



ALDON CORPORATION

MATERIAL SAFETY DATA SHEET

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MSDS No. AA235
Effective Date January 22, 1999

SECTION V HEALTH HAZARD DATA

AA 235

Threshold Limited Value TLV/TWA: 10 mg/m³ as fume.
STEL 20 mg/m³. (ACGIH, 1992-93).

Effects of Overexposure **INHALATION:** Dust or fume from heating may cause upper respiratory tract irritation, coughing and choking sensation. **SKIN:** Causes irritation, dermatitis. **EYES:** Causes irritation, visual impairment. **INGESTION:** Large doses cause nausea, vomiting, acidosis, irritation of the mouth, esophagus and gastric system. Ingestion may result in low grade toxicity.

Emergency and First Aid Procedures **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. **SKIN:** Flush thoroughly with water, then wash with mild soap and water. **EYES:** Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. If irritation develops, get medical attention. **INGESTION:** If swallowed, **DO NOT** induce vomiting. If conscious, give large amounts of water to drink and call physician. Never give anything by mouth to an unconscious person.

SECTION VI REACTIVITY DATA

Stability	Unstable		Conditions to Avoid	Somewhat hygroscopic, has an acid reaction in aqueous solution; solid tends to lose ammonia and become more acid on exposure and in storage.
	Stable	X		

Incompatibility (Materials to Avoid) Oxidizing agents, acids, bases, lead and silver salts.

Hazardous Decomposition Products Thermal decomposition will emit ammonia and hydrogen chloride.

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

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled Sweep up and place in a suitable container for proper disposal. Wash spill area with soap and large 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.

Dispose of in accordance with federal, state and local regulations.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type) None needed in normal laboratory handling. Work in fume hood or wear a NIOSH/MSHA-approved dust mask.

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

Protective Gloves Rubber. **Eye Protection** Chemical safety glasses.

Other Protective Equipment Goggles, smock, apron, proper gloves, eye wash station, ventilation hood.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing Store in a cool, dry place. Avoid contact with eyes and skin. 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.
Ammonium chloride solutions have a tendency to attack ferrous metal and other metal surfaces, especially those of copper, brass and bronze. Remove and wash contaminated clothing.

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

Revision No. 7	Date 1/22/99	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	AMMONIUM CHLORIDE	 <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>1</td> </tr> <tr> <td>Fire</td> <td>0</td> </tr> <tr> <td>Reactivity</td> <td>0</td> </tr> </table>	LEAST	SLIGHT	MODERATE	HIGH	EXTREME	0	1	2	3	4	Health	1	Fire	0	Reactivity	0
LEAST	SLIGHT		MODERATE	HIGH	EXTREME													
0	1		2	3	4													
Health	1																	
Fire	0																	
Reactivity	0																	
Chemical Synonyms	Sal Ammoniac																	
Formula	NH ₄ Cl																	
Unit Size	up to 2.5 Kg.																	
C.A.S. No.	12125-02-9																	

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Ammonium Chloride.	100%	See Section V.
WARNING! MAY BE HARMFUL IF SWALLOWED. CAUSES SKIN AND EYE IRRITATION.		

SECTION III PHYSICAL DATA

Melting Point (°F)	520°C (968°F).	Specific Gravity (H ₂ O = 1)	1.527
Boiling Point (°F)	Sublimes 340°C (644°F).	Percent Volatile by Volume (%)	Negligible as solid.
Vapor Pressure (mm Hg)	N/A	Evaporation Rate (=1)	Not applicable.
Vapor Density (Air=1)	N/A		
Solubility in Water	Very soluble.		
Appearance & Odor	White crystals, granular or powder; odorless.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable solid.	Flammable Limits in Air % by Volume as NH₃	Lower	Upper
			15	28

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.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Vaporizes at temperatures of about 335°C (653°F) evolving toxic fumes of nitrogen oxides, chloride ions and ammonia gas.

D.O.T. NON-REGULATED.

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