FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

Material Safety Data Sheet (MSDS)

MSDS #: 58.50

Revision Date: November 25, 2002

Section 1 — Chemical Product and Company Identification

Ammonia/Ammonium Chloride Buffer

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

CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Ammonium Hydroxide (1336-21-6) 2.5%, Ammonium Chloride (12125-02-9) 1%, Water (7732-18-5) 96.5%

CAS#: None Established

Section 3 — Hazards Identification

Clear liquid, strong ammonia odor.

Mildly toxic by ingestion. Vapor extremely irritating to eyes, may cause blindness.

Severe body tissue irritant. Avoid all body tissue contact.

FLINN AT-A-GLANCE

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

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

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.

Section 5 — Fire Fighting Measures

Non flammable liquid.

When heated to decomposition, emits toxic fumes of NH3 and NOx.

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

Section 6 — Accidental Release Measures

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.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates. Keep container tightly closed. Use and dispense in a hood.

<u>Section 8 — Exposure Controls , Personal Protection</u>

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron. Use exhaust ventilation to keep airborne concentrations low.

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Section 9 — Physical and Chemical Properties

Solution of ammonia and ammonium chloride in water. pH 10 Buffer

Section 10 — Stability and Reactivity

Avoid contact with acids, copper, galvanized iron and aluminum. Shelf life: Indefinite, if stored safely.

Section 11 — Toxicological Information

Acute effects: Toxic, corrosive, lachrymator
Chronic effects: N.A.
Target organs: N.A.

SKN-RBT LD50: N.A.
SKN-RBT LD50: N.A.

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

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

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

Section 14 — Transport Information

Shipping Name: Not Regulated

Hazard Class: N/A UN Number: N/A N/A = Not applicable

Section 15 — Regulatory Information

Not listed.

Section 16 — Other Information

Consult your copy of the Flinn Scientific Catalog/Reference Manual for additional information about laboratory chemicals. This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. Flinn Scientific Inc. assumes no legal responsibility for use or reliance upon this data.

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