

## Sulfamic Acid

Version number: 2.0

### SECTION 1: Identification

#### 1.1 Product identifier

|                                 |                             |
|---------------------------------|-----------------------------|
| Identification of the substance | sulfamic acid               |
| Trade name                      | <b><u>Sulfamic Acid</u></b> |
| CAS number                      | 5329-14-6                   |

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

|                          |                                                                    |
|--------------------------|--------------------------------------------------------------------|
| Relevant identified uses | Chemicals for various applications<br>Washing and cleaning product |
|--------------------------|--------------------------------------------------------------------|

#### 1.3 Details of the supplier of the safety data sheet

|                                |                              |
|--------------------------------|------------------------------|
| Valudor Products, LLC          | Telephone: +1 (760) 635 8500 |
| 179 Calle Magdalena Suite 100  | e-mail: info@valudor.com     |
| Encinitas, California CA 92024 | Website: www.valudor.com     |
| United States                  |                              |

#### 1.4 Emergency telephone number

|                                                       |                         |
|-------------------------------------------------------|-------------------------|
| Emergency information                                 | 800-535-5053 (Infotrac) |
| As above or nearest toxicological information center. |                         |

### SECTION 2: Hazard(s) identification

#### 2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

| Classification |                                   |          |                           |                   |
|----------------|-----------------------------------|----------|---------------------------|-------------------|
| Section        | Hazard class                      | Category | Hazard class and category | Hazard state-ment |
| A.2            | skin corrosion/irritation         | 2        | Skin Irrit. 2             | H315              |
| A.3            | serious eye damage/eye irritation | 2        | Eye Irrit. 2              | H319              |
| A.6            | carcinogenicity                   | 1A       | Carc. 1A                  | H350              |

For full text of abbreviations: see SECTION 16

#### 2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

|             |        |
|-------------|--------|
| Signal word | danger |
|-------------|--------|

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## Pictograms

GHS07, GHS08



## Hazard statements

|      |                                |
|------|--------------------------------|
| H315 | Causes skin irritation.        |
| H319 | Causes serious eye irritation. |
| H350 | May cause cancer.              |

## Precautionary statements

|                |                                                                                                                                  |
|----------------|----------------------------------------------------------------------------------------------------------------------------------|
| P201           | Obtain special instructions before use.                                                                                          |
| P280           | Wear protective gloves/protective clothing/eye protection/face protection.                                                       |
| P302+P352      | If on skin: Wash with plenty of water.                                                                                           |
| P305+P351+P338 | If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P308+P313      | If exposed or concerned: Get medical advice/attention.                                                                           |
| P321           | Specific treatment (see on this label).                                                                                          |
| P337+P313      | If eye irritation persists: Get medical advice/attention.                                                                        |
| P362+P364      | Take off contaminated clothing and wash it before reuse.                                                                         |
| P405           | Store locked up.                                                                                                                 |
| P501           | Dispose of contents/container to an authorized waste treatment facility.                                                         |

## 2.3 Other hazards

### Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|                   |                                  |
|-------------------|----------------------------------|
| Name of substance | sulfamic acid                    |
| Identifiers       |                                  |
| CAS No            | 5329-14-6                        |
| Molecular formula | H <sub>3</sub> NO <sub>3</sub> S |
| Molar mass        | 97.09 g/mol                      |

## SECTION 4: First-aid measures

### 4.1 Description of first-aid measures

#### General notes

Self-protection of the first aider.  
Remove affected person from the danger area and lay down.  
Do not leave affected person unattended.

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Take off immediately all contaminated clothing.

In all cases of doubt, or when symptoms persist, seek medical advice.

## **Following inhalation**

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

## **Following skin contact**

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap.

If skin irritation occurs: Get medical advice/attention.

## **Following eye contact**

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Remove contact lenses, if present and easy to do. Continue rinsing.

## **Following ingestion**

Rinse mouth. Do not induce vomiting.

