

Martin Resources
Material Safety Data Sheet
Ammonium Thiosulfate Solution

Dated: 01/31/98

Section I - Product Identification/Company

Product Name: Ammonium Thiosulfate Solution

Chemical Family: Inorganic Salt Solution

Synonyms: Ammonium Thiosulfate, ATS, 12-0-0-26S, Thiosulfuric Acid, Diammonium Salt

Formula: $(\text{NH}_4)_2\text{S}_2\text{O}_3$

Manufacturer: Martin Resources
#1 Gulf States Road
PO Box 6567
Beaumont, TX 77704
Information: Phone: (409) 835-6172 Ext 327
FAX: (409) 832-3607

Emergency Contact: (800) 424-9300 (Chemtrec)

Section II - Properties

Ingredients (% by weight):

Ammonium Thiosulfate	CAS #: 7783-18-89	55 - 60 %
Ammonium Sulfate	CAS #: 7783-20-2	0 - 4 %
Ammonium Sulfite (s)		0.5 -2.5 %
Water	CAS #: 7732-18-5	.36 -45 %

Appearance: Colorless to pale yellow liquid.

Odor: May have a slight ammonia and/or organic odor.

Boiling Point: 210°F (98.9°C) - 220°F (104.4°C)

Vapor Pressure: 18 mm Hg @70°F (21.1°C)

Vapor Density: Not determined

Solubility in Water: Complete

Specific Gravity: 1.32 - 1.35 (11.0- 11.2 lbs/gal)

Freezing Point: Approx. 34°F (1.1°C)

pH: 7.0- 8.5

Volatile: Not applicable

* See Section 8 for Exposure Guidelines****

Section III - Potential Hazards

NFPA: Health - 1 Flammability - 0 Reactivity - 0

Emergency Information:

Contact may cause eye irritation.
Repeated/prolonged skin contact may cause irritation.
Ingestion may irritate gastrointestinal tract.
Heat may cause ammonia gas to evolve.

Potential Health Effects:

EYE: Contact with the eyes by product mist or solution may cause irritation or a burning sensation.
SKIN CONTACT: Prolonged or repeated contact with product mist or solution may cause skin irritation.
SKIN ABSORPTION: Absorption is unlikely to occur.
INGESTION: Ingestion of product solution may cause irritation of the gastrointestinal tract to include nausea, vomiting, and diarrhea. Ammonium Thiosulfate is considered to have a low toxicity to humans.
INHALATION: Inhalation of product mist may cause irritation of the nose, throat and respiratory tract.
CHRONIC EFFECTS/CARCINOGENICITY: Not listed as a carcinogen by NTP, IARC or OSHA.

Section IV - First Aid Measures

EYES: Immediately flush with large quantities of water for 15 minutes. Hold eyelids apart during irrigation to insure thorough flushing of the entire area of the eye and lids. Obtain medical attention if irritation occurs.
SKIN: Immediately flush with large quantities of water. Remove contaminated clothing under a safety shower. Obtain medical attention if irritation occurs.
INGESTION: If victim is conscious, give 2 to 4 glasses of water and induce vomiting by touching finger to back of throat. Obtain medical attention.
INHALATION: Remove victim from contaminated atmosphere. If breathing is labored, administer oxygen. If breathing has ceased, clear airway and start mouth to mouth resuscitation. If heart has stopped beating, external heart massage should be applied. Obtain medical attention.

Section V- Fire/Explosion Hazard Data

Flammable Properties

Flash Point - Not flammable
Method Used - NA

Flammable Limits

LFL - NA
UFL - NA

Extinguishing Media: As appropriate for combustibles involved in fire.

Fire & Explosive Hazards: Heating to dryness may cause the release of ammonia, Ammonium sulfate, sulfur and oxides of sulfur. NH₃ (16-25%) may form flammable mixtures with air. Keep containers/storage vessels in fire area cooled with water spray. Heating may cause the release of ammonia vapors.

Fire Fighting Equipment: As in any fire, wear self-contained breathing apparatus, pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section VI - Accidental Release Measures

Small Releases: Confine and absorb small releases on sand earth or other inert absorbent. Use water spray to dilute to weak fertilizer solution.

Large Releases: Confine area to qualified personnel. Shut off release if safe to do so. Dike spill area to prevent runoff into sewers, drains or surface waterways (potential aquatic toxicity). Recover as much of the solution as possible. Treat remaining material as a small release (above).

