



ATS

# Safety Data Sheet

Ammonium Thiosulfate Solution 12-0-0-26s

ACCORDING TO  
Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Revision Date 09/2014

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY UNDERTAKING

**Product Name:** Ammonium Thiosulfate Solution (ATS) 12-0-0-26s  
**Synonyms:** ATS  
**Chemical Family:** Ammoniated Sulphur Compound  
**Chemical Formula:** Proprietary information  
**Product Use:** Plant Nutrients  
**Prepared By:** Kugler Company

### SUPPLIER IDENTIFICATION

Kugler Company  
 209 W. 3rd, PO Box 1748, McCook, NE 69001  
 (308) 345-2280 phone / (308) 345-7756 fax  
 Emergency Contact No.: (800) 424-9300 CHEMTREC  
 www.KuglerCompany.com



Warning

**HAZARD STATEMENT**  
Harmful if swallowed

### SECTION 2: HAZARDS IDENTIFICATION

**Signal Word:** Warning

**Emergency Overview:**

**Routes of Entry:** Inhalation, ingestion, injection and absorption

**Potential Health Effects**

Oral: Ingestion of large amount may cause systemic ammonia poisoning and nitrate poisoning.  
 Eyes: May cause irritation  
 Skin: May cause irritation  
 Ingestion: May cause irritation  
 Inhalation: May cause irritation. Large dose ingestion can cause heart and kidney problems

**Acute Health Hazards:** NA

**Chronic Health Hazards:** Chronic ingestion may cause damage to heart, liver and blood-forming tissues. Ingestion of large quantities may cause headache, mental impairment, dizziness and may be fatal.

**Medical Conditions Generally Aggravated by Exposure:** Existing skin and lung disorders may be aggravated

**Carcinogenicity**

**OSHA:** NA      **ACGIH:** NA      **NTP:** NA      **IARC:** NA      **OTHER:** NA

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

	CHEMICAL	FORMULA	WT%	TLV LD*
				50
<b>NON-HAZARDOUS COMPOSITION:</b>				
Sulphur	S	26		
Nitrogen	N		12	
Ammonium Thiosulfate	(NH <sub>4</sub> ) <sub>2</sub> S <sub>2</sub> O <sub>3</sub>		50-60	

Ammonium thiosulfate is produced by reacting sulfur dioxide (SO<sub>2</sub>) and ammonia (NH<sub>3</sub>) to yield a 60% solution containing 26% sulfur and 12% nitrogen.

\*ORAL LD-50, mg/kg, male rat

### SECTION 4: FIRST-AID MEASURES

**Inhalation:** Move injured person into fresh air and keep person calm under observation. For breathing difficulties, oxygen may be necessary. If breathing stops, provide artificial respiration. Get medical attention immediately.

**Skin Contact:** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If frostbite occurs, immerse affected area in warm water (not exceeding 105°F/41°C). Keep immersed for 20 to 40 minutes. Get medical attention immediately. Chemical burns must be treated by a physician.

**Eye Contact:** Flush thoroughly with water for at least 15 minutes. Get immediate medical assistance. If medical assistance is not immediately available, flush an additional 15 minutes. If frostbite occurs, immerse affected area in warm water (not exceeding 105°F/41°C) for at least 15 minutes. If easy to do, remove contact lenses.

**Ingestion:** Call a physician or poison control center immediately. DO NOT induce vomiting. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than the hips to help prevent aspiration. This material is a gas under normal atmospheric conditions and ingestion is unlikely.

**Chemical Burns:** Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Seek medical attention immediately.

#### **SECTION 5: FIRE-FIGHTING MEASURES**

**Flammable Limits in Air, Upper:** NA  
(% by volume) Lower: NA

**Flash Point:** NA

**Method Used:** NA

**Autoignition Temperature:** NA

**NFPA Hazard Classification**

Health: 1 Flammability: 0 Reactivity: 0 Other: None

**HMIS Hazard Classification**

Health: 1 Flammability: 0 Reactivity: 0 Other: None

**Extinguishing Media:** Use extinguishing media appropriate for surrounding materials.

**Special Fire Fighting Procedures:** Because fire may produce hazardous decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure demand or positive pressure mode.

**Unusual Fire and Explosion Hazards:** NA

**Hazardous Decomposition Products:** Can release ammonia, nitrous oxide fumes, cyanides, oxides of carbon and phosphorous oxide fumes.

#### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Small Spills:** Absorb with sand or other inert material and dispose of in accordance with applicable regulations.

**Large Spills:**

**Containment:** For large spills, dike far ahead of liquid spill for later disposal, Do not release into sewers or waterways.

