

# FLINN SCIENTIFIC, INC.

## Material Safety Data Sheet (MSDS)

MSDS #: 58.05

Revision Date: April 18, 2008

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### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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#### Ammonium Hydroxide Solution

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

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### SECTION 2 — COMPOSITION, INFORMATION ON INGREDIENTS

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Ammonium Hydroxide (1336-21-6)<11%, Water (7732-18-5)>89%.

Synonym: 3M or less ammonium hydroxide.

CAS#: None Established

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### SECTION 3 — HAZARDS IDENTIFICATION

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Clear liquid, strong ammonia odor.

Liquid and vapor are strongly irritating to skin, eyes, and mucous membranes. Vapor extremely irritating to eyes. May cause blindness. Moderately toxic by ingestion or inhalation.

#### FLINN AT-A-GLANCE

Health-2  
Flammability-0  
Reactivity-1  
Exposure-2  
Storage-3

0 is low hazard, 3 is high hazard

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### SECTION 4 — FIRST AID MEASURES

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Call a physician, seek medical attention for further treatment, observation and support after first aid.

Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.

Eye: Immediately flush with fresh water for 15 minutes.

External: Wash continuously with fresh water for 15 minutes.

Internal: Give no more than 1-2 cups of water for dilution. Do not induce vomiting. Call a physician or poison control at once.

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### SECTION 5 — FIRE FIGHTING MEASURES

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Non-flammable liquid.

When heated to decomposition, emits toxic fumes of NH<sub>3</sub> and NO<sub>x</sub>.

**Fire Fighting Instructions:** Use triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.

#### NFPA CODE

None  
Established

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### SECTION 6 — ACCIDENTAL RELEASE MEASURES

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Restrict unprotected personnel from area and ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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### SECTION 7 — HANDLING AND STORAGE

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Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store in a dedicated base cabinet. If a cabinet is not available, store in a Flinn Saf-Cube. Use and dispense in a hood.

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### SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

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Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits. Always wear a NIOSH-approved respirator with proper cartridges or a positive pressure, air-supplied respirator when handling this material in emergency situations (spill or fire).

Exposure guidelines: TWA 25 ppm, STEL 35 ppm.

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**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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Solution of ammonia in water, 3M or less.  
Formula: NH<sub>4</sub>OH  
Formula Weight: 35.05

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**SECTION 10 — STABILITY AND REACTIVITY**

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Avoid contact with acids, copper, galvanized iron and aluminum.  
When heated to decomposition, emits toxic fumes of NH<sub>3</sub> and NO<sub>x</sub>.  
Shelf life: Indefinite, if stored safely.

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**SECTION 11 — TOXICOLOGICAL INFORMATION**

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Acute effects: Toxic, corrosive, lachrymator	ORL-RAT LD50: 350 mg/kg as ammonium hydroxide
Chronic effects: N.A.	IHL-RAT LC50: N.A.
Target organs: N.A.	SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

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**SECTION 12 — ECOLOGICAL INFORMATION**

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Data not yet available.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please consult with state and local regulations.  
Flinn Suggested Disposal Method #10 is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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Shipping Name: Not Regulated  
Hazard Class: N/A  
UN Number: N/A  
N/A = Not applicable

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**SECTION 15 — REGULATORY INFORMATION**

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TSCA-listed, EINECS-listed (215-647-6), RCRA code D002.

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**SECTION 16 — OTHER INFORMATION**

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**Consult your copy of the Flinn Chemical Catalog/Reference Manual  
for additional information about laboratory chemicals**