Section VII - Handling and Storage

Handling: Avoid contact with eyes. Use only in a well ventilated area. Wash thoroughly after handling. Avoid prolonged or repeated breathing of vapors. Avoid prolonged or repeated contact with the skin.

Storage: Store in well ventilated areas. Do not store combustibles in the area of storage vessels. Keep away from any sources of heat or flame. Store tote and smaller containers out of direct sunlight at moderated temperatures. (See Section IX for materials of construction)

Section VIII - Exposure Controls/Protection Information

RESPIRATORY PROTECTION: None generally required. If conditions exist where mist may be generated, a NIOSH/MSHA approved mist respirator should be worn.

SKIN PROTECTION: Neoprene rubber gloves and apron should be worn to prevent repeated or prolonged contact with the liquid. Wash contaminated clothing prior to reuse.

EYE PROTECTION: Chemical goggles and a full face shield. DO NOT WEAR CONTACT LENSES.

EXPOSURE GUIDELINES: None

OSHA		ACGIH	
<u>TWA</u>	<u>STEL</u>	<u>TLV</u>	<u>STEL</u>
NA	NA	NA	NA

ENGINEERING CONTROLS: Use adequate exhaust ventilation to prevent inhalation of product vapors.

Section IX - Reactivity Data

STABILITY: This is a stable material.

HAZARDOUS POLYMERIZATION:

HAZARDOUS DECOMPOSITION PRODUCTS: Heating this product will evolve ammonia. Heating to dryness will cause the production of ammonia, ammonium sulfate, sulfur and oxides of sulfur. Ammonia (16-25%) may form flammable mixtures with air.

INCOMPATIBILITY: Strong oxidizers such as nitrates, nitrites or chlorates can cause explosive mixtures if heated to dryness. Acids will cause the release of sulfur dioxide, a severe respiratory hazard. Alkalies accelerate the evolution of Ammonia. Ammonium thiosulfate solution is not compatible with copper, zinc or their alloys (i.e. bronze, brass, galvanized metals, etc.). These materials of construction should not be used in handling systems or storage containers for this product. (See Section VII - Storage)

Section X - Toxicological Data

ORAL: Oral-Rat LD₅₀: 2,890 mg/Kg
DERMAL: Data not available
INHALATION: Data not available
CHRONIC / CARCINOGENICITY: No evidence available
TERATOLOGY: Data not available
REPRODUCTION: Data not available
MUTAGENICITY: Data not available

Section XI - Ecological Data

Static acute 96 hour-LC₅₀ for bluegills is 1,000 mg/L.
Static acute 96 hour-LC₅₀ for rainbow trout is 770 mg/L.
Static acute 96 hour-LC₅₀ for sheepshead minnow is > 1,000 mg/L.
Static acute 96 hour-LC₅₀ for mysid shrimp is 77 mg/L.

Section XII - Disposal

Ammonium thiosulfate is not considered a hazardous waste under Federal Hazardous waste Regulations, 40 CFR 261. Consult state and local re for different or more restrictive disposal regulations.

Section XIII - Transport Data

DOT Shipping Name:	Ammonium thiosulfate solution
DOT Hazard Class:	NA
UN Number:	NA
Packing Group:	NA
DOT Placard:	NA
DOT Label(s):	NA

IMO Shipping Name: Ammonium thiosulfate solution
RQ (Reportable Quantity): NA
RR STCC Number: 28-191-73

Section XIV - Regulatory Data

OSHA: This product is listed as a hazardous material under criteria of the Federal OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SARA TITLE III. 1. EHS (Extremely Hazardous Substance) List: No
2. Section 311/312, (Tier I II Categories):

Immediate (acute) Yes
Fire No
Sudden release No
Reactivity No
Delayed (chronic) No

3. Section 313 (Toxic Release Reporting-Form R) Yes

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Concentration</u>
Ammonia	7664-41-7	14.6%

4. TPQ (Threshold Planning Quantity): No

CERCLA/SUPERFUND: RQ (Reportable Quantity) No

TSCA (Toxic Substance Control Act) INVENTORY LIST: Yes

RCRA (Resource Conservation and Recovery Act) STATUS: NA

WHMIS (Canada) HAZARD CLASSIFICATION: NA

DOT HAZARDOUS MATERIAL: (See Section XIII) No

CAA HAZARDOUS AIR. POLLUTANT (HAP) No

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