**Cleanup:** Contained materials may be salvaged for use.

**Regulatory Requirements:** Follow applicable 051-IA regulations for cleanup personnel and EPA requirements for disposal.

**Disposal:** Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, State, and local regulations if material is not salvageable for use.

**Disposal Regulatory Requirements:** Follow applicable Federal, state, and local regulations.

**Container Cleaning and Disposal:** Triple rinse and use rinseate in product tank. Dispose of container per applicable regulations.

#### **SECTION 7: HANDLING STORAGE**

**Precautions for Safe Handling:** Avoid inhalation and contact with skin and eyes. Do not get in eyes, on skin, on clothing. Do not breathe gas. Use only with adequate ventilation. Open valve slowly. Ensure that cylinders are not exposed to heat. When using, do not eat, drink or smoke. Do not pressurize, cut weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death. Observe good industrial hygiene practices.

**Conditions for Safe Storage, Including any Incompatibilities:** Compressed gas storage. Pressurized container. Protect for sunlight and do not expose to temperatures exceeding 50°C/122°F. Store in a cool and well-ventilated place. Secure cylinders in an upright position at all times, close all valves when not in use. Secure cylinders from falling or being knocked over.

#### **SECTION 8: EXPOSURE/CONTROLS/PERSONAL PROTECTION**

**ENGINEERING CONTROLS:**

**Ventilation:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs.

**ADMINISTRATIVE CONTROLS:**

**Respiratory Protection:** Respiratory protection may be needed if airborne mists are created. Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

**Protective Clothing Equipment:** Wear chemically protective gloves to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133).

**Safety Stations:** Make emergency eyewash stations, emergency showers, and washing facilities available in work area.

**Contaminated Equipment:** Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your personal protective equipment.

**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics

#### **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**BOILING POINT:** N/A

**SOLUBILITY IN WATER:** Complete

**DENSITY:** 11.1

**% VOLATILE (BY VOLUME):** 1%

**pH:** 7.5-8.5

**VAPOR PRESSURE, mmHg:** N/A

**SPECIFIC GRAVITY:** 1.331 @ 70 degrees F

**FREEZING POINT:** 23 degrees F

**CRYSTALLIZATION TEMPERATURE:** 10 degrees F

**APPEARANCE:** Clear, white solution with slight ammonia odor

HAZARD RATING (NFPA): FIRE: HEALTH: REACTIVITY: SPECIAL:

EVAPORATION RATE:  
FREEZING POINT: 10 -20 degrees F  
APPEARANCE: Clear, white solution with slight ammonia odor

**SECTION 10: STABILITY AND REACTIVITY**

**Stability:** Stable under normal storage and handling conditions  
**Conditions to Avoid (Stability):** Avoid excessive heat  
**Incompatibility (material to avoid):** Oxidizers, hypochlorites, strong bases and strong acids  
**Hazardous Decomposition or By-Products:** Ammonia  
**Hazardous Polymerization:** NA  
**Conditions to Avoid (Polymerization):** NA

**SECTION 11: TOXICOLOGICAL INFORMATION**

NA

**SECTION 12: ECOLOGICAL INFORMATION**

NA

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Disposal Method:** Disposal of N-P-K fertilizer may be subject to federal, state and local regulations. Users of this product should review their operations in terms of applicable federal, state and local laws and regulations, then consult with appropriate regulatory agent before discharging or disposing.

**RCRA Hazard Class:** NA

**SECTION 14: TRANSPORT INFORMATION**

SHIPPING NAME: Ammonium Thiosulfate  
C.A.S. NUMBER: **7783-18-8**  
HAZARD CLASS:  
D.O.T. NUMBER:  
REPORTABLE QUANTITY:  
HAZARDOUS WASTE #:  
LABELS REQUIRED: None  
E.P.A. REGISTRATION: None  
PLACARDS: None

**SECTION 15: REGULATORY INFORMATION**

NA

**SECTION 16: OTHER INFORMATION INCLUDING DATE OF PREPARATION AND/OR LAST REVISION**

**Handling Precautions:** Use in accordance with labeling instructions. Keep away from children, pets, domestic animals, and wildlife.  
**Storage Requirements:** Store in properly labeled containers. Keep from freezing.  
**Labeling (Precautionary Statements):** Warning! Eye and Skin Irritant

**This product is not regulated by DOT or falls under the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and CFR part 372.**

**Disclaimer:**

*The data in this Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control, it should not be taken as warranty or representation for which KUGLER OIL COMPANY assumes legal responsibility. This information is provided solely for your consideration, investigation and verification.*