



SAFETY DATA SHEET

99.5 % SULPHAMIC ACID

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. PRODUCT IDENTIFIER

Product name: Sulphamic Acid
Product No.: SUPH
CAS-No.: 5329-14-6
Index No.: 016-026-00-0
EC No.: 226-218-8
Synonyms: Sulfamic Acid, Aminosulphonic Acid, Amidosulfonic Acid, Amidosulfuric Acid, Aminosulfonic Acid, and Sulfamidic Acid
Chemical Formula: H_3NSO_3

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Use of the substance/mixture: The cleaning of milk/food pipeline systems
Recommended use: Laboratory chemicals, manufacture of substances, Scientific R&D
Restrictions on use: Not for food, drug or household use

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

HD Chemicals LTD
UNIT 9 Scott Business Park
PL2 2PB Plymouth UK

Contact Person responsible for SDS: Mr Peter Konefal, e-mail: contact@hdchemicals.co.uk

SECTION 2: HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification 67/548/EEC: Xi; R36 Eye Irrit. 2 Irritant Xi; R38 Skin Irrit. 2 Irritant R52-53 Aquatic Chronic 3 Dangerous for the environment

Classification – EC 1272/2008: Skin corrosion/irritation; Category 2 (H315)
Serious eye damage/eye irritation; Category 2A (H319)

Hazardous to the aquatic environment, chronic toxicity; Category 3 (H412)

Potential Acute Health Effects:

Hazardous in case of skin contact (corrosive, irritant), of eye contact (irritant), of ingestion, of inhalation. Very hazardous in case of skin contact (sensitizer). Hazardous in case of skin contact (permeator). The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:

Extremely hazardous in case of skin contact (corrosive, irritant), of eye contact (irritant), of ingestion, of inhalation. Very hazardous in case of skin contact (sensitizer). Hazardous in case of skin contact (permeator). CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

2.2. LABEL ELEMENTS**SIGNAL WORDS**

Warning



RISK PHRASES

| | |
|--------|---|
| R36 | Causes serious eye irritation |
| R38 | Irritant Causes skin irritation |
| R52-53 | Dangerous for the environment Harmful to aquatic life with long lasting effects |

HAZARD PHRASES

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

PROTECTION PHRASES

| | |
|----------------|---|
| P102 | Keep out of reach of children |
| P280 | Wear eye protection |
| P301 + P313 | IF SWALLOWED: Get medical advice/ attention |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing |
| P337+P313 | If eye irritation persists: Get medical advice/ attention |
| P501 | Dispose of contents/ container in accordance with local regulations |

SAFETY PHRASES

| | |
|-----|--|
| S2 | Keep out of the reach of children |
| S26 | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice |
| S28 | After contact with skin, wash immediately with plenty of water |
| S61 | Avoid release to the environment. Refer to special instructions / safety data sheets |

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

67/548/EEC/1999/45/EC

Composition information – main constituents

| Substance name | Mol. Formula | Index No. | Typical conc. (%w/w) | EINECS No. | CAS-No. | Classification |
|----------------|---------------------------------|---------------|----------------------|------------|-----------|----------------|
| Sulphamic Acid | H ₃ NSO ₃ | 016-026- 00-0 | 99.5% | 226-218-8 | 5329-14-6 | H319 H315 H412 |

EC 1272/2008

Composition information – main constituents

| Substance name | Mol. Formula | Index No. | Typical conc. (%w/w) | EINECS No. | CAS-No. | Classification |
|----------------|---------------------------------|---------------|----------------------|------------|-----------|---|
| Sulphamic Acid | H ₃ NSO ₃ | 016-026- 00-0 | 99.5% | 226-218-8 | 5329-14-6 | Xi; R36 Eye Irrit. 2 Irritant Xi; R38 Skin Irrit. 2 Irritant R52-53 Aquatic Chronic 3 Dangerous for the environment |

SECTION 4: FIRST AID MEASURES**4.1. DESCRIPTION OF FIRST AID MEASURES**

First-aid measures general: If you feel unwell, seek medical advice (show the label where possible).

Inhalation: Move the exposed person to fresh air. If breathing stops, provide artificial respiration.

