MATERIAL SAFETY DATA SHEET

ALDON CORPORATION
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MSDS No. HH 170
Effective Date March 8, 1999

SECTION I NAME

24 HOUR EMERGENCY ASSISTANCE

Product	HYDROCHLORIC ACID, 18% SOLUTION
Chemical Synonyms	Hydrochloric Acid, 18%, 6 M/6 N
Formula	Mixture.
Unit Size	up to 3.785 Liters
C.A.S. No.	7647-01-0

CHEMTREC **800-424-9300**
Day 716-226-6177

NFPA HAZARD RATING

LEAST	SLIGHT	MODERATE	HIGH	EXTREME
0	1	2	3	4

HMIS *	
Health	3
Fire	0
Reactivity	2

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Hydrochloric Acid Solution	18% as HCl	See Section V.
Water: (CAS No. 7732-18-5)	82%	None established.
DANGER! CORROSIVE! POISON. CAUSES SEVERE		
BURNS. MAY BE FATAL IF SWALLOWED. VAPOR HARMFUL.		

SECTION III PHYSICAL DATA

Melting Point (°F)	Data not listed.	Specific Gravity (H_2O = 1)	1.18
Boiling Point (°F)	Approx. 110°C (230°F)	Percent Volatile by Volume (%)	100%
Vapor Pressure (mm Hg)	212 mm @ 20°C.	Evaporation Rate (Ether =1)	Greater than 1.
Vapor Density (Air=1)	1.3		
Solubility in Water	Complete.		
Appearance & Odor	Clear, colorless liquid; acrid odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

			Lower	Upper
Flash Point (Method Used)	Non-flammable.	Flammable Limits in Air % by Volume N/A		
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 to prevent eye and skin contact.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 157)

UNUSUAL FIRE AND EXPLOSION HAZARDS

Non-combustible, but contact with common metals produce hydrogen which may form explosive mixtures with air. In fire conditions, water may evaporate from this solution, which may cause hazardous decomposition products to be formed as dust or fume.

D.O.T. **Hydrochloric acid, Solution, 8, UN 1789, PG II**

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V HEALTH HAZARD DATA

HH 170

Threshold Limited Value

ACGIH 1992-93 TWA: C 5 ppm; C 7.5 mg/m^3

Effects of Overexposure

INHALATION: Inhalation of vapors can cause coughing, choking, inflammation of the nose, throat, and upper respiratory tract. **INGESTION:** Corrosive! Swallowing hydrochloric acid can cause immediate pain and burns of the mouth, throat, esophagus and gastrointestinal tract. **SKIN CONTACT:** Corrosive! Can cause redness, pain, and severe skin burns. **EYE CONTACT:** Vapors are irritating and may cause damage to the eyes. Splashes may cause severe burns and permanent eye damage.

Emergency and First Aid Procedures

INGESTION: If swallowed, do **NOT** induce vomiting. If conscious, give several glasses of water or milk to drink. Follow with milk of magnesia, beaten eggs or vegetable oil. Call physician immediately. Never give anything by mouth to an unconscious person. **EYES:** Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. **SKIN:** Flush thoroughly with water, then wash with mild soap and water. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SECTION VI REACTIVITY DATA

Stability			**Conditions to Avoid**
	Unstable		Stable under conditions of use and storage. Containers may burst when heated.
	Stable	X	

Incompatibility (Materials to Avoid) Highly reactive with strong bases, metals, metal oxides, hydroxides, amines, carbonates and other alkaline materials. Incompatible with cyanides, sulfides, sulfites, and formaldehyde.

Hazardous Decomposition Products When heated to decomposition, emits toxic hydrogen chloride fumes and will react with water or steam to produce heat and toxic and corrosive fumes.

Hazardous Polymerization		**Conditions to Avoid**
May Occur	**Will Not Occur**	Not applicable.
	X	

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled

Clean-up personnel should wear protective clothing and respiratory equipment suitable for toxic or corrosive fluids or vapors. Isolate or enclose the area of the leak or spill. Neutralize with sodium bicarbonate, soda ash, lime 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.

Neutralize with alkaline materials (sodium bicarbonate, soda ash, lime, etc.) and flush to sewer with copious amounts of water.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type) In the laboratory open bottle closure slowly and work in fume hood. If the TLV is exceeded a NIOSH/MSHA-approved full facepiece chemical cartridge respirator may be worn.

Ventilation				
	Local Exhaust	Yes (Recommended).	**Special**	No.
	Mechanical (General)	Yes.	**Other**	No.

Protective Gloves Rubber, Neoprene. **Eye Protection** Goggles and faceshield.

Other Protective Equipment Goggles and faceshield, eye wash station, proper gloves, ventilation hood, lab coat, apron.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing
Keep container tightly closed when not in use.

Keep container tightly closed when not in use. Store in a cool, dry, well-ventilated area. Protect from physical damage and direct sunlight. Isolate from incompatible substances. Protect from moisture. Remove cap slowly, while wearing all protective clothing and proper ventilation.

Other Precautions Read label on container before using. Do not wear contact lenses when working with chemicals.

Do not get in eyes, on skin, or on clothing. Avoid breathing mist. Use only with adequate ventilation. Remove and wash contaminated clothing promptly.

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

Revision No. 6	Date 3/8/99	Approved Michael Raszeja	Chemical Safety Coordinator MR