

Material Safety Data Sheet

[Health: 2] [Flammability: 0] [Reactivity: 0]

Product Name: Enviroklean Plus

Revision Date: 09/10/10

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OSHA HAZARD CLASSIFICATIONS: Not Corrosive to eyes or skin. Avoid inhalation of mists or vapors.

HAZARDOUS COMPONENTS:

| <u>Chemical Name</u> | <u>CAS Number</u> | <u>% by Weight</u> | <u>Exposure Limits</u> |
|----------------------|-------------------|--------------------|---|
| Citric Acid | 77-92-9 | Conf | Non Established |
| Ammonium Bifluoride | 1341-49-7 | Conf | No Data |
| Hydrochloric Acid | 7647-01-0 | 5.79% | OSHA, TWA ceiling 5 ppm ACGIH, TWA ceiling 5 ppm |

The remainder of the components comprise proprietary information.

PRECAUTIONARY LABEL INFORMATION AS PRESCRIBED BY THE US. EPA: This section not applicable to non-biocides.

FIRST AID INFORMATION:

Eye exposure: Flush immediately with copious amounts of tap water or normal saline (minimum of 15 minutes). Take exposed individual to a health care professional, preferably an ophthalmologist, for further evaluation.

Skin exposure: Wash exposed area with plenty of soap and water. Repeat washing. Remove contaminated clothing and wash thoroughly before reuse. If irritation persists consult a health care professional.

Inhalation: If exposure by inhalation is suspected, immediately move exposed individual to fresh air. If individual experiences nausea, headache, dizziness, has difficulty in breathing or is cyanotic, seek a health care professional immediately.

Ingestion: DO NOT INDUCE VOMITING. Rinse with copious amounts of water or milk, first. Irrigate the esophagus and dilute stomach contents by slowly giving one (1) to two (2) glasses of water or milk. Avoid giving alcohol or alcohol related products. In cases where the individual is semi-comatose, comatose or convulsing, DO NOT GIVE FLUIDS BY MOUTH. In case of intentional ingestion of the product seek medical assistance immediately; take individual to nearest medical facility.

NOTE TO PHYSICIAN: No specific antidote is known. Probable mucosal damage may contraindicate the use of gastric lavage. Treat symptoms.

PRIMARY ROUTES OF EXPOSURE:

1. Effects from Acute Exposure:

Eye exposure: Not corrosive. May cause irritation. Effects may range from moderate to severe, depending on the length of exposure & first aid measures.

Skin exposure: May cause dermal irritation. Moderate to severe skin irritation depending on length of exposure and first aid measures.

Inhalation: May cause irritation of mucous membranes & the lungs. Exposed individuals should be monitored for respiratory distress, bronchitis or pneumonia.

Ingestion: Ingestion is not expected to be a primary route of exposure.

2. Effects from Chronic Exposure: The effects from chronic exposure to this product have not been fully evaluated.

TOXICOLOGICAL INFORMATION:

Acute effects: Not tested, but expected to be hazardous by ingestion, inhalation or dermal exposure based on components.

Irritant effects: May cause irritation to eyes and skin.

Sensitization effects: Not tested but none expected.

Carcinogenic potential: Not listed in any of OSHA Standard, Section 1910.1200 sources as carcinogenic.

Target Organ Effects: Skin and eyes (irritation) are expected to be the primary target organs of this product.

PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: clear, yellow/green liquid

Flash Point: none tcc

Solubility: soluble in water

Vapor Pressure: N/T

Note: N/A = Not Applicable, N/T = Not Tested

Odor: Acidic / Soapy odor

Freezing Point 32 °F

Ph: 2 - 3

o/w Partition Coefficient: N/T

Density: @ 25°C 1.12 g/mL

Boiling Point: 212 °F

Ph: (100 ppm in water): 2 - 3

Oxidizing/Reducing Properties: N/T

FIRE AND EXPLOSION INFORMATION:

Flammable limits: None

Extinguishing media: Water fog, carbon dioxide, foam, dry chemical

Special firefighting procedures: Self contained breathing apparatus and full body protective clothing. Water spray may be used to cool containers.

REACTIVITY INFORMATION:

Stability: Stable under ordinary conditions of use and storage.

Incompatibility: Avoid contact with substances incompatible with hydrochloric acid. Soft metals, nylon, and rayon. May react with soft metals to form highly flammable hydrogen gas.

HANDLING PRECAUTIONS:

Eye wash fountains in the work place are strongly recommended. If splashing can occur, a face shield is advisable. Rubber gloves, indirect ventilation goggles, body-protective clothing, and rubber safety shoes are recommended. If misting can occur, a NIOSH approved respirator is recommended. A comprehensive respiratory protection program is needed when respirators must be used.

SATISFACTORY MATERIALS OF CONSTRUCTION:

Tested Satisfactory Materials

Teflon., Polypropylene, Buna-N rubber, Viton, Polyethylene - low density, PVC-Rigid, Polyethylene - high density, Butyl rubber, Polyethylene . crosslink, ABS (Plastic)

NOTE: With respect to all other materials not listed above, user should be aware that use of such materials with **Enviroklean Plus** may be hazardous and result in damages to such materials and other property and personal injuries. (Data concerning such materials not listed above should be implied by the user.)