Get medical advice/attention.

## **Notes for the doctor**

None.

## **4.2 Most important symptoms and effects, both acute and delayed**

This information is not available.

## **4.3 Indication of any immediate medical attention and special treatment needed**

None.

## **SECTION 5: Fire-fighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

coordinate firefighting measures to the fire surroundings

### **5.2 Special hazards arising from the substance or mixture**

Hazardous decomposition products: Section 10.

#### **Hazardous combustion products**

nitrogen oxides (NO<sub>x</sub>), sulfur oxides (SO<sub>x</sub>), toxic gases/vapours

### **5.3 Advice for firefighters**

Coordinate firefighting measures to the fire surroundings.

Do not allow firefighting water to enter drains or water courses.

Collect contaminated firefighting water separately.

Fight fire with normal precautions from a reasonable distance.

#### **Special protective equipment for firefighters**

chemical protection suit, self-contained breathing apparatus (SCBA)

## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

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## **For non-emergency personnel**

Remove persons to safety.

Ventilate affected area.

Control of dust.

Do not breathe dust.

Do not get in eyes, on skin, or on clothing.

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

## **For emergency responders**

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

## **6.2 Environmental precautions**

Keep away from drains, surface and ground water.

Retain contaminated washing water and dispose of it.

## **6.3 Methods and material for containment and cleaning up**

### **Advice on how to contain a spill**

Covering of drains.

Take up mechanically.

### **Advice on how to clean up a spill**

Take up mechanically.

Collect spillage.

### **Other information relating to spills and releases**

Place in appropriate containers for disposal.

Ventilate affected area.

## **6.4 Reference to other sections**

Hazardous combustion products: see section 5.

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

Do not get in eyes, on skin, or on clothing.

Do not breathe dust.

#### **Measures to prevent fire as well as aerosol and dust generation**

Use local and general ventilation.

Removal of dust deposits.

#### **Specific notes/details**

Dust deposits may accumulate on all deposition surfaces in a technical room.

#### **Handling of incompatible substances or mixtures**

Do not mix with alkali.

Do not mix with oxidizer

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## Measures to protect the environment

Avoid release to the environment.

Do not empty into drains; dispose of this material and its container at hazardous or special waste collection point.

## Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.

Remove contaminated clothing and protective equipment before entering eating areas.

Do not breathe dust.

Do not get in eyes, on skin, or on clothing.

Wash thoroughly after handling.

Preventive skin protection (barrier creams/ointments) is recommended.

## 7.2 Conditions for safe storage, including any incompatibilities

### Flammability hazards

None.

### Incompatible substances or mixtures

Incompatible materials: see section 10.

### Protect against external exposure, such as

heat

### Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

### Ventilation requirements

Provision of sufficient ventilation.

### Specific designs for storage rooms or vessels

Keep container tightly closed and in a well-ventilated place.

### Packaging compatibilities

Keep only in original container.

Only packagings which are approved (e.g. acc. to DOT) may be used.

## 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

The following constituents are the only constituents of the product which have a PEL, a TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

| Occupational exposure limit values (Workplace Exposure Limits) |                                  |        |            |           |             |            |              |          |              |
|----------------------------------------------------------------|----------------------------------|--------|------------|-----------|-------------|------------|--------------|----------|--------------|
| Country                                                        | Name of agent                    | CAS No | Identifier | TWA [ppm] | TWA [mg/m³] | STEL [ppm] | STEL [mg/m³] | Notation | Source       |
| US                                                             | Particulates not otherwise regu- | -      | PEL (CA)   | -         | 10          | -          | -            | dust     | Cal/OSHA PEL |

