



Material Safety Data Sheet

Ammonium Bisulfite Solution

MSDS Number 36600 (Revised: 6/24/2013)

6 Pages

Section 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION

- 1.1 **Product Name** Ammonium bisulfite solution
Chemical Family Inorganic salt solution
Synonyms Ammonium hydrogen sulfite, ABS,
Sulfurous acid, mono-ammonium salt
Formula NH_4HSO_3
- 1.2 **Manufacturer** Shandong Tiantai Steel-Plastic Co.,Ltd
Jiangdian Industry Zone, Gaotang
Country, Liaocheng City, Shandong
Province, China.
- 1.3 **Emergency Contact** 86-0531-83530989

Section 2: COMPOSITION, INFORMATION ON INGREDIENTS

- 2.1 Chemical Ingredients (% by wt.)
- | | | |
|--------------------|------------------|----------|
| Ammonium bisulfite | CAS #:10192-30-0 | 45 - 70% |
| Water | CAS #:7732-18-5 | 30 - 55% |

(See Section 8 for exposure guidelines)

Section 3: HAZARDS IDENTIFICATION

NFPA: Health - 1 Flammability - 0 Reactivity - 1

EMERGENCY OVERVIEW

Solutions are slightly acidic (pH 5.5)
Contact may cause eye irritation.
Repeated/prolonged skin contact may cause irritation.
Avoid inhalation of fumes in vapor space (sulfur dioxide).
Ingestion may irritate gastrointestinal tract.
Heating may lead to rapid thermal decomposition resulting in release of heat, SO_2 , and associated gas pressure.

Section	3:	HAZARDS IDENTIFICATION
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3.1 POTENTIAL HEALTH EFFECTS

EYE: Contact with the eyes by product mist or solution will cause irritation and a burning sensation.

SKIN CONTACT: Prolonged or repeated contact with product mist or solution will cause skin irritation. SKIN

ABSORPTION: Absorption is unlikely to occur.

INGESTION: Ingestion of product solution will cause irritation of the gastrointestinal tract to include nausea, vomiting and diarrhea.

INHALATION: Inhalation of product vapors (slight amount of sulfur dioxide) will cause nose, throat and lung irritation..

CHRONIC EFFECTS/CARCINOGENICITY: Not listed as a carcinogen by NTP, IARC or OSHA.

Section	4:	FIRST AID MEASURES
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4.1 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 immediate medical attention.

4.2 SKIN: Immediately flush with large quantities of water. Remove contaminated clothing under a safety shower. Obtain immediate medical attention.

4.3 INGESTION: If victim is conscious, immediately give 2 to 4 glasses of water. Induce vomiting by touching finger to back of throat. Obtain immediate medical attention.

4.4 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 immediate medical attention.

Section	5:	FIRE FIGHTING MEASURES
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5.1 FLAMMABLE PROPERTIES

FLASH POINT: Not flammable

METHOD USED: NA

5.2 FLAMMABLE LIMITS

LFL: NA

UFL: NA

5.3 EXTINGUISHING MEDIA: As appropriate for combustibles involved in fire.

5.4 FIRE & EXPLOSIVE HAZARDS: .When heated , sulfur dioxide vapors will evolve. This gas is a severe respiratory hazard. Further heating may cause rapid thermal decomposition resulting in rapid release of heat, sulfur dioxide and associated pressure. Keep containers/storage vessels in fire area cooled with water spray.

5.5 FIRE FIGHTING EQUIPMENT: Because of the possible presence of toxic gases and the corrosive nature of the product, wear self-contained breathing apparatus, pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section	6:	ACCIDENTAL RELEASE MEASURES
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6.1 Small releases: Confine and absorb small releases on sand, earth or other inert absorbent. Dispose of in a chemical waste landfill.

6.2 Large releases: Confine area to qualified personnel. Wear proper protective equipment. Shut off release if safe to do so. Dike spill area to prevent runoff into sewers, drains or surface waterways (potential aquatic toxicity). Spray product vapors with water spray or mist. Recover as much of the solution as possible. Treat remaining material as a small release (above).

Section	7:	HANDLING and STORAGE
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7.1 Handling: Handle in enclosed containers to avoid breathing product. Avoid contact with skin and eyes. Use in a well ventilated area. Wash thoroughly after handling.

7.2 Storage: Store in well ventilated areas in enclosed containers. Do not store combustibles in the area of storage vessels. Keep away from any sources of heat or flame which may cause rapid thermal decomposition resulting in rapid heat and pressure release. Avoid heating of ABS above 75°F(24°C), in closed storage vessels. Provide for venting of closed pressure vessels. Store tote and smaller containers out of direct sunlight at moderate temperatures [75°F(24°C)]. See Section 10.4 for materials of construction.

Section	8:	EXPOSURE CONTROLS, PERSONAL PROTECTION
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8.1 RESPIRATORY PROTECTION: None generally required. If vapor exposure is possible a NIOSH approved respirator for sulfur dioxide is required. Wear self-contained breathing apparatus, pressure demand, MSHA/NIOSH (approved or equivalent) if handling product under fire conditions.