Ingestion: DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person. Rinse mouth thoroughly. Give plenty of water to drink and give milk of magnesia. Keep warm and quiet. Seek medical attention

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash off immediately with plenty of soap and water. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Seek medical attention if irritation or symptoms persist.

Eye contact: Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention.



4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

| | |
|----------------------|---|
| Inhalation: | There may be irritation of the throat with a feeling of tightness in the chest. |
| Ingestion: | Harmful if swallowed. |
| Skin contact: | Irritation or pain may occur at the site of contact. |
| Eye contact: | There may be irritation and pain. |

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Notes to Physician Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

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

Unsuitable extinguishing media: No unsuitable extinguishing media known.

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

In combustion emits toxic fumes of sulphur oxides. In combustion emits toxic fumes of nitrogen oxides. Ammonia fumes may be produced.

5.3. ADVICE FOR FIRE-FIGHTERS

Wear suitable respiratory equipment when necessary. Wear protective clothing to prevent contact with skin and eyes.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Wear suitable protective clothing. Avoid breathing vapours, mist or gas. Avoid formation of dust. Ensure adequate ventilation of the working area. Evacuate personnel to a safe area.

6.2. ENVIRONMENTAL PRECAUTIONS

Prevent further spillage if safe. Do not allow product to enter drains.



6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Avoid raising dust. Sweep up. Transfer to suitable, labelled containers for disposal.

SECTION 7: HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

Handle in accordance with good industrial hygiene and safety practice. Avoid formation of dust. Ensure adequate ventilation of the working area.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Store in a cool, dry area. Keep container tightly closed.

7.3. SPECIFIC END USE(S)

See section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS/EXPOSURE GUIDELINES

Occupational Exposure Limit Values (Sulphamic Acid):

| Type | Exposure | Value | Population | Effect |
|------|------------|------------------------|------------|----------|
| DNEL | Oral | 1.06 | Consumers | Systemic |
| DNEL | Inhalation | 1.85 mg/m ³ | Consumers | Systemic |
| DNEL | Inhalation | 7.5 mg/m ³ | Workers | Systemic |

Engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the working day. Ensure adequate ventilation of the working area.

Protective equipment:

- Respiratory equipment:** Where risk assessment shows it is necessary, use a dust mask type or breathing apparatus.
- Skin and body protection:** Wear suitable protective clothing and gloves
- Eye/Face protection:** Approved safety glasses. Face shield where appropriate.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-----------------------------|---------------------------------|
| Appearance: | Solid/Crystals |
| Colour: | White |
| Odour: | Odourless |
| Solubility: | 213 g/l @ 20°C. 328 g/l @ 50°C. |
| Initial boiling point (°C): | Not available |
| Melting point (°C): | 205-225 °C |
| Freezing point: | No data available |
| Relative density: | 2.151 g/cm ³ |
| Specific gravity / density: | Not available |
| Vapour density: | Not available |
| Vapour pressure: | Not available |
| pH-Value, Diluted Solution: | 1.2 @ 10 g/l |
| Flash point (°C): | Not applicable. |
| Molecular mass: | 97.1 g/mol |
| Auto-ignition temperature: | Not applicable |
| Oxidizing properties : | Not available |
| Decomposition temperature: | Not available |
| Molecular formula: | H ₃ NSO ₃ |



SECTION 10: STABILITY AND REACTIVITY

10.1. REACTIVITY

Exothermic reaction with alkalis. Reacts with nitrites developing nitrogen. Reacts with strong oxidising agents. Forms hydrogen in aqueous solution with metals.

10.2. CHEMICAL STABILITY

Stable under normal conditions. Decomposes on heating.

10.3. POSSIBILITY OF HAZARDOUS REACTIONS

Becomes corrosive in contact with moisture/water

10.4. CONDITIONS TO AVOID

Strong solutions should not be heated in poorly ventilated containers.

10.5. INCOMPATIBLE MATERIALS

Bases. Strong oxidising agents. Nitrites. Metals DO NOT MIX WITH ANY OTHER CHEMICALS.

10.6. HAZARDOUS DECOMPOSITION

In combustion emits toxic fumes of sulphur oxides. In combustion emits toxic fumes of nitrogen oxides. May be released in fire: Sulphur dioxide, Nitrogen oxides (NO_x), Nitrous vitriol gases, Ammonia.

