective clothing, safety glasses and face protection. Do not breathe vapours. Follow good hygiene procedures when handling substances. Do not eat, drink, smoke or use personal products when handling substances. Use only in well-ventilated areas. Avoid contact with eyes, skin, and clothing. Ensure an eye bath and safety shower are available and ready for use.

Conditions for Safe Storage including and incompatibilities

Store in cool, dry and ventilated area away from heat sources and protected from sunlight. Protect from freezing. Keep container tightly closed and in its original container. Keep air contact to a minimum. Do not leave the material container open. Store protected from heat, sparks and ignition sources and incompatible materials. Unsuitable container material: steel and aluminum.

Container Type Store in original packaging as approved by manufacturer.

SECTION 8: EXPOSURE CONTROLS/ PERSONAL PROTECTION

Control Parameters No specific exposure standards are available for this substance.

Appropriate Engineering Controls Preferent use local exhaust ventilation to minimise the exposures.

Respiratory Protection Use suitable respiratory protective equipment when inadequate ventilation or where risk assessment shows air-purifying respirators are appropriate.

Protection of skin Appropriate personal equipment is required like protective overalls, safety footwear and gloves.

Eye Protection Safety Glasses and face shield are recommended to prevent contact with eyes.

Work hygiene practices Do not eat, drink or smoke when using the substance. Handle in accordance with good industrial hygiene and safety practice. Wash hands after handling.

Biological Values No information available

Exposure Limits No occupational exposure limits were established.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, colorless to pale straw liquid
Odor	Characteristic
Vapor Pressure	23.8 @25°C
Vapor Density	0.8
Boiling Point	108°C
Melting Point/Freezing point	<1 Celsius
Solubilities	Soluble in water
Specific Gravity/ Relative Density	1.4 – 1.45
Flash Point	Not available
pH	2-3
Lower Explosion Limit	Not available
Upper Explosion Limit	Not available
Ignition Temperature	Not available
Specific Heat Value	Not Determined
Particle Size	Not available
Volatile Organic Compounds	Not Determined
Evaporation Rate	1 (N-Butyl Acetate = 12)
Viscosity	Not Determined
Percent Volatile	Not Determined
Octanol/Water partition coefficient	Not Determined
Saturated Vapor Concentration	Not Determined
Additional Characteristics	Not Determined
Flame Propagation/Burning rate of Solid Material	Not Determined
Reactions that release flammable Gases	Not Determined
Additional information	Molecular weight 206.02
Chemical formula	C2H8O7P2

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability Stable at recommended storage conditions.

Incompatible Materials Strong oxidising agents, strong alkalis and metals (steel, aluminum)

Hazardous Decomposition products Fire or heat can develop irritating, corrosive and/ or toxic gases like phosphorus oxide, carbon monoxide and carbon dioxide.

Hazardous Polymerisation When correct storage and handling, no dangerous reactions.

Conditions to avoid Protect for heat, sunlight and frost.

SECTION 11: TOXICOLOGICAL INFORMATION

Moderate Toxicity:

Ingestion	1800 mg/kg oral	LD50 rat

General information:

Eye Corrosion/ Irritation	Causes serious eye damage
Respiratory/ skin Irritation	None
Single Target Organ Toxicity (STOT) single expose	None
Single Target Organ Toxicity (STOT) repeat expose	Not considered to cause serious damage to health
Carcinogenicity	None
Gem Mutagenicity	Not considered to be genotoxic based on weight of evidence
Reproductive Toxicity	None
Aspiration toxicity	None

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:
Invertebrates: 48h, EC50 Water flea (Daphnia magna) 527 mg/l
Invertebrates: 96h, LC50 Rainbow trout (Oncorhynchus mykiss) 368 mg/l, LC50 Bluegill sunfish (Lepomis macrochirus) 868 mg/l
Algae**:** 96h, EC50 Algae (Selenastrum capricornutum) 3 mg/l
Algal growth inhibition is due to the ability of this product to complex materials not to toxicity.

Environmental fate:
Modified OECD Screening theoretical CO2 evolution 2 % 70 d Modified SCAS Dissolved Organic Carbon removed 90 % Closed Bottle BOD30/COD 5 % - do not allow to enter into ground- water, surface water or drains.

Persistence/ degradability	Not expected to bio-accumulate.
Mobility in Soil	No information available
Bioaccumulation Potential	No information available

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal	Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of 1-Hydroxyethylidene-1,1-Diphosphonic Acid or HEDP Phosphonate container and unused contents in accordance with regional, national and Intenational regulatory.

SECTION 14: TRANSPORT INFORMATION

UN Number	3265
Shipping Name:	Corrosive liquid, acidic, organic, n.o.s. (phosphonic acid)
Dangerous Goods Class	8 Corrosive Substances
Subsidiary Risk	No data available
Pack Group	III
Hazchem Code	2X
EPG	37 Toxic and or corrosive substances Non-combustible
EMS	F-A, S-B
Special precautions for user	No data available

*As per ADG Code, IATA DGR and IMDG Code

SECTION 15: REGULATORY INFORMATION

Classified as Hazardous according to the criteria of The Australian Safety and Compensation Council (ASCC).

Poisons Schedule (AUST)	No scheduled

SECTION 16: CONTACT INFORMATION

Any advice, recommendation, information, assistance, or service provided by Viva Blu in relation to the goods supplied by it or their use or application is given in good faith and believed to be appropriate and reliable. However, it is provided with a disclaimer of any liability on the part of Viva Blu. The customer accepts all risk and responsibility for use of the goods alone, or in combination with other products. All warranties, guarantees and conditions, other than those expressly stated, and whether implied by stature, common law, custom of the trade otherwise, are to the extent that the law permits expressly excluded.

Craig Mair
Managing Director

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