8.2 SKIN PROTECTION: Neoprene rubber gloves, boots, and apron should be worn to prevent contact with the liquid. Wash contaminated clothing prior to reuse.

8.3 EYE PROTECTION: Chemical goggles and a full face shield

8.4 EXPOSURE GUIDELINES:

	OSHA		ACGIH	
	<u>TWA</u>	<u>STEL</u>	<u>TLV</u>	<u>STEL</u>
Sulfur dioxide	5 ppm	35 ppm	2 ppm	5 ppm (15 min)

8.5 ENGINEERING CONTROLS: Use adequate exhaust ventilation to prevent inhalation of product vapors. Provide for adequate vents for storage in closed storage vessels. Maintain eyewash/safety shower in areas where product is handled.

Section 9: PHYSICAL and CHEMICAL PROPERTIES

9.1 APPEARANCE:	Clear to pale yellow liquid
9.2 ODOR:	Slight sulfur dioxide odor.
9.3 BOILING POINT:	220?- 231°F (104?- 111°C)
9.4 VAPOR PRESSURE:	Data not available
9.5 VAPOR DENSITY:	Not determined
9.6 SOLUBILITY IN WATER:	Complete
9.7 SPECIFIC GRAVITY:	1.31 - 1.42
9.8 FREEZING POINT:	4.5-5.5
9.9 pH:	Not applicable
9.10 VOLATILE:	

Section 10: STABILITY and REACTIVITY

10.1 STABILITY: This is a stable material

10.2 HAZARDOUS POLYMERIZATION: Will not occur.

10.3 HAZARDOUS DECOMPOSITION PRODUCTS: Heating this product in a closed pressure vessel will generate ammonium bisulfate, ammonium sulfate and sulfur. In an open container ammonium thiosulfate and ammonium sulfate will be generated and sulfur dioxide will be vented.

10.4 INCOMPATIBILITY: Strong oxidizers such as nitrates, nitrites or chlorates. Acids will cause the release of sulfur dioxide, a highly toxic gas. Alkalies will accelerate the evolution of ammonia. Ammonium bisulfite 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 7.2, Storage.

Section 11: TOXICOLOGICAL INFORMATION

11.1 ORAL: Data not available

11.2 DERMAL: Data not available

11.3 INHALATION: Data not available

11.4 CHRONIC/CARCINOGENICITY: No evidence available

11.5 TERATOLOGY: Data not available

11.6 REPRODUCTION: Data not available

11.7 MUTAGENICITY: Data not available

Section 12: ECOLOGICAL INFORMATION

No data available.

Section 13: DISPOSAL CONSIDERATIONS
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If released to the environment for other than its intended purpose, this product does not meet the definition of a hazardous waste under 40 CFR 261.

Section 14: TRANSPORT INFORMATION
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14.1 DOT Shipping Name:	Bisulfites, aqueous solutions, n.o.s.
14.2 DOT Hazard Class:	8
14.3 UN/NA Number:	UN2693
14.4 Packing Group:	III
14.5 DOT Placard:	Corrosive
14.6 DOT Label(s):	Corrosive
14.7 IMO Shipping Name:	Bisulphites, aqueous solutions, n.o.s.
14.8 RQ (Reportable Quantity):	5,000 lbs (100%) [1,068 gal (45%); 621 gal (70%)]
14.9 RR STCC Number:	28-191-14

Section 15: REGULATORY INFORMATION

15.1 OSHA:	This product is listed as a hazardous material under criteria of the Federal OSHA Hazard Communication Standard, 29 CFR 1910.1200.		
15.2 SARA TITLE III:	a.	EHS (Extremely Hazardous Substance) List:	No
	b.	Section 311/312, (Tier I,II) Categories:	Yes
		Fire	No
		Sudden release	No
		Reactivity	Yes
		Delayed (chronic)	No
	c.	Section 313 (Toxic Release Reporting-Form R):	Yes
		Chemical NameCAS Number	Concentration
		Ammonia 7664-41-7	3.4 - 12%
	d.	TPQ (Threshold Planning Quantity):	No
15.3 CERCLA/SUPERFUND:		RQ (Reportable Quantity)	Yes
15.4 TSCA (Toxic Substance Control Act) Inventory List:			Yes

Section 15: REGULATORY INFORMATION (Cont.)

15.5	RCRA (Resource Conservation and Recovery Act) Status:	No
15.6	WHMIS (Canada) Hazard Classification:	E, D2B
15.7	DOT Hazardous Material: (See Section 14)	Yes
15.8	CAA Hazardous Air Pollutant (HAP)	No

Section 16: OTHER INFORMATION

REVISIONS: The entire MSDS was reformatted to comply to ANSI Standard Z400.1-1993, by Shandong Tiantai Steel-Plastic Co.,Ltd

Address updated, 12/3/2012

Revised Section 8.3, Eye Protection, and company logo, 5/8/2012

Revised Section 3, Emergency Overview, Section 5.4, Fire & Explosive Hazards, Section 7.2, Storage, Section 8.5, Emergency Controls and Section 10.3, Hazardous Decomposition Products, 2/24/2012.

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