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| Occupational exposure limit values (Workplace Exposure Limits) |                                              |        |            |           |                          |            |                           |                 |                  |
|----------------------------------------------------------------|----------------------------------------------|--------|------------|-----------|--------------------------|------------|---------------------------|-----------------|------------------|
| Country                                                        | Name of agent                                | CAS No | Identifier | TWA [ppm] | TWA [mg/m <sup>3</sup> ] | STEL [ppm] | STEL [mg/m <sup>3</sup> ] | Notation        | Source           |
|                                                                | lated                                        |        |            |           |                          |            |                           |                 |                  |
| US                                                             | Particulates not otherwise regulated         | -      | PEL (CA)   | -         | 5                        | -          | -                         | r               | Cal/OSHA PEL     |
| US                                                             | particulates not otherwise classified (PNOC) | -      | PEL        | -         | 15                       | -          | -                         | dust            | 29 CFR 1910.1000 |
| US                                                             | particulates not otherwise classified (PNOC) | -      | PEL        | 1,765     | -                        | -          | -                         | partml, dust    | 29 CFR 1910.1000 |
| US                                                             | particulates not otherwise classified (PNOC) | -      | PEL        | 529.5     | -                        | -          | -                         | partml, r, dust | 29 CFR 1910.1000 |
| US                                                             | particulates not otherwise classified (PNOC) | -      | PEL        | -         | 5                        | -          | -                         | r               | 29 CFR 1910.1000 |
| US                                                             | particulate not otherwise regulated          | -      | REL        | -         | -                        | -          | -                         | appx-D          | NIOSH REL        |

## Notation

appx-D see Appendix D - Substances with No Established RELs

dust as dust

partml particles/ml

r respirable fraction

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

## 8.2 Exposure controls

### Appropriate engineering controls

Use local and general ventilation.

### Individual protection measures (personal protective equipment)

#### Eye/face protection

Wear eye/face protection.

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## Hand protection

| Protective gloves                        |                          |                                          |
|------------------------------------------|--------------------------|------------------------------------------|
| Material                                 | Material thickness       | Breakthrough times of the glove material |
| IIR: isobutene-isoprene (butyl) rubber   | ≥ 0,5 mm                 | >480 minutes (permeation: level 6)       |
| NR: natural rubber, latex                | ≥ 0,5 mm                 | >480 minutes (permeation: level 6)       |
| CR: chloroprene (chlorobutadiene) rubber | ≥ 0,5 mm                 | >480 minutes (permeation: level 6)       |
| NBR: acrylonitrile-butadiene rubber      | ≥ 0,11 mm                | >480 minutes (permeation: level 6)       |
| PVC: polyvinyl chloride                  | no information available | no information available                 |
| FKM: fluoro-elastomer                    | no information available | no information available                 |

Wear suitable gloves.

Chemical protection gloves are suitable, which are tested according to EN 374.

Check leak-tightness/impermeability prior to use.

For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

## Body protection

Protective clothing for use against solid particulates.

## Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Particle filter device (DIN EN 143).

## Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

|                |                |
|----------------|----------------|
| Physical state | solid          |
| Color          | white          |
| Odor           | characteristic |
| Odor threshold | not determined |

#### Other safety parameters

|                                                    |                                     |
|----------------------------------------------------|-------------------------------------|
| pH (value)                                         | these information are not available |
| Melting point/freezing point                       | 205 °C<br>slow decomposition        |
| Boiling point or initial boiling point and boiling | not determined                      |

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## range

|                                        |                                     |
|----------------------------------------|-------------------------------------|
| <b>Flash point</b>                     | not applicable                      |
| <b>Evaporation rate</b>                | not determined                      |
| <b>Flammability (solid, gas)</b>       | non-combustible                     |
| <b>Explosive limits</b>                | not determined                      |
| <b>Explosion limits of dust clouds</b> | not determined                      |
| <b>Vapor pressure</b>                  | 0.8 Pa at 20 °C<br>2.5 Pa at 100 °C |

## Density and/or relative density

|                  |                                                 |
|------------------|-------------------------------------------------|
| Density          | 2.126 g/cm <sup>3</sup> at 25 °C<br>(ECHA Chem) |
| Relative density | 2.13 at 20 °C (water = 1)                       |

