

FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

Material Safety Data Sheet (MSDS)

MSDS #: 552.50

Revision Date: February 24, 2003

Section 1 — Chemical Product and Company Identification

Nitric Acid Solution

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

Nitric Acid (7697-37-2) 38-6% and Water (7732-18-5) 62-94%.

Synonym: 6 thru 1 Molar

CAS#: None Established

Section 3 — Hazards Identification

Clear, colorless or yellowish liquid. Yellow color (if present) results from exposure to light and release of nitrogen dioxide.

Corrosive; will cause severe damage to eyes, skin and mucous membranes. Moderately toxic by ingestion and inhalation. Strong oxidizer. Avoid contact with acetic acid and readily oxidized substances.

FLINN AT-A-GLANCE

Health-2

Flammability-0

Reactivity-2

Exposure-2

Storage-3

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 large quantities of water. May also give gastric antacids such as Milk of Magnesia. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Non flammable liquid.

Strong oxidizer. Dangerous fire risk in contact with acetic acid, combustible or organic materials.

When heated to decomposition, emits toxic fumes of NO_x and hydrogen nitrate.

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

H-4

F-0

R-0

OX

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area. Remove all ignition sources and ventilate area. Contain spill with sand and absorbent material, neutralize with sodium bicarbonate or calcium hydroxide and 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 #3. Store with amides, nitrates and nitrites.

Store in a dedicated acid cabinet and away from any source of water; if an acid cabinet is not available, store in Flinn Saf-Cube.

Never store with acetic acid. Use and dispense in a hood.

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 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 2 ppm, STEL 4 ppm (OSHA, NIOSH)

FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

Material Safety Data Sheet (MSDS)

Nitric Acid Solution

MSDS #: 552.50

Revision Date: February 24, 2003

Section 9 — Physical and Chemical Properties

Transparent, colorless or yellowish, fuming, suffocating, corrosive liquid.

Solubility: Miscible with water. Hygroscopic.

Formula: HNO₃

Formula Weight: 63.01

Section 10 — Stability and Reactivity

Avoid contact with bases, reducers, alcohols, alkali metals, brass, copper, copper alloys, galvanized iron, aluminum, corrodes steel, organic materials, amines, acetic acid, and readily oxidized substances.

Shelf life: Fair, product may turn yellow due to exposure to light.

Section 11 — Toxicological Information

Acute effects: Poison, corrosive

Chronic effects: N.A.

Target organs: N.A.

ORL-RAT LD50: N.A.

IHL-RAT LC50: 2500 ppm/1hr.

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 #24b is one option.

Section 14 — Transport Information

Shipping Name: Nitric acid

Hazard Class: 8, Corrosive

UN Number: UN2031

N/A = Not applicable

Section 15 — Regulatory Information

TSCA-listed, EINECS-listed (231-714-2), RCRA code D001, D002, D003.

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.

FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

*Questions on Chemical Disposal
or Storage?--Call Flinn*

flinn@flinnsci.com www.flinnsci.com
P.O. Box 219 Batavia IL 60510
(800) 452-1261 Fax (866) 452-1436