



SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

Product Name: METAL-OUT PLUS
 Synonym(s): HEDP; 1-Hydroxyethylidene-1, 1-diphosphonic acid
 Recommended Uses: Sequestering Agent
 SDS Reference: 36

Company Information: ALLCHEM PERFORMANCE PRODUCTS, INC. Distributed By: WATER TECHNIQUES, INC
 6010 NW FIRST PLACE 14260 W. NEWBERRY RD #162
 GAINESVILLE, FL 32607 NEWBERRY FL 32669
 Tel: 352-378-9696
 24 HOUR EMERGENCY NUMBER: INFOTRAC (TRANSPORTATION): 1-800-535-5053

2. HAZARD(S) IDENTIFICATION



Classification: CORROSIVE
 HARMFUL IF SWALLOWED
 TARGET ORGAN TOXICITY (SINGLE)

Signal Word: DANGER

Hazard Statements: HEALTH HAZARDS:
 Eye Damage - Causes serious eye damage - Category 1 - H318
 Skin Irritation - Causes severe skin burns and eye damage - Category 1 - H314
 Acute Oral Toxicity - Harmful if swallowed - H302
 Specific target organ - single exposure - May cause damage to (kidney, liver, spleen) - Category 2 - H371
 PHYSICAL HAZARDS:
 Corrosive to many metals

Precautionary Statements: Corrosive. Causes severe skin burns and eye damage. May cause damage to kidney, liver and/or spleen. Wear protective gloves, eye protection and face protection when handling this product. Do not breathe vapors/gas/mist or spray. Harmful if swallowed. Wash hands thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Do not store product in mild steel, carbon steel, aluminum or other metals.

Eye Contact: Rinse continuously 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 Contact: Wash with plenty of soap and water. Call a physician if irritation persists.

Inhalation: Material is irritating to mucous membranes and upper respiratory tract.

Ingestion: Corrosive to mouth, esophagus and stomach. Harmful if swallowed.

3. COMPOSITION

	PERCENT %	CAS #
Chemical Name: 1-Hydroxyethylidene-1, 1-diphosphonic acid	28 - 30	2809-21-4
Phosphorous Acid	0 - 2	10294-56-1

4. FIRST AID

If In Eyes: Immediately flush eyes with large amounts of water for at least 15 minutes. If easy to do, remove any contact lenses. Get immediate medical attention.

If on Skin or Clothing: Immediate first aid is not likely to be required. Wash with large amounts of water. If irritation persists, seek medical attention.

If Inhaled: Immediate first aid is not likely to be required. If symptoms occur, remove to fresh air.

If Swallowed: Immediate first aid is not likely to be required. A physician or Poison Control Center can be contacted for advice.

Note: Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

5. FIREFIGHTING MEASURES

Suitable / Unsuitable: Recommended extinguishing media; water spray

Extinguishing Media:

Specific Hazards from Chemical: Hazardous decomposition: Carbon Monoxide, Carbon Dioxide



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Special Protective Equipment: Firefighters, and other exposed, wear self contained breathing apparatus. Wear suitable protective clothing, gloves and eye/face protection.
Other Information: No data available.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with skin, eyes and clothing. See Section 8 for Personal Protective Equipment.

Methods and Materials for cleanup: Warn everybody in sewers, basements and workpits of danger of corrosive hazard.
Large Quantities: Prevent liquid entering basements and workpits. Keep out of drains and watercourses. Contain liquid spillage with sandbags or other means to prevent entry into drains Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.
Large Spillage: Absorb in earth or sand. Sweep up into containers for disposal. Do not use metal containers for spilled material. Flush spill area with water.
Small Spillage: Treat with hydrated lime or soda ash. Wash away small spills with plenty of water.

7. HANDLING AND STORAGE

Handling: Keep container closed. Open and handle containers with care. Empty product containers may contain residue. Do not reuse empty containers without commercial cleaning or reconditioning.

Storage: Store in a cool, well ventilated place away from incompatible materials. Do not allow product to freeze. Incompatible material: Attacks many metals, corrosive aluminum and mild steel.

8. EXPOSURE CONTROLS / PERSONAL PROTECTIONS

OSHA permissible exposure limit: No workplace exposure limits have been established for this product.

Appropriate Engineering Controls: Provide natural or mechanical ventilation to minimize exposure. If practical, use local exhaust ventilation at sources of air contamination such as processing equipment.