## Solubility(ies)

|                  |                    |
|------------------|--------------------|
| Water solubility | 181.4 g/l at 20 °C |
|------------------|--------------------|

## Partition coefficient

|                           |                             |
|---------------------------|-----------------------------|
| n-octanol/water (log KOW) | not relevant<br>(inorganic) |
|---------------------------|-----------------------------|

|                                  |              |
|----------------------------------|--------------|
| <b>Auto-ignition temperature</b> | not relevant |
|----------------------------------|--------------|

|                                  |         |
|----------------------------------|---------|
| <b>Decomposition temperature</b> | >205 °C |
|----------------------------------|---------|

|                  |                         |
|------------------|-------------------------|
| <b>Viscosity</b> | not relevant<br>(solid) |
|------------------|-------------------------|

|                             |      |
|-----------------------------|------|
| <b>Explosive properties</b> | none |
|-----------------------------|------|

|                             |      |
|-----------------------------|------|
| <b>Oxidizing properties</b> | none |
|-----------------------------|------|

|                                                                 |                                                                |
|-----------------------------------------------------------------|----------------------------------------------------------------|
| <b>Information for relevant hazard classes according to GHS</b> | hazard classes acc. to GHS (physical hazards):<br>not relevant |
|-----------------------------------------------------------------|----------------------------------------------------------------|

|                              |                                    |
|------------------------------|------------------------------------|
| <b>9.2 Other information</b> | there is no additional information |
|------------------------------|------------------------------------|

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

May be corrosive to metals.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

See below "Conditions to avoid".

### 10.3 Possibility of hazardous reactions

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Do not mix with alkali.

## 10.4 Conditions to avoid

Control of dust.

## 10.5 Incompatible materials

bases, light metals (due to the release of hydrogen in an acid/alkaline medium), nitrites and their mixtures

Release of toxic materials with:

Sulphides, cyanides

Liberation of excessive heat with:

bases

## 10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

If not otherwise specified the classification is based on:

Animal studies; Evidence from any other toxicity tests; Expert judgment (weight of evidence determination).

#### Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

##### Acute toxicity

Shall not be classified as acutely toxic (oral).

Shall not be classified as acutely toxic (dermal).

##### Inhalation.

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

| Exposure route | Endpoint | Value        | Species     | Method             | Source |
|----------------|----------|--------------|-------------|--------------------|--------|
| oral           | LD50     | 2,065 mg/kg  | rat, female | OECD Guideline 401 | ECHA   |
| dermal         | LD0      | >2,000 mg/kg | rat         | OECD Guideline 402 | ECHA   |

##### Skin corrosion/irritation

Causes skin irritation.

(1272/2008/EC, Annex VI)

##### Serious eye damage/eye irritation

Causes serious eye irritation.

(1272/2008/EC, Annex VI)

##### Respiratory or skin sensitization

##### Skin sensitization

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Classification could not be established because:  
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Respiratory sensitization

Classification could not be established because:  
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.  
(ECHA, OECD Guideline 471, OECD Guideline 472, OECD Guideline 474, OECD Guideline 476, OECD Guideline 487)

## Carcinogenicity

May cause cancer.

## IARC Monographs

| IARC Monographs on the Evaluation of Carcinogenic Risks to Humans |        |                |        |
|-------------------------------------------------------------------|--------|----------------|--------|
| Name of substance                                                 | CAS No | Classification | Number |
| sulfamic acid                                                     |        | 1              | -      |

### Legend

1 Carcinogenic to humans

## National Toxicology Program (United States)

not listed

## OSHA Carcinogens

Not listed.

