

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

Revision Date 26.05.2017

Version 9.12

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

Catalogue No. 806356

Product name Sodium hydrogen sulfite (39% solution in water) for synthesis

REACH Registration Number This product is a mixture. REACH Registration Number see section 3.

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

Identified uses Chemical for synthesis

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)**

Acute toxicity, Category 4, Oral, H302

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

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## 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

*Hazard pictograms*



*Signal word*

Warning

*Hazard statements*

H302 Harmful if swallowed.

EUH031 Contact with acids liberates toxic gas.

**Reduced labelling ( $\leq 125$  ml)**

*Hazard pictograms*



*Signal word*

Warning

Contains: sodium hydrogensulphite

## 2.3 Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

Chemical nature Aqueous solution

### 3.1 Substance

Not applicable

### 3.2 Mixture

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

*Chemical name (Concentration)*

CAS-No.            Registration number    Classification

sodium hydrogensulphite ( $\geq 25\%$  -  $< 50\%$ )

7631-90-5        \*)

Acute toxicity, Category 4, H302

\*) 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.

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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.

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

irritant effects, Cough, Shortness of breath, gastric pain, Diarrhoea, Nausea, cardiovascular disorders, Headache

### 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

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### *Suitable extinguishing media*

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

### *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

## **5.3 Advice for firefighters**

### *Special protective equipment for firefighters*

In the event of fire, wear self-contained breathing apparatus.

### *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: Do not breathe vapours, aerosols. 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).

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Take up with liquid-absorbent and neutralising material (e.g. Chemisorb® H<sup>+</sup>, Merck Art. No. 101595). Dispose of properly. Clean up affected area.

## 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.

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:     | natural latex |
| Glove thickness:    | 0,6 mm        |
| Break through time: | > 480 min     |

splash contact:

|                     |                |
|---------------------|----------------|
| Glove material:     | Nitrile rubber |
| Glove thickness:    | 0,11 mm        |
| Break through time: | > 120 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 706 Lapren® (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 vapours/aerosols 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                      | liquid                    |
| Colour                    | colourless                |
| Odour                     | stinging                  |
| Odour Threshold           | No information available. |
| pH                        | 4,5<br>at 20 °C           |
| Melting point             | -44 °C                    |
| Boiling point             | No information available. |
| Flash point               | Not applicable            |
| Evaporation rate          | No information available. |
| Flammability (solid, gas) | No information available. |
| Lower explosion limit     | Not applicable            |
| Upper explosion limit     | Not applicable            |

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|  |  |
|--|--|
| Vapour pressure                        | 40 hPa<br>at 20 °C                     |
| Relative vapour density                | No information available.              |
| Density                                | ca. 1,34 g/cm <sup>3</sup><br>at 20 °C |
| Relative density                       | No information available.              |
| Water solubility                       | at 20 °C<br>soluble                    |
| Partition coefficient: n-octanol/water | No information available.              |
| Auto-ignition temperature              | No information available.              |
| Decomposition temperature              | > 150 °C                               |
| Viscosity, dynamic                     | 4,3 mPa.s<br>at 20 °C                  |
| Explosive properties                   | Not classified as explosive.           |
| Oxidizing properties                   | none                                   |

## 9.2 Other data

|                      |                |
|----------------------|----------------|
| Ignition temperature | Not applicable |
| Bulk density         | Not applicable |

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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

Violent reactions possible with:

Oxidizing agents

A risk of explosion and/or of toxic gas formation exists with the following substances:

acids

Exothermic reaction with:

nitrites, Peroxides

## 10.4 Conditions to avoid

no information available

## 10.5 Incompatible materials

no information available

## 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

#### Mixture

#### *Acute oral toxicity*

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

absorption

Acute toxicity estimate: 1.282 mg/kg

Calculation method

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## *Acute inhalation toxicity*

Symptoms: Possible damages: slight mucosal irritations, Cough, Shortness of breath

## *Acute dermal toxicity*

This information is not available.

## *Skin irritation*

Possible damages: slight irritation

## *Eye irritation*

Possible damages: slight irritation

## *Sensitisation*

This information is not available.

## *Germ cell mutagenicity*

This information is not available.

## *Carcinogenicity*

This information is not available.

## *Reproductive toxicity*

This information is not available.

## *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

Systemic effects:

After uptake of large quantities:

Nausea, Headache, cardiovascular disorders, gastric pain, Diarrhoea, Pneumonia

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Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

## Components

*sodium hydrogensulphite*

*Acute oral toxicity*

Acute toxicity estimate: 500,1 mg/kg

Expert judgement

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## SECTION 12. Ecological information

### Mixture

#### 12.1 Toxicity

*Toxicity to fish*

LC50 *Gambusia affinis* (Mosquito fish): 240 mg/l; 96 h

(refers to pure substance) (ECOTOX Database)

*Toxicity to algae*

IC0 *Scenedesmus quadricauda* (Green algae): 8,2 mg/l; 30 min

(refers to pure substance) (IUCLID)

#### 12.2 Persistence and degradability

*Biodegradability*

The methods for determining the biological degradability are not applicable to inorganic substances.

#### 12.3 Bioaccumulative potential

No information available.

#### 12.4 Mobility in soil

No information available.

#### 12.5 Results of PBT and vPvB assessment

Substance(s) in the mixture do(es) not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII, or a PBT/vPvB assessment was not conducted.

#### 12.6 Other adverse effects

*Additional ecological information*

Biological effects:

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Forms corrosive mixtures with water even if diluted.  
Discharge into the environment must be avoided.

## Components

*sodium hydrogensulphite*

No information available.

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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 2693  |
| 14.2 Proper shipping name         | BISULPHITES, AQUEOUS SOLUTION, N.O.S. (SODIUM BISULPHITE SOLUTION) |
| 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)

Not relevant

### Air transport (IATA)

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**14.1 UN number** UN 2693  
**14.2 Proper shipping name** BISULPHITES, AQUEOUS SOLUTION, N.O.S. (SODIUM BISULPHITE SOLUTION)  
**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 2693  
**14.2 Proper shipping name** BISULPHITES, AQUEOUS SOLUTION, N.O.S. (SODIUM BISULPHITE SOLUTION)  
**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. Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

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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.

H302 Harmful if swallowed.

### Training advice

Provide adequate information, instruction and training for operators.

### Labelling

#### *Hazard pictograms*



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## *Signal word*

Warning

## *Hazard statements*

H302 Harmful if swallowed.

EUH031 Contact with acids liberates toxic gas.

Contains: sodium hydrogensulphite

## **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.*