

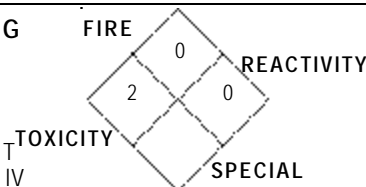


**KLEENCO**  
FOR QUALITY, VALUE AND PERFORMANCE

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TELEPHONE NUMBER  
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For Emergency Assistance  
Call Infotrac (800) 535-5053

**HAZARD RATING**  
4 = EXTREME  
3 = HIGH  
2 = MODERATE  
1 = SLIGHT  
0 = INSIGNIFICANT  
\* = SEE SECTION IV



# MATERIAL SAFETY DATA SHEET

PRODUCT NAME <b>RUST-OUT</b>	DATE ISSUED 07-18-95	CODE	DOT HAZARD
FORMULA Proprietary	PREPARED BY Dale R. Silbaugh	008-0120	Corrosive NA-1760
CHEMICAL NAMES AND OR SYNONYMS Compound Cleaning Liquid			

## I - COMPOSITIONAL INFORMATION/SARA III INFORMATION

INGREDIENTS	CAS NUMBER	OCCUPATION EXPOSURE OSHA PEL	EXPOSURE ACGIH TLV	LIMITS OTHER	VAPOR mm Hg	PRESSURE @ TEMP	WEIGHT PERCENT
* Hydrofluoric Acid 70%	7664-39-3	3PPM	3PPM	None	130.0	68°F	13.0%

\*Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and 40 CFR 342. **NOTE:** The precise composition of this mixture is proprietary. A more complete description will be provided to a physician in the event of a medical emergency.

## II - PHYSICAL PROPERTY INFORMATION

APPEARANCE and ODOR Water thin, clear liquid			
MELTING POINT Not Applicable	BOILING POINT Not Available	COATING V.O.C. Not Applicable	EVAPORATION RATE Not Applicable
SOLUBILITY IN WATER Complete	SPECIFIC GRAVITY (Water = 1) 1.0	VAPOR DENSITY Not Applicable	

## III - FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT Not Applicable	AUTO IGNITION TEMPERATURE Not Applicable	LOWER EXPLOSION LIMIT (%) Not Applicable	UPPER EXPLOSION LIMIT (%) Not Applicable
EXTINGUISHING MEDIA <input checked="" type="checkbox"/> FOAM <input checked="" type="checkbox"/> CO <sub>2</sub> <input checked="" type="checkbox"/> DRY CHEMICAL <input checked="" type="checkbox"/> WATER SPRAY <input type="checkbox"/> OTHER			
SPECIAL FIRE FIGHTING PROCEDURES For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of normal products of combustion or oxygen deficiency. Read the entire MSDS.			
UNUSUAL FIRE AND EXPLOSION HAZARDS Extinguish all nearby sources of ignition since flammable hydrogen gas will be liberated from contact with some metals.			

## IV - HEALTH HAZARD INFORMATION

THRESHOLD LIMIT VALUE Not Established	ROUTE(S) OF ENTRY: <input checked="" type="checkbox"/> INHALATION See Health Hazards	<input checked="" type="checkbox"/> SKIN See Health Hazards	<input checked="" type="checkbox"/> INGESTION See Health Hazards
HEALTH HAZARDS (Acute and Chronic) CHRONIC EFFECTS OF EXPOSURE for Hydrofluoric Acid: Dilute solutions may not be painful or show visible effects until hours after skin exposure, during which time the acid has penetrated the skin causing possible destruction of tissue and development of skin ulcers. This acid is extremely irritating and readily penetrates the skin to attack underlying tissue and bone and its burns are slow to heal. Any form of exposure may cause secondary hypocalcemia; If treatment is delayed death may result. May also produce gangrene or cause fluorosis. *See Section 1X.			
CARCINOGENICITY: Not considered to be a carcinogen <input type="checkbox"/> NTP <input type="checkbox"/> IARC Monographs <input checked="" type="checkbox"/> OSHA Regulated			
SIGNS AND SYMPTOMS OF EXPOSURE INHALATION: Vapors and mists are extremely corrosive to the nose, throat, and mucous membranes. Bronchitis, pulmonary edema, and chemical pneumonitis may occur. Irritation, coughing, chest pain, and difficulty in breathing may occur with brief exposure while prolonged exposure may result in more severe irritation and tissue damage. SKIN CONTACT: Vapors, mists, and liquid are extremely corrosive to the skin. Vapors will severely irritate the skin and liquid and mists will severely burn the skin. Prolonged liquid contact will burn or destroy surrounding tissue. Solutions as dilute as 2% or less of Hydrofluoric acid may cause burns. SWALLOWED: Vapors, mists, and liquid are extremely corrosive to the mouth and throat. Swallowing the liquid burns the tissues, causes severe abdominal pain, nausea, vomiting, and collapse. Swallowing large quantities can cause death.			
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE Persons with preexisting dermatitis may be more susceptible to the effects of this material.			
EMERGENCY AND FIRST AID PROCEDURES EYES: If this chemical contacts the eyes, immediately wash the eyes with large amounts of water, occasionally lifting the lower and upper lids. Get medical attention immediately. Contact lenses should not be worn when working with this chemical. SKIN: If this chemical contacts the skin, immediately flush the contaminated skin with water. If this chemical penetrates the clothing, immediately remove the clothing and flush the skin with water. Get medical attention promptly. INHALATION: If a person breathes large amounts of this chemical, move the exposed person to fresh air at once. If breathing has stopped, perform mouth-to-mouth resuscitation. Keep the affected person warm and at rest. Get medical attention as soon as possible. INGESTION: If this chemical has been swallowed, get medical attention immediately.			

