

**KEMTEC
EDUCATIONAL
CORPORATION**

MATERIAL SAFETY DATA SHEET

8944 Beckett Rd.
West Chester, OH, 45069
(513) 860-4949
Fax (513) 682-8181

MSDS No. HH 105
Effective Date June 4, 1997

SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	HYDROCHLORIC ACID, 0.1 MOLAR AQ. SOL'N.
Chemical Synonyms	Hydrochloric Acid, Water Solution
Formula	Mixture.
Unit Size	up to 4 Lt.
C.A.S. No.	Mixture.

 NFPA HAZARD RATING LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4	CHEMTREC 800-424-9300 Day 716-228-6177	<table border="1"> <tr> <td>Health</td> <td>1</td> </tr> <tr> <td>Fire</td> <td>0</td> </tr> <tr> <td>Reactivity</td> <td>1</td> </tr> </table>	Health	1	Fire	0	Reactivity	1
	Health	1						
Fire	0							
Reactivity	1							
HMIS* 0 1 2 3 4								

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Hydrochloric Acid: (CAS No. 7647-01-0)	0.36%	See Section V.
Water: (CAS No. 7732-18-5)	99.64%	None established.

CAUTION! CONTACT MAY CAUSE IRRITATION TO SKIN, EYES AND MUCOUS MEMBRANES.

SECTION III PHYSICAL DATA

Melting Point (°F)	Freezes: Approx. 0°C (32°F)	Specific Gravity (H ₂ O = 1)	1.0
Boiling Point (°F)	Approx. 100°C (212°F)	Percent Volatile by Volume (%)	99.64%
Vapor Pressure (mm Hg)	14 (water)	Evaporation Rate (Water = 1)	Slightly less than 1.
Vapor Density (Air=1)	0.7 (water)		
Solubility in Water	Complete.		
Appearance & Odor	Clear, colorless liquid; may have acid odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable (NA).	Flammable Limits in Air % by Volume	NA	Lower	Upper
Extinguisher Media	Use any media suitable for extinguishing supporting fire.				

SPECIAL FIREFIGHTING PROCEDURES

In fire conditions, wear a NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

(1993 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.6, GUIDE PAGE NO. 60)

UNUSUAL FIRE AND EXPLOSION HAZARDS

Non-combustible, but contact with common metals produce hydrogen which may form explosive mixtures with air.

SECTION V HEALTH HAZARD DATA

HH 105

Threshold Limited Value

Hydrogen chloride as gas or fume: TWA Ceiling Limits.
TWA: 5 ppm; 7.5 mg/m³ (AIR). (ACGIH 1992-93).

Effects of Overexposure

Hydrochloric acid solutions at these dilutions may cause irritation to skin, eyes and mucous membranes. **INGESTION:** May be harmful if swallowed. Exercise appropriate procedures to minimize potential hazards.

Emergency and First Aid Procedures

EYES: Flush thoroughly with water, lifting upper and lower eyelids occasionally. Get immediate medical attention. **SKIN:** Flush with water. **INGESTION:** If swallowed, do NOT induce vomiting. If conscious, give one or two glasses of water to drink and get medical attention. Never give anything by mouth to an unconscious person. **INHALATION AS MIST:** Remove to fresh air.

SECTION VI REACTIVITY DATA

Stability	Unstable	X	Conditions to Avoid	Excessive temperatures or heat.
	Stable			
Incompatibility (Materials to Avoid)	Will react with most metals, alkalis, strong oxidants.			
Hazardous Decomposition Products	Hydrogen chloride gas maybe evolved by heating. Hydrogen gas evolved by reaction with metals.			
Hazardous Polymerization	May Occur		Will Not Occur	
			X	
Conditions to Avoid		Not applicable.		

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled
Carefully neutralize with sodium bicarbonate and flush to sewer with copious amounts of water.

Waste Disposal Method

Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only. Carefully neutralize with sodium bicarbonate, soda ash, or lime and flush to sewer with copious amounts of water.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type)	None needed in normal laboratory handling. In misty conditions work in ventilation hood or wear NIOSH/MSHA approved respirator.			
Ventilation	Local Exhaust	None needed.	Special	No.
	Mechanical (General)	None needed.	Other	No.
Protective Gloves	Rubber.		Eye Protection	Chemical safety glasses.
Other Protective Equipment	Smock, apron, eye wash station, goggles, ventilation hood, proper gloves.			

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing
Store in a cool place.
Wash thoroughly after handling.
Keep container tightly closed when not in use.

Other Precautions

Read label on container before using. Do not wear contact lenses when working with chemicals.
Avoid contact with skin or eyes.
Remove and wash contaminated clothing.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Revision No. 5	Date 6/4/97	Approved Michael Raszja	Chemical Safety Coordinator	MR
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This information is provided without warranty of any kind. Employees should use this information only as a supplement to other information.