## Reproductive toxicity

Shall not be classified as a reproductive toxicant.  
(ECHA, OECD Guideline 414)

## Specific target organ toxicity - single exposure

Classification could not be established because:  
Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## Specific target organ toxicity - repeated exposure

| Exposure route | Endpoint | Value              | Exposure time | Species     | Method             |
|----------------|----------|--------------------|---------------|-------------|--------------------|
| oral           | NOAEL    | 929 mg/kg bw/day   | 90 d          | rat, male   | OECD Guideline 408 |
| oral           | NOAEL    | 1,004 mg/kg bw/day | 90 d          | rat, female | OECD Guideline 408 |

## Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

## 11.2 Other information

There is no additional information.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Aquatic toxicity (acute)

Based on available data, the classification criteria are not met.

| Endpoint | Exposure time | Value     | Species                               | Method             | Source    |
|----------|---------------|-----------|---------------------------------------|--------------------|-----------|
| LC50     | 96 h          | 70.3 mg/l | fathead minnow (Pimephales promelas)  | OECD Guideline 203 | ECHA Chem |
| EC50     | 48 h          | 71.6 mg/l | daphnia magna                         | OECD Guideline 202 | ECHA Chem |
| ErC50    | 72 h          | 48 mg/l   | green algae (Desmodesmus subspicatus) | OECD Guideline 201 | ECHA      |
| EbC50    | 72 h          | 33.8 mg/l | green algae (Desmodesmus subspicatus) | OECD Guideline 201 | ECHA      |

#### Aquatic toxicity (chronic)

Based on available data, the classification criteria are not met.

| Endpoint               | Exposure time | Value     | Species                               | Method             | Source    |
|------------------------|---------------|-----------|---------------------------------------|--------------------|-----------|
| EC50                   | 21 d          | >60 mg/l  | daphnia magna                         | OECD Guideline 211 | ECHA Chem |
| EC50                   | 3 h           | >200 mg/l | activated sludge                      | OECD Guideline 209 | ECHA      |
| NOEC                   | 72 h          | 18 mg/l   | green algae (Desmodesmus subspicatus) | OECD Guideline 201 | ECHA Chem |
| NOEC                   | 21 d          | 19 mg/l   | daphnia magna                         | OECD Guideline 211 | ECHA Chem |
| NOEC                   | 34 d          | ≥60 mg/l  | zebra fish (Danio rerio)              | OECD Guideline 210 | ECHA Chem |
| NOEC                   | 3 h           | >200 mg/l | activated sludge                      | OECD Guideline 209 | ECHA      |
| LOEC                   | 21 d          | 34 mg/l   | daphnia magna                         | OECD Guideline 211 | ECHA Chem |
| growth (EbCx) 10%      | 72 h          | 13.3 mg/l | green algae (Desmodesmus subspicatus) | OECD Guideline 201 | ECHA      |
| growth rate (ErCx) 10% | 72 h          | 29.5 mg/l | green algae (Desmodesmus subspicatus) | OECD Guideline 201 | ECHA      |

### 12.2 Persistence and degradability

#### Biodegradation

The study does not need to be conducted because the substance is inorganic.

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## Persistence

The study does not need to be conducted because the substance is inorganic.

## 12.3 Bioaccumulative potential

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

**n-octanol/water (log KOW)**

0.1 (20 °C)  
(calculated value)

## 12.4 Mobility in soil

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

## 12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

## 12.6 Other adverse effects

Data are not available.

## Remarks

None.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packages

Completely emptied packages can be recycled.  
Handle contaminated packages in the same way as the substance itself.

#### Remarks

Please consider the relevant national or regional provisions.

## SECTION 14: Transport information

### 14.1 UN number

|                  |        |
|------------------|--------|
| <b>DOT</b>       | UN2967 |
| <b>IMDG-Code</b> | UN2967 |
| <b>ICAO-TI</b>   | UN2967 |

### 14.2 UN proper shipping name

|                  |                |
|------------------|----------------|
| <b>DOT</b>       | Sulphamic acid |
| <b>IMDG-Code</b> | SULPHAMIC ACID |
| <b>ICAO-TI</b>   | Sulphamic acid |

