



ALDON CORPORATION

MATERIAL SAFETY DATA SHEET

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

MSDS No. AA 264
Effective Date March 26, 1999

SECTION V HEALTH HAZARD DATA

AA 264

Threshold Limited Value As Ammonia gas TWA: 25 ppm, 17 mg/m³; STEL: 35 ppm, 24 mg/m³ (ACGIH 1992-93). Oral Rat-LD50 350 mg/Kg.

Effects of Overexposure Causes severe irritation or burns to eyes, skin and mucous membranes; highly toxic by oral and inhalation routes. Inhalation of ammonia gas causes edema, spasm, and asphyxia. If container is warm, open cap slowly with adequate ventilation; a sudden release of ammonia fumes may cause irritation to eyes and mucous membranes.

Emergency and First Aid Procedures
SKIN: Flood with water, then wash with vinegar. **EYES:** Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention. **INGESTION:** If swallowed, if conscious, give large quantities of water to drink, follow with vegetable oil. Get prompt medical attention. Never give anything by mouth to an unconscious person. **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	Unstable		Conditions to Avoid	When heated, emits toxic fumes of ammonia.
	Stable	X		

Incompatibility (Materials to Avoid) Acids, hypochlorites, strong oxidizers, halogens.

Hazardous Decomposition Products Decomposes to ammonia gas and above 450°C (842°F) to hydrogen and nitrogen gas.

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

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled Wearing protective equipment, carefully neutralize with sodium bisulfate. Absorb with inert dry material and place in suitable container for proper disposal.

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) Work in ventilation hood or wear a NIOSH/MSHA-approved respirator with ammonia canister if necessary.

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

Protective Gloves Rubber. **Eye Protection** Goggles, chemical safety glasses.

Other Protective Equipment Goggles and shield, lab coat, vented hood, proper gloves, eye wash station.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing Store at 75°F. Store away from sources of ignition, separate from acids. Store in a well-ventilated area. 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 eyes, skin and mucous membranes. Avoid breathing vapor. Use with adequate ventilation. 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 3/26/99	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 HYDROXIDE, 28-30%	 <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 * Health 3 Fire 1 Reactivity 2</p>	LEAST	SLIGHT	MODERATE	HIGH	EXTREME	0	1	2	3	4
LEAST	SLIGHT		MODERATE	HIGH	EXTREME							
0	1		2	3	4							
Chemical Synonyms	Ammonium Hydroxide, Water Solution											
Formula	Mixture. See Section II.											
Unit Size	up to 4 Lt.											
C.A.S. No.	Mixture. See Section II.											

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Ammonium Hydroxide: (CAS No. 1336-21-6)	Approx. 28-30% as ammonia	25 ppm in air as ammonia
Water: (CAS No. 7732-18-5)	Approx. 70-72%	None established.
DANGER! CORROSIVE! POISON 		

CAUSES SEVERE BURNS. MAY BE FATAL IF SWALLOWED. VAPOR EXTREMELY IRRITATING.

SECTION III PHYSICAL DATA

Melting Point (°F)	-77°C (-106°F)	Specific Gravity (H₂O = 1)	0.896-0.902 60°/60°F
Boiling Point (°F)	Ammonia volatile above 84.9°F mixture boils 212°F	Percent Volatile by Volume (%)	100%
Vapor Pressure (mm Hg)	420 - 475 at 60°F	Evaporation Rate (N. Butyl Acetate = 1)	< 1
Vapor Density (Air=1)	0.6 - 1.2		
Solubility in Water	Complete.		
Appearance & Odor	Water, white liquid; strong, pungent ammonia odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Liquid not flammable (NA).	Flammable Limits in Air % by Volume	Lower	Upper
		NH ₃ Gas	16	25

Extinguisher Media Use any media for extinguishing the supporting fire.

SPECIAL FIREFIGHTING PROCEDURES

Wear full protective clothing with respirator mask having ammonia vapor canister, or NIOSH/MSHA-approved self-contained breathing apparatus.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 154)

UNUSUAL FIRE AND EXPLOSION HAZARDS

Emits irritating fumes and liquid can inflict burns. Ammonium hydroxide is non-combustible and non-explosive, but ammonia vapors released from solution can form an explosive mixture with air.

Auto-ignition Temperature 651°C (1204°F).

D.O.T. AMMONIA SOLUTIONS, 8, UN 2672, PG III

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