**Sulfamic Acid, ACS**

**Safety Data Sheet**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**Issue date:** 11/19/2013  
**Revision date:** 07/22/2020  
**Supersedes:** 04/25/2018  
**Version:** 1.3

### SECTION 1: Identification

#### 1.1. Identification

<table>
<thead>
<tr>
<th>Product form</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance name</td>
<td>Sulfamic Acid, ACS</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>5329-14-6</td>
</tr>
<tr>
<td>Product code</td>
<td>LC25420</td>
</tr>
<tr>
<td>Formula</td>
<td>H3NO3S</td>
</tr>
<tr>
<td>Synonyms</td>
<td>amidosulfonic acid / sulfamidic acid</td>
</tr>
</tbody>
</table>

#### 1.2. Recommended use and restrictions on use

| Use of the substance/mixture | Laboratory chemical  
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended use</td>
<td>Laboratory chemicals</td>
</tr>
<tr>
<td>Restrictions on use</td>
<td>Not for food, drug or household use</td>
</tr>
</tbody>
</table>

#### 1.3. Supplier

LabChem, Inc.  
1010 Jackson's Pointe Ct.  
Zelienople, PA 16063 - USA  
T 412-826-6230 - F 724-473-0647  
info@labchem.com - www.labchem.com

#### 1.4. Emergency telephone number

| Emergency number | CHEMTREC: 1-800-424-9300 or +1-703-741-5970 |

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

**GHS US classification**

<table>
<thead>
<tr>
<th>Skin corrosion/irritation Category 1C</th>
<th>H314 - Causes severe skin burns and eye damage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/eye irritation Category 1</td>
<td>H318 - Causes serious eye damage</td>
</tr>
<tr>
<td>Hazardous to the aquatic environment - Acute Hazard Category 3</td>
<td>H402 - Harmful to aquatic life</td>
</tr>
</tbody>
</table>

Full text of H statements: see section 16

#### 2.2. GHS Label elements, including precautionary statements

**GHS US labeling**

<table>
<thead>
<tr>
<th>Hazard pictograms (GHS US)</th>
<th></th>
</tr>
</thead>
</table>

**Signal word (GHS US)**: Danger

<table>
<thead>
<tr>
<th>Hazard statements (GHS US)</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Precautionary statements (GHS US)</th>
<th></th>
</tr>
</thead>
</table>

- P260 - Do not breathe dust.  
- P264 - Wash exposed skin thoroughly after handling.  
- P273 - Avoid release to the environment.  
- P280 - Wear protective gloves, eye protection, protective clothing.  
- P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
- P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
- P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
- P305+P351+P335 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
- P310 - Immediately call a poison center or doctor/physician.  
- P363 - Wash contaminated clothing before reuse.  
- P405 - Store locked up.  
- P501 - Dispose of contents/container to comply with local, state and federal regulations.
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2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification: None.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type: Mono-constituent

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfamic Acid, ACS</td>
<td>(CAS-No.) 5329-14-6</td>
<td>100</td>
<td>Skin Corr. 1C, H314</td>
</tr>
<tr>
<td>(Main constituent)</td>
<td></td>
<td></td>
<td>Eye Dam. 1, H318</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Acute 3, H402</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures


First-aid measures after inhalation: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Doctor: administration of corticoid spray.

First-aid measures after skin contact: Wash immediately with lots of water. Do not apply (chemical) neutralizing agents without medical advice. Take victim to a doctor if irritation persists.

First-aid measures after eye contact: Rinse immediately with plenty of water. Do not apply (chemical) neutralizing agents without medical advice. Remove contact lenses, if present and easy to do. Continue rinsing. Take victim to an ophthalmologist if irritation persists.

First-aid measures after ingestion: Rinse mouth with water. Do not apply (chemical) neutralizing agents without medical advice. Do not induce vomiting. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Take the container/vomit to the doctor/hospital.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms: Practically non-toxic if swallowed (LD50 oral 2000/5000 mg/kg). Causes skin irritation. Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg). Causes serious eye irritation.