### 14.3 Transport hazard class(es)

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|             |                                                                                            |                                |
|-------------|--------------------------------------------------------------------------------------------|--------------------------------|
|             | <b>DOT</b>                                                                                 | 8                              |
|             | <b>IMDG-Code</b>                                                                           | 8                              |
|             | <b>ICAO-TI</b>                                                                             | 8                              |
| <b>14.4</b> | <b>Packing group</b>                                                                       |                                |
|             | <b>DOT</b>                                                                                 | III                            |
|             | <b>IMDG-Code</b>                                                                           | III                            |
|             | <b>ICAO-TI</b>                                                                             | III                            |
| <b>14.5</b> | <b>Environmental hazards</b>                                                               | -                              |
| <b>14.6</b> | <b>Special precautions for user</b>                                                        | -                              |
| <b>14.7</b> | <b>Transport in bulk according to IMO instruments</b>                                      | -                              |
| <b>14.8</b> | <b><u>Information for each of the UN Model Regulations</u></b>                             |                                |
|             | <b>Transport of dangerous goods by road or rail (49 CFR US DOT) Additional information</b> |                                |
|             | Particulars in the shipper's declaration                                                   | UN2967, Sulphamic acid, 8, III |
|             | Danger label(s)                                                                            | 8                              |
|             |         |                                |
|             | Special provisions (SP)                                                                    | IB8, IP3, T1, TP33             |
|             | ERG No                                                                                     | 154                            |
|             | <b>International Maritime Dangerous Goods Code (IMDG) Additional information</b>           |                                |
|             | Marine pollutant                                                                           | -                              |
|             | Danger label(s)                                                                            | 8                              |
|             |         |                                |
|             | Excepted quantities (EQ)                                                                   | E1                             |
|             | Limited quantities (LQ)                                                                    | 5 kg                           |
|             | EmS                                                                                        | F-A, S-B                       |
|             | Stowage category                                                                           | A                              |
|             | Segregation group                                                                          | 1 - Acids.                     |
|             | <b>International Civil Aviation Organization (ICAO-IATA/DGR) Additional information</b>    |                                |
|             | Danger label(s)                                                                            | 8                              |

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Excepted quantities (EQ)

E1

Limited quantities (LQ)

5 kg

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations specific for the product in question

#### National regulations (United States)

##### Toxic Substance Control Act (TSCA)

Substance is listed (ACTIVE)

##### Superfund Amendment and Reauthorization Act (SARA TITLE III )

##### The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

Not listed

##### Specific Toxic Chemical Listings (EPCRA Section 313)

Not listed

##### Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

##### List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Not listed

##### Clean Air Act

Not listed

##### Right to Know Hazardous Substance List

##### Toxic or Hazardous Substance List (MA-TURA)

Not listed

##### Hazardous Substances List (MN-ERTK)

| Name of substance | Name acc. to inventory | CAS No | References | Remarks |
|-------------------|------------------------|--------|------------|---------|
| sulfamic acid     | Welding fumes          | -      | A          | fume    |

#### Legend

A American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1992-93", available from ACGIH

fume Small solid particles formed by the condensation of vapors of solid materials.

##### Hazardous Substance List (NJ-RTK)

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| Name of substance | Name acc. to inventory          | CAS No    | Remarks | Classifications | Listed in | Substance number | DOT number |
|-------------------|---------------------------------|-----------|---------|-----------------|-----------|------------------|------------|
| sulfamic acid     | sulfamidic acid (sulfamic acid) | 5329-14-6 | -       | CO.             | 3<br>17   | 1770             | 2967       |

## Legend

- 17 "2008 Emergency Response Guidebook," Research and Special Programs Administration, U.S. Department of Transportation, 2008.
- 3 Office of Hazardous Materials Safety, Research and Special Programs Administration, U.S. Department of Transportation, 49 CFR 172.101-Hazardous Materials Table, October 1, 2008.
- CO Corrosive

