

Product name Clear Spa¹⁰⁴ Spa Solutions Metal Guard**Revision date** 5-16-15**Section 1 Identification****Product ID:** Metal Guard**Chemical Name:** (1-Hydroxyethylidene)diphosphonic acid**Synonyms:** Etidronic Acid; 1-Hydroxyethylidene-1,1-diphosphonic acid; HEDP**Chemical Formula:** C₂H₈O₇P₂**CAS Number:** 2809-21-4**Product Use:** Surface and Equipment Protectant**Supplier:** Oreq Corporation
42306 Remington Avenue
Temecula, CA 92590
951-296-5076**Emergency Phone#** Chemtrec: 1-800-424-9300**Section 2 Hazards identification****EMERGENCY OVERVIEW
DANGER****Hazard Statement(s)**Corrosive to metals (Category 1)
Serious eye damage (Category 1)H290: May be corrosive to metals.
H303: May be harmful if swallowed.
H318: Causes serious eye damage.
H410: Very toxic to aquatic life with long lasting effects.**Precautionary Statement(s)**P273: Avoid release to the environment.
P280: Wear protective gloves/eye protection/face protection.
P234: Keep only in original container.
P305+351+338: 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.
P406: Store in corrosive resistant stainless steel container with a resistant inner liner.
P501: Dispose of contents/container to an approved waste disposal plant.**HMIS CLASSIFICATION**Health Hazard 2
Flammability 0
Physical Hazards 0**NFPA RATING**Health Hazard 2
Fire 0
Reactivity Hazard 0

Product name Clear Spa¹⁰⁴ Spa Solutions Metal Guard**Revision date** 5-16-15**Section 2 Hazards identification (Continued)****Potential Health Effects**

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: May be harmful if swallowed.

Section 3 Composition / Information on ingredients

COMPONENT	CAS#	PERCENT
(1-Hydroxyethylidene)diphosphonic acid	2809-21-4	7%-14%

Section 4 First - aid measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin Contact: Wash off with soap and plenty of water. Consult a physician.

Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5 Fire - fighting measures**Extinguishing Media**

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture: Carbon oxides, Oxides of phosphorus.

Advice for Firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Section 6 Accidental release measures

Personal Precautions: Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

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.

Methods and materials for containment and cleaning up: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

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Section 7 Handling and storage

Precautions for Safe Handling: Avoid inhalation of vapor or mist. Normal measures for preventive fire protection.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store at room temperature.

Section 8 Exposure controls / personal protection

Control Parameters

Components with workplace control parameters: Contains no substances with occupational exposure limit values.

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.

Personal Protective Equipment

Eye/Face Protection:

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection:

Handle with gloves. 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 in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection:

Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection:

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of Environmental Exposure: Do not let product enter drains.

Hygiene Measures:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Section 9 Physical and chemical properties

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Appearance: Colorless to pale yellow liquid.
Odor: Mild. Vinegar like.
Odor Threshold: Not Available
pH (1% solution): <2.0
Melting Point: 198-199°C
Boiling Point: 578.8°C at 760 mmHg
Flash Point: 303.8°C
Stability: Stable under ordinary conditions.
Evaporation Rate: Not Available
Flammability (solid, gas): Not Available
Upper/Lower Flammability or Explosive Limits: Not Available
Vapor Pressure (mm Hg): 8.34E-16mmHg at 25°C
Density @ 25°C: 1.45 g/mL
Specific Gravity: 1.43 – 1.46
Solubility in Water: Completely miscible with water in all proportions.
Partition Coefficient (n-octanol/water): log Pow: -3,49
Auto-ignition Temperature: Not Available
Decomposition Temperature: Not Available
Viscosity: Not Available
Explosive Properties: Not Available
Oxidizing Properties: Not Available
Molecular Weight: 201.9987

Section 10 Stability and reactivity

Reactivity: Not Available.
Chemical Stability: Stable under recommended storage conditions.
Possibility of Hazardous Reactions: Corrosive in contact with metals.
Conditions to Avoid: Not Available
Incompatible Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Hazardous decomposition products formed under fire conditions. – Carbon oxides, Oxides of phosphorus.

Section 11 Toxicological information

Acute Toxicity: LD50 Oral – rat – 2610 mg/kg
LD50 Dermal – rabbit – 8630 mg/kg

Inhalation: Not Available
Skin Corrosion/Irritation: Skin – rabbit – no skin irritation – Draize Test
Serious Eye Damage/Eye Irritation: Eyes – rabbit – Severe eye irritation – OECD Test Guideline 405
Respiratory or Skin Sensitization: Not Available
Germ Cell Mutagenicity: Not Available

Section 11 Toxicological information (Continued)**Carcinogenicity**

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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.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive Toxicity:	Not Available
Specific target organ toxicity - single exposure:	Not Available
Specific target organ toxicity - repeated exposure:	Not Available
Aspiration Hazard:	Not Available

Potential Health Effects

Inhalation:	May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion:	May be harmful if swallowed.
Skin:	May be harmful if absorbed through skin. May cause skin irritation.
Eyes:	May cause eye irritation.

Signs and Symptoms of Exposure:

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 Ecological information

Toxicity

- Toxicity to fish: mortality – *Salmo gairdneri* – 217 mg/l – 96h
- Toxicity to daphnia and other aquatic invertebrates: Immobilization EC50 – *Daphnia magna* (water flea) – 572 mg/l – 48h
- Toxicity to Algae: Growth inhibition – SELENASTRUM – 42 mg/l – 14 d

Persistence and Degradability: Not Available

Bioaccumulative Potential: Not Available

Mobility in Soil: Not Available

Results of PBT and vPvB Assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

Other Adverse Effects: And environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

Section 13 Disposal considerations

Waste Treatment Methods

Product: Contact a licensed professional waste disposal service to dispose of this material. Offer surplus and

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non-recyclable solutions to a licensed disposal company.

Contaminated Packaging: Dispose of as unused product.**Section 14 Transport information****DOT:** **UN Number:** ORM-D
UN Proper Shipping Name: ORM-D
Transport Hazard Class: ORM-D
Packing Group: ORM-D

Consumer commodity (ORM-D) means a material that is packaged and distributed in a form intended or suitable for sale through retail sales agencies or instrumentalities for consumption by individuals for purposes of personal care or household use. Valid until December 31, 2020.

**TDG:** **UN Number:** 3265
UN Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s. (1 Hydroxyethylidene)diphosphonic acid
Transport Hazard Class: 8
Packing Group: III
Marine Pollutant: No**MEX:** **UN Number:** 3265
UN Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s.(1 Hydroxyethylidene)diphosphonic acid
Transport Hazard Class: 8
Packing Group: III
Marine Pollutant: No**IMDG:** **UN Number:** 3265
UN Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s.(1 Hydroxyethylidene)diphosphonic acid
Transport Hazard Class: 8
Packing Group: III
EMS-No: F-A, S-B
Marine Pollutant: No**Section 14 Transport information (Continued)****IATA:** **UN Number:** 3265
UN Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s.
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Section 15 Regulatory information

OSHA Hazards: Irritant

DSL Status: All components of this product are on the Canadian DSL list.

SARA 302 Components: SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards: Acute Health Hazard

Massachusetts Right To Know Components: No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components:	CAS-No.	Revision Date
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New Jersey Right To Know Components:	CAS-No.	Revision Date
Etidronic acid	2809-21-4	

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16 Other information

DATE OF PREPARATION

5-16-15

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