## V - REACTIVITY INFORMATION

<input checked="" type="checkbox"/> STABLE	<input type="checkbox"/> UNSTABLE	CONDITIONS TO AVOID Excessive heat and contamination of any kind.	
HAZARDOUS DECOMPOSITION PRODUCTS May liberate HF.			
HAZARDOUS POLYMERIZATION	<input type="checkbox"/> MAY OCCUR	<input checked="" type="checkbox"/> WILL NOT OCCUR	CONDITIONS TO AVOID Not Applicable
INCOMPATIBILITY (Materials to avoid) Strong alkalis at high temperatures, strong acids and strong oxidizers			

## VI - SPILL OR LEAK PROCEDURE INFORMATION

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Stop the source of leak or release. Clean up releases as soon as possible, observing precautions is Special Protective Information. Contain liquid to prevent further contamination of soil, surface water or groundwater. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Follow prescribed procedures for reporting and responding to larger releases.
WASTE DISPOSAL METHODS Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental authorities for approved disposal of this material.

## VII - SPECIAL PROTECTION INFORMATION

VENTILATION TYPE Local mechanical exhaust ventilation, capable of maintaining emissions at the point of use below the PEL.	
RESPIRATORY PROTECTION Wear a NIOSH-Approved respirator, appropriate for the concentration of vapor or mist encountered at the point of use.	
PROTECTIVE GLOVES Impervious	EYE PROTECTION Wear eye protection to prevent any possibility of eye contact.
OTHER PROTECTIVE EQUIPMENT Wear appropriate equipment to prevent any possibility of skin contact.	

## VIII - STORAGE AND HANDLING INFORMATION

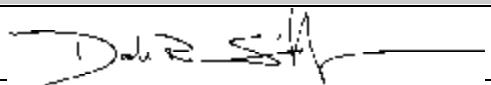
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE Keep out of reach of children. Store in a cool dry place away from incompatible materials. Keep container tightly closed when not in use. Workers should wash immediately when skin becomes contaminated. Remove clothing immediately if it is non-impervious clothing that becomes contaminated. The following equipment should be available: Eyewash, quick drench. It is generally recognized that contact lenses should not be worn when working with chemicals because contact lenses may contribute to the severity of the injury.
OTHER PRECAUTIONS Read and follow label instructions. The label contains information necessary for the proper use of the product. Containers, even those that have been emptied, will retain product residue and vapors. Always obey hazard warnings and handle empty containers as if they were full. Prohibit smoking, flames and sparks near HF storage areas.

## IX - TOXICITY INFORMATION

*HEALTH HAZARDS for Propylene Glycol n-Butyl Ether. INHALATION: Excessive exposure may cause irritation to upper respiratory tract. A single prolonged (hours) excessive inhalation exposure may cause adverse effects. Signs and symptoms of excessive exposure may be central nervous system effects. EYE CONTACT: May cause moderate eye irritation. May cause moderate corneal injury. SKIN CONTACT: Prolonged or repeated exposure may cause skin irritation. SKIN ABSORPTION: A single prolonged exposure may result in the material being absorbed in harmful amounts. The LD50 for skin absorption in rabbits is 1400 mg/kg. The liquid is reported to cause a burning sensation and itchiness at site of contact. Exposure to large amounts may produce anesthetic or narcotic effects. INGESTION: Single dose oral toxicity is low. The oral LD50 for rats is 3300 mg/kg. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury. SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Observations in animals include only increase liver size following repeated exposure. TERATOLOGY (BIRTH DEFECTS): Birth defects are unlikely. Exposures having no adverse effects on the mother should have no effect on the fetus. REPRODUCTIVE EFFECTS: In animal studies, has been shown not to interfere with reproduction. MUTAGENICITY (EFFECTS ON GENETIC MATERIAL): Results of in vitro ('test tube') mutagenicity tests have been negative.
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## X - MISCELLANEOUS INFORMATION

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and the removal of the material from eyes, skin and clothing.
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PRODUCT CODE 008-0120	NA = NOT AVAILABLE	DATE OF ISSUE 07-18-95	SUPERSEDES Any previous MSDS	SIGNED 
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