## Hazardous Substance List (Chapter 323) (PA-RTK)

| Name acc. to inventory | CAS No | Classification |
|------------------------|--------|----------------|
| WELDING FUMES          | -      | -              |

## Hazardous Substance List (RI-RTK)

| Name of substance | Name acc. to inventory | CAS No | References |
|-------------------|------------------------|--------|------------|
| sulfamic acid     | Welding fumes (NOC)    | -      | T          |

## Legend

- T Toxicity (ACGIH®)

## California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

Not listed

## Drug precursors, Chemicals designated within the Controlled Substances Act, 21 U.S.C. § 802, paragraphs 34 (list I) and 35 (list II)

Not listed

## SECTION 16: Other information, including date of preparation or last revision

Date of preparation: 2021-09-09

Date of last revision: 2025-07-10.

## Abbreviations and acronyms

| Abbr.            | Descriptions of used abbreviations                                                                                                              |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 29 CFR 1910.1000 | 29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits) |
| 49 CFR US DOT    | 49 CFR U.S. Department of Transportation                                                                                                        |
| ACGIH®           | American Conference of Governmental Industrial Hygienists                                                                                       |

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| Abbr.           | Descriptions of used abbreviations                                                                                                                                               |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cal/OSHA PEL    | California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)                                                                             |
| CAS             | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)                                                                           |
| DGR             | Dangerous Goods Regulations (see IATA/DGR)                                                                                                                                       |
| DOT             | Department of Transportation (USA)                                                                                                                                               |
| EbC50           | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control           |
| EC50            | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval |
| EmS             | Emergency Schedule                                                                                                                                                               |
| ErC50           | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control           |
| ERG No          | Emergency Response Guidebook - Number                                                                                                                                            |
| GHS             | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations                                                                        |
| IARC            | International Agency for Research on Cancer                                                                                                                                      |
| IARC Monographs | IARC Monographs on the Evaluation of Carcinogenic Risks to Humans                                                                                                                |
| IATA            | International Air Transport Association                                                                                                                                          |
| IATA/DGR        | Dangerous Goods Regulations (DGR) for the air transport (IATA)                                                                                                                   |
| ICAO            | International Civil Aviation Organization                                                                                                                                        |
| ICAO-TI         | Technical instructions for the safe transport of dangerous goods by air                                                                                                          |
| IMDG            | International Maritime Dangerous Goods Code                                                                                                                                      |
| IMDG-Code       | International Maritime Dangerous Goods Code                                                                                                                                      |
| LC50            | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval                                |
| LD50            | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval                                                 |
| LOEC            | Lowest Observed Effect Concentration                                                                                                                                             |
| NIOSH REL       | National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)                                                                                |
| NOAEL           | No Observed Adverse Effect Level                                                                                                                                                 |
| NOEC            | No Observed Effect Concentration                                                                                                                                                 |
| OSHA            | Occupational Safety and Health Administration (United States)                                                                                                                    |
| PBT             | Persistent, Bioaccumulative and Toxic                                                                                                                                            |
| PEL             | Permissible exposure limit                                                                                                                                                       |
| ppm             | Parts per million                                                                                                                                                                |
| STEL            | Short-term exposure limit                                                                                                                                                        |

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| Abbr. | Descriptions of used abbreviations       |
|-------|------------------------------------------|
| TWA   | Time-weighted average                    |
| vPvB  | Very Persistent and very Bioaccumulative |

## Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200 (May 20, 2024 eff. July 19, 2024).  
Transport of dangerous goods by road or rail (49 CFR US DOT).  
International Maritime Dangerous Goods Code (IMDG).  
Dangerous Goods Regulations (DGR) for the air transport (IATA).

## List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text                           |
|------|--------------------------------|
| H315 | Causes skin irritation.        |
| H319 | Causes serious eye irritation. |
| H350 | May cause cancer.              |

## Responsible for the safety data sheet

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## Disclaimer

This information is based upon the present state of our knowledge.  
This SDS has been compiled and is solely intended for this product.