

**FLINN SCIENTIFIC, INC.**  
**Material Safety Data Sheet (MSDS)**

MSDS #: 61.00

Revision Date: May 11, 2010

**SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Ammonium Nitrate**

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 nitrate

Synonym: nitric acid, ammonium salt

CAS#: 6484-52-2

**SECTION 3 — HAZARDS IDENTIFICATION**

White, odorless crystals.

Strong oxidizer; may explode if heated under confinement; will explode at temperatures of 210 °C; explodes more readily if contaminated with combustible material.

Slightly toxic by ingestion. Irritating to body tissues. Avoid all body tissue contact.

**FLINN AT-A-GLANCE**

Health-1

Flammability-0

Reactivity-3

Exposure-1

Storage-2

0 is low hazard, 3 is high hazard

**SECTION 4 — FIRST AID MEASURES**

Call a physician and 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 at least 15 minutes.

External: Wash continuously with fresh water for at least 15 minutes.

Internal: Give large quantities of water. Call a physician or poison control at once.

**SECTION 5 — FIRE FIGHTING MEASURES**

Nonflammable, noncombustible solid.

May explode under confinement and high temperatures or if exposed to reducing agents.

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

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

**NFPA CODE**

H-0

F-0

R-3

OX

**SECTION 6 — ACCIDENTAL RELEASE MEASURES**

Restrict unprotected personnel from the area. Remove all ignition sources and water. Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

**SECTION 7 — HANDLING AND STORAGE**

Flinn Suggested Chemical Storage Pattern: Inorganic #8. Store with borates, chromates, manganates, and permanganates. Store away from all combustibles.

**SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION**

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.

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

White, odorless crystals.

Solubility: Water soluble (100%), alcohol, and alkalis.

Formula:  $\text{NH}_4\text{NO}_3$

Formula Weight: 80.06

Boiling Point: 210 °C (decomposes)

Melting Point: 170 °C

Specific Gravity: 1.725

**SECTION 10 — STABILITY AND REACTIVITY**

Store away from any source of combustion or ignition. Avoid contact with reducing agents, strong acids, finely powdered metals, and organic materials. Do not grind in a mortar and pestle - potentially shock sensitive.

Shelf life: Good, if stored safely.

**SECTION 11 — TOXICOLOGICAL INFORMATION**

Acute effects: Irritant, gastrointestinal disturbances

Chronic effects: N.A.

Target organs: Blood, central nervous system

ORL-RAT  $\text{LD}_{50}$ : 2217 mg/kg

IHL-RAT  $\text{LC}_{50}$ : N.A.

SKN-RBT  $\text{LD}_{50}$ : 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 #26b is one option.

**SECTION 14 — TRANSPORT INFORMATION**

Shipping Name: Ammonium Nitrate

Hazard Class: 5.1, Oxidizer

UN Number: UN1942

N/A = Not applicable

**SECTION 15 — REGULATORY INFORMATION**

TSCA-listed, EINECS-listed (229-347-8), RCRA code D001, D003.

**SECTION 16 — OTHER INFORMATION**

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