Symptoms/effects after skin contact: Tingling/irritation of the skin. Red skin. ON CONTINUOUS EXPOSURE/CONTACT: Caustic burns/corrosion of the skin.

Symptoms/effects after eye contact: Redness of the eye tissue. Visual disturbances. Irritation of the eye tissue. ON CONTINUOUS EXPOSURE/CONTACT: Corrosion of the eye tissue.


Chronic symptoms: No effects known.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Adapt extinguishing media to the environment for surrounding fires.

5.2. Specific hazards arising from the chemical

Fire hazard: DIRECT FIRE HAZARD. Non combustible. INDIRECT FIRE HAZARD. Reactions involving a fire hazard: see "Reactivity Hazard".

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Explosion hazard : DIRECT EXPLOSION HAZARD. No direct explosion hazard. INDIRECT EXPLOSION HAZARD. Reactions with explosion hazards: see "Reactivity Hazard".

Hazardous decomposition products in case of fire : On burning: release of toxic and corrosive gases/vapours (nitrous vapours, sulphur oxides).

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.


SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel


Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Do not breathe dust.

Emergency procedures : Stop release. Ventilate area.

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

For containment : Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Hazardous reaction: measure explosive gas-air mixture. Reaction: dilute combustible gas/vapour with water curtain. Knock down/dilute dust cloud with water spray.

Methods for cleaning up : Prevent dust cloud formation. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Spill must not return in its original container. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep container tightly closed.

Hygiene measures : Observe normal hygiene standards.

7.2. Conditions for safe storage, including any incompatibilities


Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources.

Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. strong acids. (strong) bases. halogens. water/moisture.

Storage area : Store in a dry area. Meet the legal requirements.

Special rules on packaging : SPECIAL REQUIREMENTS: closing. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials : SUITABLE MATERIAL: cardboard. plastics.
SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Sulfamic Acid, ACS (5329-14-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No additional information available</td>
</tr>
</tbody>
</table>

8.2. Appropriate engineering controls

Appropriate engineering controls: Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:


Materials for protective clothing:

GIVE GOOD RESISTANCE: neoprene. PVC. nitrile rubber

Hand protection:

Protective gloves against chemicals (EN 374)

Eye protection:

Face shield. In case of dust production: protective goggles

Skin and body protection:

Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing

Respiratory protection:

Dust production: dust mask with filter type P2

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Crystalline solid, Crystalline powder.</td>
</tr>
<tr>
<td>Color</td>
<td>Colourless or white</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>1.2 (1 %)</td>
</tr>
<tr>
<td>Melting point</td>
<td>205 °C (1013 hPa)</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>0.008 hPa (20 °C)</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>2.15 (20 °C)</td>
</tr>
<tr>
<td>Specific gravity / density</td>
<td>2120 kg/m³</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>97.1 g/mol</td>
</tr>
</tbody>
</table>
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Solubility: Decomposes on exposure to water. Water: 18.1 g/100ml (20 °C, EU Method A.6: Water solubility)

Log Pow: 0.1 (Experimental value, EPA OPPTS 830.7550: Partition Coefficient (n-octanol/water), Shake Flask Method, 20 °C)

Auto-ignition temperature: No data available
Decomposition temperature: > 205 °C (1013 hPa)
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosion limits: No data available
Explosive properties: No data available
Oxidizing properties: No data available

9.2. Other information
VOC content: Not applicable (inorganic)
Other properties: Substance has acid reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity
Reacts violently with (strong) oxidizers. Reacts exothermically with (some) bases. Decomposes slowly on exposure to water (moisture): release of corrosive products. This reaction is accelerated on exposure to temperature rise.

