

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

Revision Date 29.01.2018

Version 9.11

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Catalogue No. 100103

Product name Amidosulfuric acid for analysis EMSURE®

REACH Registration Number A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

CAS-No. 5329-14-6

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

Identified uses Reagent for analysis, Chemical production  
For additional information on uses please refer to the Merck Chemicals portal ([www.merckgroup.com](http://www.merckgroup.com)).

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

Company Merck KGaA \* 64271 Darmstadt \* Germany \* Phone:+49 6151 72-0

Responsible Department LS-QHC \* e-mail: [prodsafe@merckgroup.com](mailto:prodsafe@merckgroup.com)

**1.4 Emergency telephone number** Please contact the regional company representation in your country.

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## SECTION 2. Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification (REGULATION (EC) No 1272/2008)

Skin irritation, Category 2, H315

Eye irritation, Category 2, H319

Chronic aquatic toxicity, Category 3, H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

##### *Hazard pictograms*



##### *Signal word*

Warning

##### *Hazard statements*

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H412 Harmful to aquatic life with long lasting effects.

##### *Precautionary statements*

###### Prevention

P273 Avoid release to the environment.

###### Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and 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.

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## Reduced labelling (≤125 ml)

*Hazard pictograms*



*Signal word*

Warning

*Hazard statements*

H412 Harmful to aquatic life with long lasting effects.

*Index-No.* 016-026-00-0

## 2.3 Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

### 3.1 Substance

|            |                                   |   |
|------------|-----------------------------------|---|
| Formula    | H <sub>2</sub> NSO <sub>3</sub> H | H <sub>3</sub> NO <sub>3</sub> S (Hill) |
| Index-No.  | 016-026-00-0                      |   |
| EC-No.     | 226-218-8                         |   |
| Molar mass | 97,08 g/mol                       |   |

### Hazardous components (REGULATION (EC) No 1272/2008)

*Chemical name (Concentration)*

| CAS-No. | Registration number | Classification |
|---------|---------------------|----------------|
|---------|---------------------|----------------|

Sulphamic acid (<= 100 % )

5329-14-6 \*)

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\*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 3.2 Mixture

Not applicable

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## SECTION 4. First aid measures

### 4.1 Description of first aid measures

After inhalation: fresh air.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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

Cough, Shortness of breath, Pain, shock, Nausea  
irritant effects

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

No information available.

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## SECTION 5. Firefighting measures

### 5.1 Extinguishing media

*Suitable extinguishing media*

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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## *Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

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

Not combustible.

Ambient fire may liberate hazardous vapours.

Fire may cause evolution of:

Sulphur oxides, nitrogen oxides, nitrous gases

## **5.3 Advice for firefighters**

### *Special protective equipment for firefighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### *Further information*

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## **SECTION 6. Accidental release measures**

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

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

### **6.2 Environmental precautions**

Do not let product enter drains.

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

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

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## 6.4 Reference to other sections

Indications about waste treatment see section 13.

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## SECTION 7. Handling and storage

### 7.1 Precautions for safe handling

#### *Advice on safe handling*

Observe label precautions.

#### *Hygiene measures*

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

### 7.2 Conditions for safe storage, including any incompatibilities

#### *Storage conditions*

Tightly closed. Dry.

Recommended storage temperature see product label.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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## SECTION 8. Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

#### **Engineering measures**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

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## Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

### *Eye/face protection*

Safety glasses

### *Hand protection*

full contact:

|                     |                |
|---------------------|----------------|
| Glove material:     | Nitrile rubber |
| Glove thickness:    | 0,11 mm        |
| Break through time: | > 480 min      |

splash contact:

|                     |                |
|---------------------|----------------|
| Glove material:     | Nitrile rubber |
| Glove thickness:    | 0,11 mm        |
| Break through time: | > 480 min      |

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

### *Other protective equipment*

protective clothing

### *Respiratory protection*

required when dusts are generated.

Recommended Filter type: Filter B-(P2)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be

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properly documented.

## Environmental exposure controls

Do not let product enter drains.

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## SECTION 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|                           |                               |
|---------------------------|-------------------------------|
| Form                      | solid                         |
| Colour                    | white                         |
| Odour                     | odourless                     |
| Odour Threshold           | Not applicable                |
| pH                        | 1,2<br>at 10 g/l              |
| Melting point             | 205 °C<br>(decomposition)     |
| Boiling point             | No information available.     |
| Flash point               | Not applicable                |
| Evaporation rate          | No information available.     |
| Flammability (solid, gas) | The product is not flammable. |
| Lower explosion limit     | No information available.     |
| Upper explosion limit     | No information available.     |



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|  |  |
|--|--|
| Vapour pressure                        | No information available.  |
| Relative vapour density                | 3,35   |
| Density                                | 2,13 g/cm <sup>3</sup><br>at 20 °C   |
| Relative density                       | No information available.  |
| Water solubility                       | 213 g/l<br>at 20 °C  |
| Partition coefficient: n-octanol/water | log Pow: 0,10<br>(experimental)<br>Bioaccumulation is not expected. (Lit.) |
| Auto-ignition temperature              | No information available.  |
| Decomposition temperature              | 209 °C   |
| Viscosity, dynamic                     | No information available.  |
| Explosive properties                   | Not classified as explosive.   |
| Oxidizing properties                   | none   |

## 9.2 Other data

|              |                          |
|--------------|--------------------------|
| Bulk density | ca.600 kg/m <sup>3</sup> |
|--------------|--------------------------|

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## SECTION 10. Stability and reactivity

### 10.1 Reactivity

See section 10.3

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## 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

## 10.3 Possibility of hazardous reactions

Risk of explosion with:

Chlorine

Exothermic reaction with:

halogens, alkalines, Oxidizing agents, nitrates, nitrites, Nitric acid, Metals, Water, Strong bases

## 10.4 Conditions to avoid

Strong heating (decomposition).

