MATERIAL SAFETY DATA SHEET

ward's science
5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

MSDS No.: SS1078
Effective Date: February 7, 2014

SECTION I NAME

Product	Sulfamic Acid
Chemical Synonyms	Sulfamidic Acid; Aminosulfonic Acid
Formula	H_3NO_3S
Unit Size	Up to 2.5 Kg.
C.A.S. No.	5329-14-6

24 HOUR EMERGENCY ASSISTANCE

CHEMTREC 800-424-9300
Day 585-226-6177

NFPA: 0 / 3 / 0

Health	3
Fire	0
Reactivity	0

HMIS *

HAZARD RATING

MINIMAL	SLIGHT	MODERATE	SERIOUS	SEVERE
0	1	2	3	4

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Sulfamic acid	100%	None established.
DANGER! CORROSIVE!		

HARMFUL IF SWALLOWED OR INHALED. CAUSES SEVERE IRRITATION OR BURNS TO SKIN AND EYES.

SECTION III PHYSICAL DATA

Melting Point (°F)	401°F (205°C)	Specific Gravity (H_2O = 1)	2.15 g/cc @ 4°C
Boiling Point (°F)	Decomposes @ 401°F (205°C)	Percent Volatile by Volume (%)	N/A
Vapor Pressure (mm Hg)	N/A	Evaporation Rate (=1)	N/A
Vapor Density (Air=1)	N/A		
Solubility in Water	6.5 parts water at 32°F; 2 parts water at 176°F		
Appearance & Odor	White orthorhombic crystals; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable.	Flammable Limits in Air % by Volume	Lower	Upper
		N/A		
Extinguisher Media	Use carbon dioxide; dry chemical; water spray or fog.			

SPECIAL FIREFIGHTING PROCEDURES

In fire conditions, wear a NIOSH/MSHA approved self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

(2004 EMERGENCY RESPONSE GUIDEBOOK, RSPA P 5800.9, GIUDE PAGE NO. 154)

UNUSUAL FIRE AND EXPLOSION HAZARDS

Emits toxic gases when heated. Do not release runoff from fire control methods to sewers or waterways.

D.O.T. Sulfamic acid, 8, UN2967, PG III, Ltd Qty 5 Lt.

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V HEALTH HAZARD DATA SS1078

Threshold Limited Value

None established ACGIH 2001. Toxicity Data: Oral-rat: LD50: 3160 mg/kg; Skin-rabbit: 500 mg applied for 24 hour caused severe irritation. Estimated human lethal dose is 0.5 to 5 g/kg for a 150 lb person.

Effects of Overexposure

Inhalation may cause severe irritation and burns of the nose and respiratory tract. Inhalation of high levels can cause pulmonary edema which may be delayed up to 48 hours. Causes severe irritation and burns to the skin and eyes. Scarring may be permanent. Ingestion may cause esophageal or stomach perforation. The mouth and esophagus may appear grayish-white progressing to black with a shrunken and wrinkled texture. Circulatory collapse occurs in extreme cases with clammy skin, weak and rapid pulse, shallow respiration and scanty urine, which if uncorrected can lead to kidney failure and death. Exercise appropriate procedures to minimize potential hazards. Target organs: Respiratory and gastrointestinal tracts, eyes, skin, central nervous and cardiovascular systems, liver, kidneys.

Emergency and First Aid Procedures

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person. **EYES:** Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. **SKIN:** Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SECTION VI REACTIVITY DATA

Stability

Unstable		Conditions to Avoid
Stable	X	Stable when dry but slowly hydrolyzes in solution to form ammonium bisulfate.

Incompatibility (Materials to Avoid)

Undergoes a violent and explosive reaction with chlorine, metal nitrates and heat, metal nitrites and heat and fuming nitric acid.

Hazardous Decomposition Products

Sulfur oxide(s), nitrogen oxide(s), ammonia gas.

Hazardous Polymerization

May Occur	Will Not Occur	Conditions to Avoid
	X	Not applicable.

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled

Recover for use if not contaminated. Avoid dispersion of dust into air. Carefully scoop up and place in a suitable container for disposal. Wash spill area with soap and water.

Waste Disposal Method

Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only.

Dispose of in an approved chemical landfill or contract with a licensed chemical waste disposal agency.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type)

None should be needed in normal laboratory use. If dusty conditions prevail, wear a NIOSH/MSHA-approved dust mask or work in a ventilation hood.

Ventilation

Local Exhaust	Recommended.	Special	No.
Mechanical (General)	Recommended.	Other	No.

Protective Gloves	Rubber.	**Eye Protection**	Chemical safety goggles.

Other Protective Equipment

Smock, apron, ventilation hood, proper gloves, and eye wash station.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing

Keep container tightly closed when not in use.

Store in a cool, dry, well-ventilated area away from incompatible substances. Use only in a well-ventilated area. Wash thoroughly after handling.

Other Precautions

Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Avoid contact with skin, eyes and clothing. Use with adequate ventilation. Avoid ingestion and inhalation. Remove and wash contaminated clothing.

Revision No.	Date	Approved	Chemical Safety Coordinator
1	2/7/14	James A. Bertsch	JAB