



**COLUMBUS CHEMICAL INDUSTRIES INC.**

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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 Chloride/Ammonium Hydroxide Buffer**

**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

N4335 Temkin Road

Columbus, Wisconsin 53925

Emergency Telephone Number

CHEMTREC 1 (800) 424-9300

Telephone Number for Information

1 (920) 623-2140

Date Prepared

1-05-2006

Signature of Preparer (optional)

**Section II - Hazardous Ingredients/Identity Information**

Hazardous Components (Specific Chemical Identity, Common Name(s))	CAS #	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Ammonium Chloride*	12125-02-9	TWA:10 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup>	STEL:20 mg/m <sup>3</sup>	5%
Ammonium Hydroxide**	1336-21-6	Not Available	25 ppm (as NH <sub>3</sub> )	STEL: 35	50-55%
EDTA, disodium salt	6381-92-6	Not Available	Not Available	Not Available	<1%
Magnesium Chloride	7791-18-6	Not Available	5 mg/m <sup>3</sup> TWA	Not Available	<1%

\*SYNONYMS: Ammonium muriate.

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

**Section III - Physical/Chemical Characteristics**

Boiling Point	Not available	Specific Gravity (H <sub>2</sub> O = 1)	1.000
Vapor Pressure (mm Hg)	Not available	Melting Point	Not available
Vapor Density (AIR = 1)	Not available	Sublimes	Not available
Solubility in Water	Complete	Evaporation Rate (Butyl Acetate = 1)	Not available

Solubility in Water

Complete

Appearance and Odor

Clear, colorless liquid

**Section IV Fire and Explosion Hazard Data**

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Nonflammable		Not applicable	Not applicable

Extinguishing Media

Use extinguishing media appropriate to surrounding fire.

Special Fire Fighting Procedures

In the event of a fire, wear full protective clothing and NIOSH/MSHA-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Unusual Fire and Explosion Hazards

Emits toxic and corrosive fumes under fire conditions.

**Section V Reactivity Data**

Stability	Unstable		Conditions to Avoid	Moisture.
	Stable	X		

**Incompatibility Materials to Avoid**

Strong acids, strong bases, finely powdered metals, water-reactive materials (such as sodium and potassium metal).

**Hazardous Decomposition or Byproducts**

Ammonia, hydrogen chloride gas, sodium oxides, carbon oxides, magnesium oxides.

**Hazardous Polymerization****Conditions to Avoid**

	May Occur		Not available.
	Will Not Occur	X	

**Section VI Health Hazard Data**

Routes of Entry	Inhalation ?	Skin ?	Ingestion ?
	Yes	Yes	Yes

**Health Hazards (Acute and Chronic)**

Corrosive to skin, eyes, mucous membranes and upper respiratory tract. May be harmful if absorbed through skin.

Harmful if swallowed. Harmful to respiratory, central nervous and cardiovascular systems. May cause serious damage to eyes upon contact. Corrosive!

Carcinogenicity	NTP	IARC Monographs	OSHA REGULATED?
	Not listed	Not listed	Not listed

**Signs and Symptoms of Exposure.**

Irritation, especially to mucous membranes of eyes and upper respiratory tract. Itching, redness, swelling of exposed tissues

Diarrhea, nausea, mydriasis, tremor, convulsions, coma, seizure, respiratory stimulation, cardiovascular changes.

**Medical Conditions Generally Aggravated by Exposure**

Unknown to CCI.

**Emergency and First Aid Procedures**

**INGESTION:** If swallowed, wash out mouth with water if person is conscious. **EYES:** In contact, immediately flush with large amounts of water for at least 15 minutes. **INHALATION:** If inhaled remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **SKIN:** Immediately wash skin with soap and large amounts of water. **CALL A PHYSICIAN.**

**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 rubber gloves. Absorb spill with absorbent material. With clean shovel place material into a clean, dry container; cover and remove from area. Wash spill site after material pickup is complete.

**Waste Disposal Method** Dispose in accordance with all 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 corrosion-resistant container. Protect against moisture, physical damage and light. Maintain adequate ventilation. Wash thoroughly after handling. Do not ingest or breathe vapors. Protect exposed tissues.

**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 small containers before opening.

**Section VII Control Measures**

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

Ventilation	Local Exhaust	Required.	Special	Eyewash nearby.
	Mechanical (General)	Recommended.	Other	Safety shower nearby.

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

**Other Protective Clothing or Equipment** Coveralls, rubber apron, rubber boots.

**Work /Hygienic Practices** Contact lenses should not be worn when working with this material. Do not breathe vapor. Avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing. Wash thoroughly after handling. Avoid prolonged or repeated exposure.

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