



ALDON CORPORATION

MATERIAL SAFETY DATA SHEET

1533 W. Henrietta Rd.
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(716) 226-6177

MSDS No. HH 167
Effective Date December 15, 1998

SECTION V HEALTH HAZARD DATA

HH 167

Threshold Limited Value

Hydrogen chloride as gas or fume: TWA Ceiling Limits.
TWA: 5 ppm; 7 mg/m³ (AIR). (ACGIH 1992-93).

Effects of Overexposure

Severe irritant to eyes, skin and mucous membranes. May cause burns.
Vapors may cause coughing, choking, inflammation of the respiratory tract.
May cause burns to mouth, throat, esophagus and gastrointestinal tract.

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. Get medical attention.

SECTION VI REACTIVITY DATA

Stability	Unstable	Stable	Conditions to Avoid
		X	Excessive temperatures or heat.

Incompatibility (Materials to Avoid)	Will react with most metals, alkalies, strong oxidants.
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Hazardous Decomposition Products	Hydrogen chloride gas may be evolved by heating. Hydrogen gas evolved by reaction with metals.
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Hazardous Polymerization	Conditions to Avoid
May Occur	Will Not Occur
	X
	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.
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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.
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Ventilation	Local Exhaust	None needed.	Special	No.
	Mechanical (General)	None needed.	Other	No.

Protective Gloves	Rubber.	Eye Protection	Goggles and face shield.
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Other Protective Equipment	Smock, apron, eye wash station, goggles, ventilation hood, proper gloves.
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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.
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Remove and wash contaminated clothing.

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

Revision	No. 1	Date	12/15/98	Approved	Michael Raszeja	Chemical Safety Coordinator	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

Product	HYDROCHLORIC ACID, 4N/4M
Chemical Synonyms	Hydrochloric Acid, Water Solution
Formula	Mixture. See Section II.
Unit Size	up to 4 Lt.
C.A.S. No.	Mixture. See Section II.

0
3 0

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

NFPA
HAZARD RATING

LEAST SLIGHT MODERATE
0 1 2

Health 3
Fire 0
Reactivity 2

HMIS *
HIGH EXTREME
3 4

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
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Hydrochloric Acid: (CAS No. 7647-01-0)	12%	See Section V.
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Water: (CAS No. 7732-18-5)	88%	None established.
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WARNING! CORROSIVE! SEVERE IRRITANT TO EYES, SKIN AND MUCOUS

MEMBRANES. HARMFUL IF SWALLOWED.

SECTION III PHYSICAL DATA

Melting Point (°F)	Freezes approx. 0°C (32°F)	Specific Gravity (H ₂ O = 1)	Approx. 1.0
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Boiling Point (°F)	Approx. 100°C (212°F)	Percent Volatile by Volume (%)	88%
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Vapor Pressure (mm Hg)	14 (water)	Evaporation Rate (Water = 1)	Slightly less than 1.
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Vapor Density (Air=1)	0.7 (water)
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Solubility in Water	Complete.
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Appearance & Odor	Clear, colorless liquid; may have acrid odor.
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SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable (NA).	Flammable Limits in Air % by Volume	NA	Lower	Upper
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Extinguisher Media	Use any media suitable for extinguishing supporting fire.
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SPECIAL FIREFIGHTING PROCEDURES	In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing.
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(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.

D.O.T.	HYDROCHLORIC ACID, SOLUTION, 8, UN 1789, PG II
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Approved by U.S. Department of Labor "essentially similar" to form OSHA-20