No decomposition if used according to specifications.

No decomposition if handled and stored according to specifications.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

TOXIC DOSE 1- LD50

3160 mg/kg oral (Rat)

Inhalation:

Irritating to respiratory system. Irritation of the mucous membranes, coughing and dyspnoea.

Ingestion:

Irritation of the mouth, the oesophagus and the gastrointestinal tract.

Skin contact:

Irritating to skin.

Eye contact:

Irritating to eyes.



SECTION 12: ECOLOGICAL INFORMATION

12.1. TOXICITY

Aquatic Toxicity: LC50 Fish (Pimephatespromeles) - 96 hour - 70.3 mg/l
Harmful to aquatic life with long lasting effects.

Remark: If the product is not neutralised, pay attention to the pH value: toxic effect for fish and bacteria commences at a pH value below 6 and increases as the pH value decreases. After neutralisation, the less harmful effects of the amid sulphuric acid apply for fish and bacteria. When leading acidic or alkaline products into sewage facilities, make sure that the discharged water does not exceed or fall below a pH range of 6 - 10 since shifts in pH value can cause disturbances in sewers and biological purification facilities. The local guidelines for discharge apply.

12.2. PERSISTENCE AND DEGRADABILITY

There are no data on the degradability of this product.

12.3. BIO ACCUMULATIVE POTENTIAL

No data available for this product.

12.4. MOBILITY

Soluble in water

12.5. RESULTS OF PBT AND vPvB ASSESSMENT

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII.

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XII.

12.6. OTHER ADVERSE EFFECTS

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal recommendations: Dispose of in compliance with all local and national regulations. Contact a licensed waste disposal company. Dispose of this material and its container to hazardous or special waste collection point. Do not allow to reach ground water or bodies of water. May not be led undiluted into sewer systems.



Recommendation: After neutralising with lime (calcium carbonate) the product can be discharged into the sewer system. Local regulations must be observed.

Uncleaned packaging: Disposal must be made according to official regulations.

SECTION 14: TRANSPORT INFORMATION



IMDG/IMO

| | |
|----------------------------|----------------|
| UN number | 2967 |
| UN proper shipping name | Sulphamic Acid |
| Transport hazard class(es) | 8 |
| Packing group | III |

ADR/RID

| | |
|--|--------------------------------|
| UN number | 2967 |
| UN proper shipping name | Sulphamic Acid |
| Transport hazard class(es) | 8 |
| Packing group | III |
| ADR label no. | 8 |
| Transport document description (ADR) : | UN 2967 SULPHAMIC ACID, 8, III |

IATA

| | |
|----------------------------|----------------|
| UN number | 2967 |
| UN proper shipping name | Sulphamic Acid |
| Transport hazard class(es) | 8 |
| Packing group | III |

Product is a marine pollutant according to the criteria set by IMDG/IMO

**SECTION 15: REGULATORY INFORMATION****SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE****EU Legislation**

Authorisations and/or restrictions on use (Annex XVII):

| | |
|--|----------------|
| 3.b. Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10 | Sulphamic Acid |
| 3.c. Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1 | Sulphamic Acid |

SECTION 16: OTHER INFORMATION**General information**

The information contained in this safety data sheet is provided in accordance with the requirements of the regulations. The product should not be used for purposes other than those shown in section 1 without first referring to the supplier and obtaining written handling instruction. As the specific conditions of use of the product are outside the suppliers control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

Revision Comments

This information is provided in a revised format to that previously produced.

Revision Date: 01/07/2017

Revision: 01

Safety Data Sheet Status Approved.

Date printed 01/07/2017

Signature Initials P.K.

DISCLAIMER:

If this product is re-distributed and re-formulated for sale, details of its hazards and recommended methods for safe handling must be passed to customers. Customers are urged to ensure that the product is entirely suitable for their own purpose. It is the customer's responsibility to ensure that a suitable and sufficient assessment of the risks created by a work activity using this product is undertaken before this product is used.



NOTE:

The information contained in this Safety Data Sheet does not constitute the users own assessment of workplace risk as required by other Health & Safety Legislation (e.g. the Health and Safety at Work Act,1974;the control of Substances Hazardous to Health Regulations,1988). The data given here is based on current knowledge and experience. The purpose of this data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the product's properties.