

970 ALUMINUM CLEANER**SECTION I - PRODUCT IDENTIFICATION**

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PRODUCT NAME: 970 ALUMINUM CLEANER

01/08

SECTION II - HAZARDOUS INGREDIENTS

NOTE: Any Diedrich product's hazardous acidic ingredients are in water diluted form not in pure concentrated acidic form. This product contains less than 20% Hydrofluoric Acid(HF) reduced of a 45% by more then 70% water and buffered by a surfactant wetting agent.

CHEMICAL NAME	CAS NO.	NFPA CODE	TLV	PEL
Hydrofluoric Acid	7664-39-3	3/0/0/-	3 ppm	STEL 6 ppm TWA 3 ppm
Orthophosphoric Acid	7664-38-2	2/0/0/-	1mg/m ³	STEL 6 ppm TWA 1 mg/m ³

SPECIFIC CHEMICAL IDENTITY AND PERCENTAGE CONTENT OF INGREDIENTS WITHHELD AS TRADE SECRET PURSUANT TO MASSACHUSETTS REGULATIONS. REPORTING REQUIREMENTS OF SECTION 313 TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 10 CFR PART 373 APPLY.

SECTION III - PHYSICAL DATA

BOILING POINT (°F): est. 210°F **SPECIFIC GRAVITY (H₂O=1):** 1.09
VAPOR PRESSURE (mmHg): 52 @ 0°C **% VOLATILE (by weight):** 98.3%
VAPOR DENSITY (Air=1): 1.0 @ 105°F **EVAPORATION RATE (Ether=1):** 1.02
SOLUBILITY IN WATER: Complete **APPEARANCE AND ODOR:** Clear liquid with sharp acid smell

VOLATILE ORGANIC COMPONENTS: N/A **pH:** < 1

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: Non Flammable **FLAMMABLE LIMITS:** LEL & UEL - N/A
EXTINGUISHING MEDIA: Dry chemical or carbon dioxide
SPECIAL FIRE FIGHTING PROCEDURES: Hydrogen chloride gas may be released from vented or ruptured containers. Heat is generated when water is added with the possibility of spattering. Use water to keep containers exposed to fire cool until fire is extinguished. Water and foam may cause a violent reaction if sprayed on melting, burning containers, endangering fire fighters. Full protective equipment and SCBA is recommended
UNUSUAL FIRE AND EXPLOSION HAZARDS: Possible formation of hydrogen gas caused by contact with metals which can when mixed with air be explosive.



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SECTION V - HEALTH HAZARD DATA

PRIMARY ROUTES OF EXPOSURE: Inhalation, skin, eyes, ingestion.

CARCINOGENS: No/None. (OSHA, IARC, NTP).

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: No applicable information found.

EFFECTS OF OVEREXPOSURE: Liquid and vapor can cause severe burns to eyes, skin, respiratory and gastrointestinal tracks, can cause pulmonary edema. Burns may not be painful or visible immediately and symptoms may last eight or more hours.

CHRONIC EFFECTS: Contact with diluted solutions may not be immediately painful or show visible effects for hours after contact. During this time the product will have penetrated the skin resulting possibly in tissue damage, or the developing of skin ulcers. The product causes severe irritation and will penetrate skin readily, attacking underlying tissue and bones. Resulting burns heal slowly. Exposure in any form may lead to secondary hypocalcemia; delay in treatment may result in death.

EYE CONTACT: Product's vapor, liquid and mists are extremely corrosive to the eyes. Minor or brief contact with vapors will cause irritation. Brief contact with liquid or mist may cause severe damage to the eyes, and extended contact can cause permanent injury to the eye and even blindness.

SKIN CONTACT: Product's vapor, liquid and mists are extremely corrosive to skin. Contact with vapors will cause severe irritation to the skin. Contact with liquid and mists will cause severe burns to the skin. Prolonged contact with liquid will cause burns and destroy tissue. Burns that extend over large percentage of the body can result in death.

INHALATION: Product's vapor, liquid and mist are extremely corrosive to nose, throat, and mucous membranes.. Bronchitis, pulmonary edema, and chemical pneumonitis may result. Brief exposure may result in difficulty breathing, irritation, coughing and chest pains. Severe irritation and tissue damage can result from extended periods of exposure. Death can occur from breathing high concentrations.

INGESTION: Product's vapor, mist and liquid are extremely corrosive to mouth and throat. If swallowed the liquid will cause burns to tissue and extreme abdominal pain, nausea, vomiting and collapse. If large quantities are swallowed, death can result.

