

Sulfamic Acid MSDS

1. Product Name and Identification

Product Name: [Sulfamic Acid](#)

Synonyms: Amidosulfonic Acid, Aminosulfonic Acid, Sulfamidic Acid

CAS Number: 5329-14-6

Molecular Formula: $\text{NH}_2\text{SO}_3\text{H}$

Manufacturer's Name: [Fill in as Applicable]

Emergency Contact: [Fill in Emergency Number]

2. Composition/Ingredients

- **Chemical Name:** Sulfamic Acid
- **CAS Number:** 5329-14-6
- **Purity:** $\geq 99\%$
- **EC Number:** 226-218-8
- **Hazardous Components:** None beyond applicable thresholds under normal handling conditions.

3. Hazards Identification

Classification:

- Skin corrosion/irritation (Category 2)
- Eye damage/irritation (Category 1)
- Harmful to aquatic life (Category 3)

Label Elements:

- **Signal Word:** Danger
- **Hazard Statements:**
 - Causes severe eye damage.
 - Harmful if swallowed.
 - Causes skin irritation.
 - Harmful to aquatic life with long-lasting effects.
- **Precautionary Statements:**
 - Avoid contact with skin and eyes.
 - Wash hands thoroughly after handling.
 - Do not release into the environment.

Potential Health Effects:

- **Eye Contact:** Causes severe irritation and potential damage to eyes.

- **Skin Contact:** May cause redness, irritation, or dryness.
- **Inhalation:** May irritate the respiratory tract with prolonged exposure.
- **Ingestion:** Harmful if swallowed; may cause gastrointestinal discomfort.

4. First Aid Measures

Eyes: Rinse cautiously with water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

Skin: Wash affected area with plenty of soap and water. Remove contaminated clothing. Get medical attention if irritation persists.

Inhalation: Move to fresh air immediately. If symptoms develop, seek medical assistance.

Ingestion: Rinse mouth thoroughly. Do NOT induce vomiting. Consult a physician immediately.

5. Handling and Storage

Handling:

- Avoid creating dust or breathing dust.
- Handle with protective equipment and in a well-ventilated area.
- Avoid contact with skin, eyes, and clothing.

Storage:

- Store in a cool, dry, and well-ventilated place.
- Keep containers tightly closed and away from moisture or incompatible materials, such as strong bases or oxidizing agents.
- Ensure containers are clearly labeled.

6. Exposure Controls/Personal Protection

Exposure Limits: None specifically established for Sulfamic Acid. Manage exposure using general workplace safety practices.

Engineering Controls:

- Use local exhaust ventilation to minimize dust exposure.

Personal Protective Equipment (PPE):

- **Eye Protection:** Chemical safety goggles.
- **Skin Protection:** Chemical-resistant gloves suitable for handling acids.
- **Respiratory Protection:** Use a dust mask or respirator when exposure limits may be exceeded.
- **Hygiene Measures:** Wash hands and exposed skin after handling. Avoid eating, drinking, or smoking in work areas.

7. Physical and Chemical Properties

- **Appearance:** White crystalline solid
- **Odor:** Odorless
- **Melting Point:** 205°C (decomposes)
- **Boiling Point:** Not applicable
- **Solubility in Water:** Soluble (~200 g/L at 20°C)
- **Density:** 2.1 g/cm³ at 25°C
- **pH:** ~1.2 (1% solution)
- **Vapor Pressure:** Negligible
- **Flash Point:** Non-combustible

8. Stability and Reactivity

Stability: Stable under normal temperatures and pressures.

Hazardous Reactions: May react with strong bases and oxidizing agents to release heat or potentially hazardous products.

Conditions to Avoid: Moisture, high humidity, and extreme heat.

Incompatible Materials: Strong acids, strong alkalis, oxidizing agents, and chlorinated compounds.

Hazardous Decomposition Products: Sulfur oxides and ammonia may be released upon decomposition.

9. Toxicological Information

Acute Toxicity:

- **Oral (LD50):** ~3160 mg/kg (rat)
- **Dermal:** Not classified as acutely toxic.

Chronic Toxicity: Prolonged or repeated exposure may cause skin or respiratory irritation.

Routes of Exposure: Skin and eye contact, inhalation of dust, accidental ingestion.

Symptoms of Overexposure: Skin irritation, respiratory discomfort, and eye irritation.

Sensitization: No data available to classify as a sensitizer.

10. Disposal Considerations

Waste Disposal:

- Dispose of material according to local, regional, and national regulations.
- Do not dispose of into drains, soil, or watercourses.

Empty Containers: Ensure proper cleaning before disposal or recycling. Follow container disposal regulations specific to your locality.
