



ALDON CORPORATION

MATERIAL SAFETY DATA SHEET

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

MSDS No. AA 273
Effective Date May 28, 1998

SECTION V HEALTH HAZARD DATA

AA 273

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, acrolein, dimethyl sulfate, halogens, AgNO₃, AgMnO₄.

Hazardous Decomposition Products Ammonia fumes.

| | | | |
|---------------------------------|----------------------------|-----------------------|-----------------|
| 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 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.

Wearing protective equipment, carefully neutralize with sodium bisulfate and flush to sewer with copious amounts of water.

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.

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|--------------------|-----------------------------|--------------|----------------|-----|
| 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.

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| Revision No. 2 | Date 5/28/98 | 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 | AMMONIUM HYDROXIDE, 6 Molar | CHEMTREC 800-424-9300 Day 716-226-6177 NFPA HAZARD RATING LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4 HMIS * HEALTH FIRE REACTIVITY 2 0 1 |
| 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. 12% as ammonia | 25 ppm in air as ammonia |
| Water: (CAS No. 7732-18-5) | Approx. 88% | None established. |
| DANGER! CORROSIVE! CAUSES SEVERE BURNS. | | |
| MAY BE FATAL IF SWALLOWED. VAPOR EXTREMELY IRRITATING. | | |

SECTION III PHYSICAL DATA

| | | | |
|-------------------------------|--|--|-----|
| Melting Point (°F) | NA | Specific Gravity (H₂O = 1) | NA |
| Boiling Point (°F) | Ammonia volatile above 78°F mixture boils 212°F | Percent Volatile by Volume (%) | 100 |
| Vapor Pressure (mm Hg) | NA | Evaporation Rate (Ether = 1) | >1 |
| Vapor Density (Air=1) | Less than 1. | | |
| Solubility in Water | Complete. | | |
| Appearance & Odor | Water, white liquid; strong, pungent ammonia odor. | | |

SECTION IV FIRE AND EXPLOSION HAZARD DATA

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|----------------------------------|----------------------------|---|----------|----------|
| Flash Point (Method Used) | Liquid not flammable (NA). | Flammable Limits in Air % by Volume NH₃ Gas | Lower 16 | Upper 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

Dangerous fire hazard; 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.

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

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