

World Headquarters  
Hach Company  
P.O.Box 389  
Loveland, CO USA 80539  
(970) 669-3050

MSDS No: M00007

## MATERIAL SAFETY DATA SHEET

---

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Sulfamic Acid  
**Catalog Number:** 105599

Hach Company  
P.O.Box 389  
Loveland, CO USA 80539  
(970) 669-3050

Emergency Telephone Numbers:  
(Medical and Transportation)  
(303) 623-5716 24 Hour Service  
(515)232-2533 8am - 4pm CST

**MSDS Number:** M00007  
**Chemical Name:** Sulfamic Acid  
**CAS No.:** 5329-14-6  
**Chemical Formula:** H<sub>3</sub>NO<sub>3</sub>S  
**Chemical Family:** Inorganic Acid  
**Hazard:** Causes eye burns.  
**Date of MSDS Preparation:**  
**Day:** 15  
**Month:** October  
**Year:** 2009

---

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

**Other component**

**CAS No.:** Not applicable  
**TSCA CAS Number:** Not applicable  
**Percent Range:** < 1.0  
**Percent Range Units:** weight / weight  
**LD50:** Not applicable  
**LC50:** Not applicable  
**TLV:** Not established  
**PEL:** Not established  
**Hazard:** Any ingredient(s) of this product listed as "Other component(s)" is not considered a health hazard to the user of this product.

**Sulfamic Acid**

**CAS No.:** 5329-14-6  
**TSCA CAS Number:** 5329-14-6  
**Percent Range:** > 99.0  
**Percent Range Units:** weight / weight  
**LD50:** Oral rat LD50 = 3160 mg/kg.  
**LC50:** None reported  
**TLV:** Not established  
**PEL:** Not established  
**Hazard:** Causes eye burns.

---

### 3. HAZARDS IDENTIFICATION

**Emergency Overview:**  
**Appearance:** White crystals  
**Odor:** None

CAUSES EYE BURNS CAUSES SKIN AND RESPIRATORY TRACT IRRITATION

**HMIS:**

**Health:** 2

**Flammability:** 1

**Reactivity:** 1

**Protective Equipment:** X - See protective equipment, Section 8.

**NFPA:**

**Health:** 2

**Flammability:** 1

**Reactivity:** 1

**Symbol:** Not applicable

**Potential Health Effects:**

**Eye Contact:** Causes eye burns.

**Skin Contact:** Causes severe irritation

**Skin Absorption:** None reported

**Target Organs:** None reported

**Ingestion:** May cause: irritation of the mouth and esophagus gastrointestinal irritation

**Target Organs:** None reported

**Inhalation:** May cause: irritation of nose and throat

**Target Organs:** None reported

**Medical Conditions Aggravated:** Pre-existing: Eye conditions Skin conditions Respiratory conditions

**Chronic Effects:** None reported

**Cancer / Reproductive Toxicity Information:**

O.S.H.A. Listed: No

IARC Listed: No

NTP Listed: No

**Additional Cancer / Reproductive Toxicity Information:** Not applicable

**Toxicologically Synergistic Products:** None reported

---

#### 4. FIRST AID

**Eye Contact:** Immediately flush eyes with water for 15 minutes. Call physician.

**Skin Contact (First Aid):** Wash skin with plenty of water for 15 minutes. Call physician immediately.

**Ingestion (First Aid):** Do not induce vomiting. Give 1-2 glasses of water. Call physician immediately. Never give anything by mouth to an unconscious person.

**Inhalation:** Remove to fresh air.

---

#### 5. FIRE FIGHTING MEASURES

**Flammable Properties:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition.

**Flash Point:** Not applicable

**Method:** Not applicable

**Flammability Limits:**

**Lower Explosion Limits:** Not applicable

**Upper Explosion Limits:** Not applicable

**Autoignition Temperature:** Not applicable

**Hazardous Combustion Products:** Toxic fumes of: ammonia nitrogen oxides. sulfur oxides.

**Fire / Explosion Hazards:** May react violently with: chlorine / chlorine compounds metal nitrates metal nitrites nitric acid

**Static Discharge:** None reported.

**Mechanical Impact:** None reported

**Extinguishing Media:** Dry chemical. Water.

**Fire Fighting Instruction:** As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

---

## 6. ACCIDENTAL RELEASE MEASURES

### **Spill Response Notice:**

Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance.

**Containment Technique:** Stop spilled material from being released to the environment. Cover spilled solid material with sand or other inert material.

**Clean-up Technique:** Scoop up spilled material into a large beaker and dissolve with water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Flush reacted material to the drain with a large excess of water. Decontaminate the area of the spill with a soap solution.

**Evacuation Procedure:** Evacuate local area (15 foot radius or as directed by your facility's emergency response plan) when: a pound or more of loose powder is spilled. If conditions warrant, increase the size of the evacuation.

**Special Instructions (for accidental release):** Product is regulated as RCRA hazardous waste.

**304 EHS RQ (40 CFR 355):** Not applicable

**D.O.T. Emergency Response Guide Number:** 154

---

## 7. HANDLING / STORAGE

**Handling:** Avoid contact with eyes skin Do not breathe dust. Maintain general industrial hygiene practices when using this product.

**Storage:** Store away from: oxidizers alkalies chlorine/chlorinated metals Protect from: heat moisture

**Flammability Class:** Not applicable

---

## 8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

**Engineering Controls:** Have an eyewash station nearby. Maintain general industrial hygiene practices when using this product.