## 10.5 Incompatible materials

Metals

## 10.6 Hazardous decomposition products

in the event of fire: See section 5.

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## SECTION 11. Toxicological information

### 11.1 Information on toxicological effects

#### *Acute oral toxicity*

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract., Nausea, Possible damages:., shock

#### *Acute inhalation toxicity*

Symptoms: Irritation symptoms in the respiratory tract., Cough, Shortness of breath

#### *Acute dermal toxicity*

This information is not available.

#### *Skin irritation*

Rabbit

Result: Irritations

OECD Test Guideline 404

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Causes skin irritation.

### *Eye irritation*

Rabbit

Result: Severe irritations

OECD Test Guideline 405

Causes serious eye irritation.

### *Sensitisation*

This information is not available.

### *Germ cell mutagenicity*

#### *Genotoxicity in vivo*

Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)

Mouse

oral

Result: negative

Method: OECD Test Guideline 474

#### *Genotoxicity in vitro*

Ames test

Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 471

Mutagenicity (mammal cell test):

Result: negative

Method: OECD Test Guideline 476

Mutagenicity (mammal cell test): micronucleus.

Human lymphocytes

Result: negative

Method: OECD Test Guideline 487

### *Carcinogenicity*

This information is not available.

### *Reproductive toxicity*

This information is not available.

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## *Teratogenicity*

This information is not available.

## *Specific target organ toxicity - single exposure*

This information is not available.

## *Specific target organ toxicity - repeated exposure*

This information is not available.

## *Aspiration hazard*

This information is not available.

## 11.2 Further information

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12. Ecological information

### 12.1 Toxicity

#### *Toxicity to fish*

LC50 Pimephales promelas (fathead minnow): 70,3 mg/l; 96 h

OECD Test Guideline 203

#### *Toxicity to daphnia and other aquatic invertebrates*

semi-static test EC50 Daphnia magna (Water flea): 71,6 mg/l; 48 h

OECD Test Guideline 202

#### *Toxicity to bacteria*

EC10 Pseudomonas putida:  $\geq 1.000$  mg/l; 16 h

(IUCLID)

EC50 activated sludge:  $> 200$  mg/l; 3 h

OECD Test Guideline 209

### 12.2 Persistence and degradability

No information available.

### 12.3 Bioaccumulative potential

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*Partition coefficient: n-octanol/water*

log Pow: 0,10  
(experimental)

Bioaccumulation is not expected. (Lit.)

## 12.4 Mobility in soil

No information available.

## 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

## 12.6 Other adverse effects

*Additional ecological information*

Biological effects:

Harmful effect due to pH shift.

Discharge into the environment must be avoided.

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## SECTION 13. Disposal considerations

*Waste treatment methods*

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## SECTION 14. Transport information

Land transport (ADR/RID)

|                                   |                |
|-----------------------------------|----------------|
| 14.1 UN number                    | UN 2967        |
| 14.2 Proper shipping name         | SULPHAMIC ACID |
| 14.3 Class                        | 8              |
| 14.4 Packing group                | III            |
| 14.5 Environmentally hazardous    | --             |
| 14.6 Special precautions for user | yes            |
| Tunnel restriction code           | E              |

Inland waterway transport (ADN)

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Not relevant

## Air transport (IATA)

14.1 UN number UN 2967  
14.2 Proper shipping name SULPHAMIC ACID  
14.3 Class 8  
14.4 Packing group III  
14.5 Environmentally hazardous --  
14.6 Special precautions for user no

## Sea transport (IMDG)

14.1 UN number UN 2967  
14.2 Proper shipping name SULPHAMIC ACID  
14.3 Class 8  
14.4 Packing group III  
14.5 Environmentally hazardous --  
14.6 Special precautions for user yes

EmS F-A S-B

## 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

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## SECTION 15. Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### *EU regulations*

Major Accident Hazard SEVESO III  
Legislation Not applicable  
Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work.

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Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

Substances of very high concern (SVHC) This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of  $\geq 0.1$  % (w/w).

#### *National legislation*

Storage class 8B

## 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

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## SECTION 16. Other information

### Full text of H-Statements referred to under sections 2 and 3.

H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H412 Harmful to aquatic life with long lasting effects.

### Training advice

Provide adequate information, instruction and training for operators.

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## Labelling

*Hazard pictograms*



*Signal word*

Warning

*Hazard statements*

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H412 Harmful to aquatic life with long lasting effects.

*Precautionary statements*

Prevention

P273 Avoid release to the environment.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and 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.

P313 Get medical advice/ attention.

## Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

## Regional representation

This information is given on the authorised Safety Data Sheet for your country.



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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*