EMERGENCY AND FIRST AID PROCEDURES:

EYE CONTACT: Flush eyes immediately with plenty of water for a minimum of 30 minutes. Lift both upper and lower eyelids periodically. Seek immediate medical attention. NOTE: Zephtrin Chloride Solution MUST NOT be used on the eyes.

SKIN CONTACT: Flush immediately with cold water for minimum of 15 minutes and remove contaminated clothing. FOR MINOR BURNS - Apply magnesia paste (magnesium oxide and glycerine) or aloe to burn area on skin. EMERGENCY ROOM TREATMENT - Soak exposed area or apply saturated compresses with a solution of Zephtrin Chloride (1:750) or apply a 70% iced solution of Isopropyl Alcohol. If hands are contaminated particular attention must be paid to skin under fingernails. If immersion of contaminated area is not possible, saturated compresses can be substituted. Compresses should be changed every two minutes. Calcium chloride solution can be injected at affected area to neutralize hydrofluoric acid and reduce swelling. Get medical attention in the event of contact or suspicion of contact.

INHALATION: Remove to fresh air immediately. If breathing difficulty is experienced give oxygen. If not breathing give artificial respiration. Do not use mouth to mouth.

INGESTION: DO NOT INDUCE VOMITING! Immediately give large quantities of water. Give one ounce of magnesia or alumina gel in equal amount of water immediately. Never give an unconscious person anything by mouth. Contact physician immediately.

SECTION VI - REACTIVITY DATA

STABILITY: Stable.

CONDITIONS TO AVOID: No applicable information found.

INCOMPATIBILITY (Material to Avoid): Alkaline materials, metals, oxidizing materials, cyanides, sulfides, combustible materials, organic peroxides, strong reducing agents, carbides, chlorates, nitrates, picrates, fulminates.

HAZARDOUS/THERMAL DECOMPOSITION PRODUCTS: Contact with metal can produce carbon dioxide, carbon monoxide and hydrogen. Release of sulfur dioxide, hydrogen cyanide and hydrogen sulfide is possible.

SECTION VII - SPILL OR LEAK PROCEDURES

SPILL, LEAK AND WASTE DISPOSAL PROCEDURES:

SMALL DRIPS, LEAKS OR SPILLS:

Soak, wipe up and dispose of in approved waste containers.

LARGE SPILLS:

Dike with absorbent material and carefully neutralize with alkali, soda ash, lime or limestone. Adequate ventilation required if soda ash or limestone is used due to release of carbon dioxide gas. Prevent unneutralized material from entering drains, sewers, waterways or soil. Applicable government regulations regarding spill reporting handling and waste disposal must be complied with.

WASTE DISPOSAL METHODS:

Contaminated product and materials used in cleanup must be placed in approved containers and disposed of in accordance with federal, state and local regulations.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

Use NIOSH/MSHA approved dust/mist filter respirator for routine work purposes when exposure exceed the permissible exposure limits. The respirator use limitations made by NIOSH/MSHA or the manufacturer must be observed.

VENTILATION:

Local Exhaust - Sufficient to maintain exposure to levels below permissible exposure limits. If mechanical exhaust is required it should be of the steel or plastic fan type.

PROTECTIVE CLOTHING:

Protect all body parts from contact by using full acid resistant suit with tight fitting cuffs and collar, rubber boots and head protection.

PROTECTIVE GLOVES:

Neoprene - butyl rubber - PVC - polyethylene.

EYE PROTECTION:

Close fitting safety chemical goggles and full face shield.



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OTHER PROTECTIVE EQUIPMENT:

Apply Diedrich recommended skin barrier cream for additional protection. Safety shower and eyewash or fresh running water close at hand and ready for use.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

Freezes at about 32°F, and keep containers below 120°F. Do not store in metal container. Do not handle container without personal protection. Add cautiously to cool water to dilute (heat is evolved). Avoid open containers. Store away from incompatible material.

OTHER PRECAUTIONS:

Do not store in or pipe through anything metallic, use only polylined steel or approved plastic. Keep containers tightly sealed. Do not cut puncture or weld on or near this container. Do not re-use container for any purpose until it has been commercially cleaned. Keep container closed when not in use.

LEGENDS:

0 = LEAST 1 = SLIGHT 2 = MODERATE 3 = HIGH 4 = EXTREME
N.D. = NOT DETERMINED N.A. = NOT AVAILABLE N/A = NOT APPLICABLE

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