SPILL, LEAK, AND DISPOSAL PROCEDURES:

SPILL AND LEAK RESPONSE GUIDELINES: Important: Before responding to a spill or leak of this product, review each section of this MSDS. Follow the recommendations given in the Handling Precautions sections. Check the Fire and Explosion Data section to determine if the use of non-sparking tools is merited. Insure that spilled or leaked product does not come into contact with materials listed as incompatible. If irritating fumes are present, consider evacuation of enclosed areas. **Emergency Response Assistance:** Emergency technical assistance is available at any time from Enviroklean Product Development, Inc., by calling **(800) 255-3924**. Initially minimize area affected by the spill or leak. Enviroklean Product Development, Inc., can be contacted for technical assistance. Determine if federal, state, and/or local release notification is required (see Regulatory Classifications section of this MSDS). Recover as much of the pure product as possible into appropriate containers. Later, determine if this recovered product can be used for its intended purpose. Address clean-up of contaminated environments. Spill or leak residuals may have to be collected and disposed of. Clay, lime, soda ash, sodium bicarbonate, or commercially available absorbents may be used to recover any material that can not readily be recovered as pure product. Flushing residual material to an industrial sewer, if present at the site of a spill or leak incident, may be acceptable if authorized approval is obtained. If product and/or spill/leak residuals are flushed to an industrial sewer, insure that they do not come into contact with incompatible materials. Contact the person(s) responsible for the operation of your facility's industrial sewer system prior to intentionally flushing or pumping spills or leaks of this product to the industrial sewer.

DISPOSAL GUIDELINES: Note: Follow federal, state, and local regulations governing the disposal of waste materials. Neat Product: Contact your EPDI representative or Enviroklean Product Development Company, Inc., at (281) 894-6500. **Contaminated Materials:** Determine if waste containing this product can be handled by available industrial effluent system or other on-site waste management unit. If off-site management is required, contact a company experienced in industrial waste management. This product is not specifically listed in 40 CFR 261 as a Resource Conservation and Recovery Act (RCRA) hazardous waste. However, spill or leak residuals may meet the criteria of a characteristic hazardous waste under this Act. Check the characteristics of the material to be disposed of and/or the physical and reactivity data given in this MSDS for the neat product. **Container Disposal:** Empty containers, as defined by appropriate sections of the RCRA, are not RCRA hazardous wastes. However, insure proper management of any residuals remaining in container.

TRANSPORTATION AND SHIPPING INFORMATION:

DOT Shipping Name: SEMI-CORROSIVE LIQUID, N.O.S., (Hydrochloric acid,), 8, UN 1789, PG III (ERG GUIDE 60)

The shipping name listed above applies only to a 55 gallon drum of the product. This product may have more than one proper shipping name, depending on packaging, product properties, and mode of shipment. All products shipped from EPDI locations have been properly packaged and labeled according to appropriate hazardous shipping regulations that apply for that particular shipment. If any alteration of packaging, product, or mode of transportation is further intended, different shipping names and labeling may apply. If there are any questions pertaining to hazardous shipping requirements, contact the transportation department for further details.

REGULATORY INFORMATION:

The following Regulations are known to apply to the use & disposal of this product. Additional Federal, State & Local regulations may also be applicable. **SARA (Superfund Amendments and Reauthorization Act): SARA 302 Extremely Hazardous Substances List:** The following components are listed on the SARA 302 Extremely Hazardous Substances List: Hydrochloric acid, TPQ = 5,000. **This Product Contains Only 9% HCL. SARA 312 Hazard Category:** Immediate (Acute) Health Hazard. **SARA 313 Toxic Chemicals List:** The following components are listed on the SARA 313 Toxic Substances List (may be listed as categories): Hydrochloric acid. **CERCLA (Comprehensive Environmental Response, Compensation and Liability Act):** The following components are listed on the CERCLA Hazardous Substances List (may be listed as categories): Hydrochloric acid, RQ = 5,000. **This Product Contains Only 9% HCL.. RCRA (Resource Conservation and Recovery Act) Listed Hazardous**

Wastes: The following components are RCRA listed or characteristic hazardous wastes: Hydrochloric acid. **CWA (Clean Water Act) Listed Substances:** No components of this product are listed. **FDA (Food and Drug Administration):** This product not approved for food contact uses. **TSCA (Toxic Substances Control Act) Applicability:** All components are listed on TSCA Inventory. **FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act):** This product is not a registered pesticide. **HMIS/NPCA Ratings:** Health 1; Flammability 0; Reactivity 1. **NFPA Ratings:** Health 1; Flammability 0; Reactivity 1. **STATE REGULATIONS/Various State Right to Know Acts:** Non-proprietary hazardous chemicals are listed in Section 2 of this MSDS. Should you require further information on specific proprietary chemicals or inerts please contact Enviroklean Product Development, Inc., Regulatory Affairs Department.

The information on this Material Safety Data Sheet reflects the latest information and data that we have on hazards, properties, and handling of this product under the recommended conditions of use. Any use of this product or method of application which is not described in the Product Data Sheet is the responsibility of the user. This Material Safety Data Sheet was prepared to comply with the OSHA Hazard Communication regulations.

Enviroklean Product Development, Inc. warrants that this product conforms to its chemical description and is reasonably fit for the purpose referred to in the directions for use when used in accordance with the directions under normal conditions. Buyer assumes the risk of any use contrary to such directions. Seller makes no other warranty or representation of any kind, express or implied, concerning the product, including **NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS OF THE GOODS FOR ANY OTHER PARTICULAR PURPOSE**. No such warranties shall be implied by law and no agent of seller is authorized to alter this warranty in any way except in writing with a specific reference to this warranty.

The exclusive remedy against seller shall be a claim for damages not to exceed the purchase price of the product, without regard to whether such a claim is based upon breach of warranty or tort.

Any controversy or claim arising out of or relating to this contract, or breach thereof, shall be settled by arbitration in accordance with the commercial arbitration rules of the American Arbitration Association, and judgment upon the award rendered by the Arbitrator(s) may be entered in any court having jurisdiction thereof.