

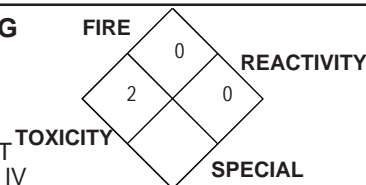


**KLEENCO**<sup>®</sup>  
FOR QUALITY, VALUE AND PERFORMANCE

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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>DESCALE</b>	DATE ISSUED 04-28-93	CODE	DOT HAZARD
	PREPARED BY Dale R. Silbaugh	024-0035	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		
*Hydrochloric Acid 20°	7647-01-0	5 PPM	5 PPM	None	30.0 68°F	8.0

\*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, red 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 Hydrochloric Acid: May result in areas of destruction of skin tissue or primary irritant dermatitis. Similarly, inhalation of vapors or mists may cause varying degrees of damage to the affected tissues and also increasing susceptibility to respiratory illness.			
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 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 irritate the skin and liquid and mists 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.			
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE None Known			
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	None
HAZARDOUS DECOMPOSITION PRODUCTS May liberate Hydrogen Chloride			
HAZARDOUS POLYMERIZATION	<input type="checkbox"/> MAY OCCUR	<input checked="" type="checkbox"/> WILL NOT OCCUR	CONDITIONS TO AVOID Not Applicable
INCOMPATIBILITY (Materials to avoid) Alkalis, oxidizing or reducing materials, cyanides, sulfides, or combustible materials, keep away from formaldehyde since there are reports that bis-chloromethyl ether, a potential carcinogen, may be formed. Also keep away from amines, vinyl acetate, propylene oxide, beta-propiolactone, and metal oxides.			

## 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 with solutions having a pH <3 and repeated or prolonged skin contact with solutions having a pH >3.		

## VIII - STORAGE AND HANDLING INFORMATION

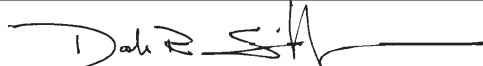
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE	Keep out of reach of children. Store in a cool dry place away from incompatible materials. Keep container tightly closed when not in use. Workers should wash immediately when skin becomes contaminated with liquid of pH <3 and promptly when skin becomes wet with liquid of pH >3. Remove clothing immediately if it is non-impervious clothing that becomes contaminated with liquid of pH <3 and promptly if clothing is contaminated with liquid of pH >3. The following equipment should be available: Eyewash. Quick drench for liquids with pH <3. 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.

## IX - TOXICITY INFORMATION

On the basis of available information this material does not appear to possess any toxicological properties which would require special handling other than good industrial hygiene and safety practices employed with any industrial chemical.
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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	NA = NOT AVAILABLE	DATE OF ISSUE	SUPERSEDES	SIGNED
024-0035		04-28-93	Any previous MSDS	

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