

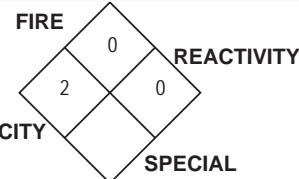


KLEENCO[®]
FOR QUALITY, VALUE AND PERFORMANCE

KLEENCO PRODUCTS, INC.
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TELEPHONE NUMBER
Reg. Phone
206-641-8888
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 BRIGHTEN-UP 2	DATE ISSUED 04-27-93	CODE	DOT HAZARD
	PREPARED BY Dale R. Silbaugh	022-0245	Corrosive NA-1760
FORMULA Proprietary	CHEMICAL NAMES AND OR SYNONYMS Compound Cleaning Liquid		

I - COMPOSITIONAL INFORMATION/SARA III INFORMATION

INGREDIENTS	CAS NUMBER	OCCUPATION EXPOSURE LIMITS			VAPOR PRESSURE mm Hg @ TEMP	WEIGHT PERCENT
		OSHA PEL	ACGIH TLV	OTHER		
* Hydrofluoric Acid 70%	7664-39-3	3 PPM	3 PPM	None	130.0 68°F	17.0%
* Sulfuric Acid	7664-39-3	1 MG/M3	1 MG/M3	1 MG/M3	Not Applicable	10.0%

*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 Slightly viscous, 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) 1.1	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 ₂ <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 pre-existing 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

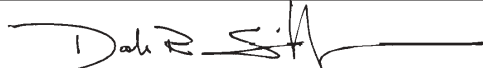
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE Keep out of reach of children. Store in a cool dry place away from incompatible materials. Keep container tightly closed when not in use. Workers should wash immediately when skin becomes contaminated. Remove clothing immediately if it is non-impervious 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 Sulfuric Acid: 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. Breathing high concentrations may result in death. EYE CONTACT: Vapors, liquid and mists are extremely corrosive to the eyes. Brief contact of the vapors will be severely irritating. Brief contact of the liquid or mists will severely damage the eyes and prolonged contact may cause permanent eye injury which may be followed by blindness. SKIN CONTACT: Vapors, mists, and liquid are extremely corrosive to the skin. Vapors will severely burn the skin. Prolonged liquid contact will burn or destroy surrounding tissue and death may accompany burns which extend over large portions of the body. 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. CHRONIC EFFECTS OF EXPOSURE: May cause erosion of the teeth, lesions on the skin, bronchial irritation, coughing, and pneumonia. MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Acute and chronic respiratory diseases.	
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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 022-0245	NA = NOT AVAILABLE	DATE OF ISSUE 04-27-93	SUPERSEDES Any Previous MSDS	SIGNED 
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