



COLUMBUS CHEMICAL INDUSTRIES INC.

P.O. BOX 8
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Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910 1200. Standard must be consulted for specific requirements

U.S. Department of Labor

Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY (as Used on Label and List)

Ammonium Hydroxide

Note: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.

Section I

Manufacturers /Distributor Address Number Street City State and Zip Code

Columbus Chemical Industries, Inc.

N4335 Temkin Road

Columbus, WI 53925-0008

Emergency Telephone Number

CHEMTREC 1 (800) 424-9300

Telephone Number for Information

1 (920) 623-2140

Date Prepared

09-20-2006

Signature of Preparer (optional)

Section II - Hazardous Ingredients/Identity Information

Table with 6 columns: Hazardous Components, CAS #, OSHA PEL, ACGIH TLV, Other Limits Recommended, % (optional). Row 1: Ammonium Hydroxide\*, 1336-21-6, Not established, 25 ppm (as NH3), STEL: 35 ppm (as NH3), 25-32%.

Balance is water

\*SYNONYMS: Aqua ammonia; Ammonia water 29%; Aqueous ammonia.

\*Chemical Subject to the reporting requirements of SARA Title III Section 313

Section III - Physical/Chemical Characteristics

Table with 4 columns: Property, Value, Property, Value. Rows: Boiling Point (Not available), Specific Gravity (0.90), Vapor Pressure (115mm (20 °C)), Melting Point (Not available), Vapor Density (1.2), Evaporation Rate (Not available).

Solubility in Water

Complete.

Appearance and Odor

Clear, colorless liquid with sharp odor of smelling salts.

Section IV Fire and Explosion Hazard Data

Table with 4 columns: Flash Point, Flammable Limits, LEL, UEL. Row 1: Nonflammable, (Ammonia, %V/V), 16%, 27%.

Extinguishing Media

Use extinguishing media appropriate for surrounding fire.

Special Fire Fighting Procedures

Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece respirator operated in positive pressure mode.

Unusual Fire and Explosion Hazards

Emits toxic fumes under fire conditions.

**Section V Reactivity Data**

Stability	Unstable		Conditions to Avoid	Incompatibles, ignition sources.
	Stable	X		

**Incompatibility Materials to Avoid**

Copper, copper alloys, galvanized iron, zinc, acids.

**Hazardous Decomposition or Byproducts**

Ammonia, nitrogen oxides.

**Hazardous Polymerization**

	May Occur		Conditions to Avoid	Not available.
	Will Not Occur	X		

**Section VI Health Hazard Data**

<b>Routes of Entry</b>	<b>Inhalation ?</b>	<b>Skin ?</b>	<b>Ingestion ?</b>
	Yes	Yes	Yes

**Health Hazards (Acute and Chronic)**

Corrosive. Causes burns. Contact with skin or eyes may cause slight irritation. Destructive to tissues of the mucous and upper respiratory tract, skin and eyes. Lachrymator. Behavioral effects such as convulsions, coma, seizure.

<b>Carcinogenicity</b>	<b>NTP</b>	<b>IARC Monographs</b>	<b>OSHA REGULATED?</b>
	Not Listed	Not Listed	Not Listed

**Signs and Symptoms of Exposure.**

Spasm, inflammation and edema of larynx and bronchi, chemical pneumonitis and pulmonary edema. Burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.

**Medical Conditions Generally Aggravated by Exposure**

Asthma, emphysema, other respiratory diseases.

**Emergency and First Aid Procedures** **EYES:** immediately flush with large amounts of water for at least 15 minutes. **SKIN:** remove contaminated clothing, wash area with soap and water. Get medical assistance if irritation persists. **INHALATION:** If inhaled remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **INGESTION:** Wash out mouth with water provided person is conscious. Call a physician. Do not induce vomiting.

**Section VII Precautions for Safe Handling and Use**

**Steps to be Taken in Case Material is Released or Spilled** Evacuate area. Wear NIOSH/MSHA-approved respirator, chemical-resistant goggles, rubber boots, apron and heavy rubber gloves. Cover with dry lime or soda ash, pick up and place in a closed container and hold for waste disposal. Avoid breathing vapors. Ventilate area and wash spill site after material pickup is complete.

**Waste Disposal Method** Dispose of material in accordance with all applicable federal, state, and local regulations.

**Precautions to be Taken in Handling and Storing** Store in a cool, dry, well-ventilated area in tightly-closed, plainly-labelled containers. Store in a resistant area. Protect against moisture, physical damage and light. Maintain adequate ventilation. Wash thoroughly after handling. Do not ingest or breathe vapors. Protect exposed tissues. Store away from heat and incompatibles.

**Other Precautions** Containers, even when empty, will retain residue and vapors. Always obey hazard warnings and handle empty containers as if they were full. Store below 85 °F. and above freezing. Refrigerate before opening.

**Section VII Control Measures**

**Respiratory Protection (Specify Type)** NIOSH/MSHA-approved respirator with ammonia cartridge.

Ventilation	<b>Local Exhaust</b>	Necessary.	<b>Special</b>	Eye-wash nearby.
	<b>Mechanical (General)</b>	Recommended.	<b>Other</b>	Safety shower nearby.

**Protective Gloves** Chemical resistant gloves. **Eye Protection** Chemical safety goggles.

**Other Protective Clothing or Equipment** Lab coat or apron. Rubber boots.

**Work /Hygienic Practices** Contact lenses should not be worn when working with this material. Maintain eye wash and quick-drench facilities in work area. Avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing. Wash thoroughly after handling. Do not breathe vapor. **CORROSIVE!**

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