



**ALDON CORPORATION**

# MATERIAL SAFETY DATA SHEET

1533 W. Henrietta Rd.  
Avon, New York 14414  
(716) 226-6177

MSDS No. HH 171  
Effective Date November 6, 1998

## SECTION V HEALTH HAZARD DATA

HH 171

**Threshold Limited Value** RTECS No. MW4025000 Toxicity data: oral-rat LD50: 900 mg/kg. Airborne Exposure Limits: OSHA PEL: 5 ppm (TWA) Ceiling - ACGIH TLV: 5 ppm (TWA) Ceiling.

**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

<b>Stability</b>	<b>Unstable</b>		<b>Conditions to Avoid</b>	Stable under conditions of use and storage. Containers may burst when heated.
	<b>Stable</b>	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.

<b>Hazardous Polymerization</b>	<b>Conditions to Avoid</b>		Not applicable.
	<b>May Occur</b>	<b>Will Not Occur</b>	
		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.

<b>Ventilation</b>	<b>Local Exhaust</b>	<b>Yes (Recommended)</b>	<b>Special</b>	No.
	<b>Mechanical (General)</b>	Yes.	<b>Other</b>	No.

<b>Protective Gloves</b>	Rubber, Neoprene.	<b>Eye Protection</b>	Goggles and faceshield.
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**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. 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.

<b>Revision</b> No. 2	<b>Date</b> 11/6/98	<b>Approved</b> Michael Raszeja	<b>Chemical Safety Coordinator</b> MR
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The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. \* Hazardous Materials Industrial Standards. Printed on recycled paper.

## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

<b>Product</b>	HYDROCHLORIC ACID, 36.5-38%	 <p>CHEMTREC 800-424-9300 Day 716-226-6177</p> <p>NFPA HAZARD RATING</p> <table border="1"> <tr> <td>LEAST</td> <td>SLIGHT</td> <td>MODERATE</td> <td>HIGH</td> <td>EXTREME</td> </tr> <tr> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table> <p>HMIS *</p> <table border="1"> <tr> <td>Health</td> <td>3</td> </tr> <tr> <td>Fire</td> <td>0</td> </tr> <tr> <td>Reactivity</td> <td>2</td> </tr> </table>	LEAST	SLIGHT	MODERATE	HIGH	EXTREME	0	1	2	3	4	Health	3	Fire	0	Reactivity	2
LEAST	SLIGHT		MODERATE	HIGH	EXTREME													
0	1		2	3	4													
Health	3																	
Fire	0																	
Reactivity	2																	
<b>Chemical Synonyms</b>	Muriatic Acid																	
<b>Formula</b>	Mixture. See Section II.																	
<b>Unit Size</b>	up to 4 Lt.																	
<b>C.A.S. No.</b>	Mixture. See Section II.																	

## SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Hydrochloric Acid: (CAS No. 7647-01-0)	36.5-38%	See Section V.
Water: (CAS No. 7732-18-5)	62-63.5%	None established.

**DANGER! CORROSIVE!**  **POISON**  **CAUSES SEVERE**

**BURNS. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED.**

## SECTION III PHYSICAL DATA

<b>Melting Point (°F)</b>	-74°C (-101°F)	<b>Specific Gravity (H<sub>2</sub>O = 1)</b>	1.18
<b>Boiling Point (°F)</b>	53°C (127°F)	<b>Percent Volatile by Volume (%)</b>	100%
<b>Vapor Pressure (mm Hg)</b>	190 at 25°C (77°F)	<b>Evaporation Rate ( =1)</b>	Data not listed.
<b>Vapor Density (Air=1)</b>	Data not listed.		
<b>Solubility in Water</b>	Infinite in water with slight evolution of heat.		
<b>Appearance &amp; Odor</b>	Clear, colorless fuming liquid; pungent odor of hydrogen chloride.		

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

<b>Flash Point (Method Used)</b>	Not combustible.	<b>Flammable Limits in Air % by Volume</b>	NA	<b>Lower</b>	<b>Upper</b>
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**Extinguisher Media** If involved in a fire, use water spray.

### SPECIAL FIREFIGHTING PROCEDURES

In the event of a fire, wear full protective clothing and a NIOSH/MSHA-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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

### UNUSUAL FIRE AND EXPLOSION HAZARDS

**FIRE:** Can react with metals to release flammable hydrogen gas. **EXPLOSION:** Not considered to be an explosion hazard. When heated to decomposition, emits toxic hydrogen chloride fumes and will react with water or steam to produce heat and toxic and corrosive fumes. Containers may burst when heated.

D.O.T. HYDROCHLORIC ACID, SOLUTION, 8, UN 1789, PG II

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