### **Personal Protective Equipment:**

**Eye Protection:** safety glasses with top and side shields

**Skin Protection:** disposable latex gloves lab coat

**Inhalation Protection:** adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes skin Do not breathe: dust Wash thoroughly after handling. Keep away from: alkalies metals Protect from: heat moisture

**TLV:** Not established

**PEL:** Not established

---

## 9. PHYSICAL / CHEMICAL PROPERTIES

**Appearance:** White crystals

**Physical State:** Solid

**Molecular Weight:** 97.10

**Odor:** None

**pH:** 1% soln = 1.18

**Vapor Pressure:** Not applicable

**Vapor Density (air = 1):** Not applicable

**Boiling Point:** Not applicable

**Melting Point:** Product decomposes at 205 °C; 401 °F

**Specific Gravity (water = 1):** 2.15

**Evaporation Rate (water = 1):** Not applicable

**Volatile Organic Compounds Content:** Not applicable

**Partition Coefficient (n-octanol / water):** None reported

### **Solubility:**

**Water:** 1:2 ratio @ 80 ° C (176 °F)

**Acid:** Soluble

**Other:** Slightly soluble in alcohol, methanol.

### **Metal Corrosivity:**

**Steel:** 0.814 in/yr

**Aluminum:** 0.212 in/yr

---

## 10. STABILITY / REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.

**Conditions to Avoid:** Heating to decomposition. Excess moisture

**Reactivity / Incompatibility:** May react violently in contact with: chlorates metal nitrates metal nitrites nitric acid  
Incompatible with: alkalies oxidizers

**Hazardous Decomposition:** Heating to decomposition releases toxic and/or corrosive fumes of: ammonia nitrogen oxides sulfur oxides

**Hazardous Polymerization:** Will not occur.

---

## 11. TOXICOLOGICAL INFORMATION

**Product Toxicological Data:**

**LD50:** Oral rat LD50 = 3160 mg/kg.

**LC50:** None reported

**Dermal Toxicity Data:** None reported

**Skin and Eye Irritation Data:** Skin Human 4%/5 days intermittent MILD, Skin rabbit 500 mg/24H SEVERE, Eye rabbit 20mg MODERATE, Eye rabbit 250µg/24H SEVERE.

**Mutation Data:** None reported

**Reproductive Effects Data:** None reported

**Ingredient Toxicological Data:** --

Not applicable

---

## 12. ECOLOGICAL INFORMATION

**Product Ecological Information:** --

No ecological data available for this product.

**Ingredient Ecological Information:** --

Not applicable

---

## 13. DISPOSAL CONSIDERATIONS

**EPA Waste ID Number:** None

**Special Instructions (Disposal):** Dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Open cold water tap completely, slowly pour the reacted material to the drain.

**Empty Containers:** Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.

**NOTICE (Disposal):** These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information.

---

## 14. TRANSPORT INFORMATION

**D.O.T.:**

**D.O.T. Proper Shipping Name:** Sulphamic Acid

--

**DOT Hazard Class:** 8

**DOT Subsidiary Risk:** NA

**DOT ID Number:** UN2967

**DOT Packing Group:** III

**I.C.A.O.:**

**I.C.A.O. Proper Shipping Name:** Sulphamic Acid

--

**ICAO Hazard Class:** 8

**ICAO Subsidiary Risk:** NA

**ICAO ID Number:** UN2967

**ICAO Packing Group:** III

**I.M.O.:**

**I.M.O. Proper Shipping Name:** Sulphamic Acid

--

**I.M.O. Hazard Class:** 8

**I.M.O. Subsidiary Risk:** NA

**I.M.O. ID Number:** UN2967

**I.M.O. Packing Group:** III

**Additional Information:** There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is NOT in a set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

---

## 15. REGULATORY INFORMATION

### **U.S. Federal Regulations:**

**O.S.H.A.:** This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

### **E.P.A.:**

**S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370):** Immediate (Acute) Health Hazard

**S.A.R.A. Title III Section 313 (40 CFR 372):** This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

--

**302 (EHS) TPQ (40 CFR 355):** Not applicable

**304 CERCLA RQ (40 CFR 302.4):** Not applicable

**304 EHS RQ (40 CFR 355):** Not applicable

**Clean Water Act (40 CFR 116.4):** Not applicable

**RCRA:** Contains no RCRA regulated substances.

**C.P.S.C.:** Not applicable

### **State Regulations:**

**California Prop. 65:** No Prop. 65 listed chemicals are present in this product.

**Identification of Prop. 65 Ingredient(s):** Not applicable

**California Perchlorate Rule CCR Title 22 Chap 33:**

**Trade Secret Registry:** Not applicable

### **National Inventories:**

**U.S. Inventory Status:** TSCA Listed: Yes

**TSCA CAS Number:** 5329-14-6

---

## 16. OTHER INFORMATION

**Intended Use:** Laboratory Reagent

**References:** Vendor Information. NIOSH Registry of Toxic Effects of Chemical Substances, 1985-86. Cincinnati: U.S. Department of Health and Human Services, April, 1987. Gosselin, R. E. et al. Clinical Toxicology of Commercial Products, 5th Ed. Baltimore: The Williams and Wilkins Co., 1984. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Association, 1991. Outside Testing. Technical Judgment. The Merck Index, 11th Ed. Rahway, New Jersey: Merck and Co., Inc., 1989. Sax, N. Irving. Dangerous Properties of Industrial Materials, 7th Ed. New York: Van Nostrand Reinhold Co., 1989. Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992.

**Revision Summary:** Updates in Section(s) 14,

---

### **Legend:**

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

**USER RESPONSIBILITY:** Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

**THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.**

