

Material Safety Data Sheet

PR-10,000 Phosphate Remover

MSDS No. PR10000

Date of Preparation/Revision: 11-2007

Revision: 0

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: PR-10,000 Phosphate Remover

Chemical Formula: Proprietary rare earth and compatible compounds - Patent Pending.

CAS Number: N/A

Other Designations: None

General Use: Precipitation and removal of phosphates from water.

Manufacturer: Pure Planet Science, Inc. dba Orenda Technologies, 1607 Wheatberry Ct. Allen Texas 75002 Tel: (928) 522-0194

Fax: (888) 215-5758 (emergency/informational telephone/fax numbers).

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number
The precise composition of PR-10,000 is proprietary information. A more complete disclosure will be made to an attending physician in the event of a medical emergency involving this product. When utilized in accordance with Orenda Technologies, Inc., PR-10,000 is considered to be environmentally safe, nontoxic and nonhazardous.	N/A

Trace Impurities: < 0.02%

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Proprietary	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Section 3 - Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Potential Health Effects

Primary Entry Routes: By ingestion and through eye and skin contact.

Target Organs: None known.

Acute Effects

Inhalation: None.

Eye: Possible mild and temporary irritation.

Skin: Possible mild irritant..

Ingestion: With substantial and/or long term ingestion of the as-received product, possible delayed blood clotting, sensitivity to heat, skin itching, increased odor and taste awareness, and liver damage.

Carcinogenicity: IARC, NTP, and OSHA do not list PR-10,000 Phosphate Remover or its components as carcinogens.

Medical Conditions Aggravated by Long-Term Exposure: None known.

Chronic Effects: There are no known chronic effects except as indicated above under Acute Effects.

HMIS	
H	1
F	0
R	0
PPE†	
†Sec. 8	

Section 4 - First Aid Measures

Inhalation: In the improbable event of product inhalation, remove the affected individual to fresh air and provide fresh air or artificial respiration as required. Obtain medical attention.

Eye Contact: Flush thoroughly with water for five minutes and obtain medical attention if irritation of eye membranes persists.

Skin Contact: Wash contacted areas with soap and water, apply emollient skin cream to minimize dryness and seek medical attention if irritation persists..

Ingestion: Drink several glasses of water. Obtain medical attention.

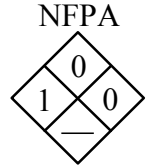
After first aid, get appropriate in-plant, paramedic, or community medical support if exposure symptoms persist.

Note to Physicians: Under normal use and human exposure conditions, the product is considered nontoxic and nonhazardous.

Special Precautions/Procedures: None.

Section 5 - Fire-Fighting Measures

Flash Point: None.
Flash Point Method: N/A
Burning Rate: N/A
Autoignition Temperature: N/A
LEL: N/A
UEL: N/A



Flammability Classification: Nonflammable.

Extinguishing Media: N/A

Unusual Fire or Explosion Hazards: None.

Hazardous Combustion Products: Thermal oxidative decomposition of the product may release toxic fumes of hydrogen chloride and metal oxide.

Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode.

Section 6 - Accidental Release Measures

Spill /Leak Procedures:

Small & Large Spills

Containment: For all spills, pick up mechanically and place in suitable container for disposal. Do not release into sewers or waterways.

Cleanup: After product recovery and removal, flush spill area with water to a sanitary sewer.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Wear appropriate eye and glove protection to minimize personal exposure.

Storage Requirements: Do not store with oxidizing materials. Keep containers sealed.

Regulatory Requirements: None established.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls:

Ventilation: In the event of product misting, provide general or local exhaust ventilation systems to minimize airborne concentrations. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls:

Respiratory Protection: If product misting occurs, follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. . If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Protective Clothing/Equipment: Wear chemically protective gloves to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove material from your shoes and clean personal protective equipment after use.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics. **KEEP AWAY FROM CHILDREN.**

Section 9 - Physical and Chemical Properties

Physical State: Liquid.

Appearance and Odor: Clear, colorless with no discernable odor.

Odor Threshold: N/A

Vapor Pressure: Not determined.

Vapor Density (Air=1): >1.0.

Formula Weight: N/A

Density: 12.25 lbs./gallon

Specific Gravity (H₂O=1, at 4 °C): 1.47

pH: 3.5 – 4.0

Water Solubility: Completely soluble.

Other Solubilities: Not soluble in hydrocarbons.

Boiling Point: ~ 230°F

Freezing Point: ~20°F (Typical).

Viscosity: ~ 20 cPs

Refractive Index: N/A

Surface Tension: N/A

% Volatile: N/A

Evaporation Rate: N/A

Section 10 - Stability and Reactivity

Stability: PR-10,000 Phosphate Remover is stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: Do not store with oxidizers or acidic agents.

Conditions to Avoid: Do not use as-received product with stainless steel storage containers or equipment – chloride corrosion will occur.

Hazardous Decomposition Products: Thermal oxidative decomposition of PR-10,000 Phosphate Remover can produce fumes of hydrogen chloride and lanthanum oxide.

Section 11- Toxicological Information

Toxicity Data:

Eye Effects: As received, irritation of eye membranes.

Acute Inhalation Effects:

Human, inhalation, TC_{LO}: Not established.

Skin Effects: As received, irritating effect.

Acute Oral Effects:

Rat, oral, LD₅₀: 4200 kg (as 100% LaCl₃).

Ingestion: As received, possible delayed blood clotting, sensitivity to heat, increased taste sensitivity, and liver damage with substantial ingestion.

Chronic Effects: None known.

Carcinogenicity: None known.

Mutagenicity: None known.

Teratogenicity: None known.

Section 12 - Ecological Information

Ecotoxicity: Specific data not established.

Environmental Fate

Environmental Transport: Water or soil.

Environmental Degradation: Not established.

Soil Absorption/Mobility: Not established.

Section 13 - Disposal Considerations

Disposal: Contact Orenda Technologies, Inc., your local supplier or a licensed contractor for detailed recommendations.

Recovered spilled product may be disposed of by either landfill or incineration. Follow applicable Federal, state, and local regulations.

Disposal Regulatory Requirements: None.

Container Cleaning and Disposal: Thoroughly clean empty containers with water and recycle. Do not use empty containers for food storage.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Chemicals,
NOS (Non-regulated).
Shipping Symbols: None.
Hazard Class: Nonhazardous.
ID No.: None.
Packing Group: N/A
Label: None.
Special Provisions (172.102):
None.

Packaging Authorizations
a) Exceptions: N/A
b) Non-bulk Packaging: N/A
c) Bulk Packaging: N/A

Quantity Limitations
a) Passenger, Aircraft, or Railcar: None.
b) Cargo Aircraft Only: None.

Vessel Stowage Requirements
a) Vessel Stowage: None.
b) Other: N/A

Section 15 - Regulatory Information

EPA Regulations:

RCRA Hazardous Waste Number: Not listed (40 CFR 261.33)
RCRA Hazardous Waste Classification (40 CFR 261): Not classified
CERCLA Hazardous Substance (40 CFR 302.4) unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4); CWA, Sec. 307(a), CAA, Sec. 112
CERCLA Reportable Quantity (RQ): None.
SARA 311/312 Codes: None.
SARA Toxic Chemical (40 CFR 372.65): Not listed
SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed, Threshold Planning Quantity (TPQ)

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed
OSHA Specifically Regulated Substance (29CFR 1910): Not listed.

State Regulations: None.

Section 16 - Other Information

Prepared By: R. J. Kersey

Revision Notes: November 2007

Additional Hazard Rating Systems: None.

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