Individual Protection Measures: Respiratory Protection - Avoid breathing vapor or mist. Use approved respiratory protection equipment when airborne exposure is excessive. If used, full face piece replaces the need for face shield and/or chemical goggles. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.
Eyes Protection - Wear chemical goggles. Have eye wash facilities immediately available at any location where eye contact can occur.
Skin Protection - Although this product does not present a significant skin concern, minimize skin contamination by following good industrial practice. Wash thoroughly after handling. Although this product does not present a significant skin concern, minimize skin contamination by following good industrial practice. Wearing protective gloves is recommended. Consult the glove/clothing manufacturer to determine the appropriate type glove/clothing for a given application.
Other Work Practices - Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless to pale yellow liquid.	Flammability (solid/gas):	Not Applicable
Odor:	Mild odor	Upper/lower Flammability or Exposure limits:	Not Applicable
Odor Threshold:	No data available	Vapor Pressure:	No data available
pH:	<2	Vapor Density:	No data available
Melting Point/Freezing Point:	No data available	Density:	9.68 lbs/gal
		Solubility(ies):	Soluble in water
Initial Boiling Point/Boiling Range:	No data available	Partition Coefficient: n-octanol/water:	No data available
		Auto-ignition Temperature:	Not Applicable
Flash Point:	Nonflammable	Decomposition Temperature:	No data available
Evaporation Rate:	No data available	Viscosity:	No data available

10. STABILITY AND REACTIVITY

Stability/Reactivity: Material is stable under normal conditions. Substantial heat is evolved when mixed with alkali.

Possibilities of Hazardous Reactions: Hazardous Polymerization: Will Not Occur.

Conditions to Avoid: Contact with common metals produces flammable hydrogen gas.



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Incompatible Materials: Strong oxidizing agents and strong bases.
Attacks many metals. Corrosive to aluminum and mild steel.

Hazardous Decomposition Materials: Thermal decomposition may produce toxic fumes of phosphorus oxides and/or phosphine. Carbon dioxide.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: COMPONENT TOXICITY:
1-Hydroxyethylidene-1,1-diphosphonic acid:
Oral LD50: 2400 mg/kg Rat
Dermal LD50: 10000 mg/kg Rabbit

Acute Toxicity Estimates (ATE):
Skin Corrosion - Category 2 - Causes skin irritation
Serious Eye Damage - Category 1 - Causes serious eye damage.

No other toxicity data is available.

Chronic Toxicity: No data available.

Reproductive Toxicity: No data available.

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

Mutagenicity: No data available.

12. ECOLOGICAL INFORMATION

Aquatic Toxicity: (Based upon 60% HEDP)
Bluegill - 96 h LC50: 868 mg/l
Rainbow trout - 96 h LC50: 368 mg/l
Daphnia Magna - 48 h EC50: 527 mg/l

Algae: 96h EC50: 3 mg/l (Algae growth inhibition is due to the ability of HEDP to complex materials and not to toxicity per se.)

Avian Toxicity: No data available.

Environmental Hazards: No data available.

13. DISPOSAL CONSIDERATIONS

Disposal: Observe all federal, state and local regulations when disposing of this product/container. Reference guidelines under 40 CFR Parts 261.
Empty containers may retain product residue. Empty drums should be completely drained, properly bunged and promptly returned to drum reconditioner, or properly disposed of.

14. TRANSPORTATION INFORMATION

Package exceptions may be applicable. Refer to the appropriate IMDG, IATA and/or 49 CFR regulations accordingly.

DOT: UN3265, Corrosive liquid, acidic, organic, n.o.s. (1-Hydroxyethylidene-1,1-diphosphonic acid), 8, PG II

15. REGULATORY INFORMATION

TSCA: USA: Reported in the EPA TSCA Inventory.

SARA (311, 312): Acute Health Hazard / Chronic Health Hazard

SARA 313: None of the ingredients are listed.

Right To Know Hazardous Substance List: California Proposition 65: not listed.
New Jersey - Phosphorous Acid >1%

Waste Classification: No data available.

Workplace Classification: This product is considered hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200).

CERCLA Reportable Quantity: Not applicable.

Quantity:

16. OTHER INFORMATION



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ALWAYS COMPLY WITH ALL APPLICABLE INTERNATIONAL, FEDERAL, STATE AND LOCAL REGULATIONS REGARDING THE TRANSPORTATION, STORAGE, USE AND DISPOSAL OF THIS CHEMICAL. Due to the changing nature of regulatory requirements, the REGULATORY INFORMATION listed in Section 15 of this document should NOT be considered all-inclusive or authoritative. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements. The information in this SDS was obtained from sources, which we believe are reliable. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, REGARDING ITS CORRECTNESS. The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

HMIS Rating: Health: 3
Flammability: 0
Reactivity: 1

NFPA Rating: Health: 3
Flammability: 0
Reactivity: 1

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Special Hazard Warning: Not applicable