10.2. Chemical stability
Unstable on exposure to moisture.

10.3. Possibility of hazardous reactions
Not established.

10.4. Conditions to avoid
Incompatible materials.

10.5. Incompatible materials

10.6. Hazardous decomposition products
Sulfur compounds.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity (oral): Not classified
Acute toxicity (dermal): Not classified
Acute toxicity (inhalation): Not classified

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<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral</td>
<td>2065 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Female, Experimental value, 10 % aqueous solution, Oral, 7 day(s))</td>
</tr>
<tr>
<td>LD50 dermal</td>
<td>&gt; 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>2065 mg/kg body weight</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Causes severe skin burns. pH: 1.2 (1 %)
Serious eye damage/irritation: Causes serious eye damage. pH: 1.2 (1 %)
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
STOT-single exposure: Not classified
STOT-repeated exposure: Not classified
Aspiration hazard: Not classified
Viscosity, kinematic: No data available
Likely routes of exposure: Skin and eye contact. Inhalation.
Potential Adverse human health effects and symptoms: Practically non-toxic if swallowed (LD50 oral 2000/5000 mg/kg). Causes skin irritation. Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg). Causes serious eye irritation.
Symptoms/effects after skin contact: Tingling/irritation of the skin. Red skin. ON CONTINUOUS EXPOSURE/CONTACT: Caustic burns/corrosion of the skin.
Symptoms/effects after eye contact: Redness of the eye tissue. Visual disturbances. Irritation of the eye tissue. ON CONTINUOUS EXPOSURE/CONTACT: Corrosion of the eye tissue.
Chronic symptoms: No effects known.

SECTION 12: Ecological information

12.1. Toxicity
Ecology - air: Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

<table>
<thead>
<tr>
<th>Sulfamic Acid, ACS (5329-14-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
</tr>
<tr>
<td>ErC50 (algae)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
Sulfamic Acid, ACS (5329-14-6)
Persistence and degradability: Biodegradability: not applicable.
Chemical oxygen demand (COD): Not applicable
ThOD: Not applicable
BOD (% of ThOD): Not applicable

12.3. Bioaccumulative potential
Sulfamic Acid, ACS (5329-14-6)
Log Pow: 0.1 (Experimental value, EPA OPPTS 830.7550: Partition Coefficient (n-octanol/water), Shake Flask Method, 20 °C)
Bioaccumulative potential: Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil
Sulfamic Acid, ACS (5329-14-6)
Ecology - soil: No (test)data on mobility of the substance available. Toxic to flora.

12.5. Other adverse effects
No additional information available
 SECTION 13: Disposal considerations

13.1. Disposal methods

Waste disposal recommendations: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Remove for physico-chemical/biological treatment.


SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description: UN2967 Sulfamic acid, 8, III
UN-No. (DOT): UN2967
Proper Shipping Name (DOT): Sulfamic acid
Transport hazard class(es) (DOT): 8 - Class 8 - Corrosive material 49 CFR 173.136
Packing group (DOT): III - Minor Danger
Hazard labels (DOT): 8 - Corrosive

DOT Packaging Non Bulk (49 CFR 173.xxx): 213
DOT Packaging Bulk (49 CFR 173.xxx): 240
DOT Special Provisions (49 CFR 172.102): IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).
IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner.
T1 - 1.5 178.274(d)(2) Normal............. 178.275(d)(2)
TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.

DOT Packaging Exceptions (49 CFR 173.xxx): 154
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27): 25 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75): 100 kg
DOT Vessel Stowage Location: A - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel.
Other information: No supplementary information available.
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SECTION 15: Regulatory information

15.1. US Federal regulations

Sulfamic Acid, ACS (5329-14-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes

Health hazard - Skin corrosion or Irritation
Health hazard - Serious eye damage or eye irritation

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

National regulations
No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>H314</th>
<th>Causes severe skin burns and eye damage</th>
</tr>
</thead>
<tbody>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H402</td>
<td>Harmful to aquatic life</td>
</tr>
</tbody>
</table>

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.

Hazard Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Personal protection : F

F - Safety glasses, Gloves, Synthetic apron, Dust respirator

SDS US LabChem

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