

Safety data sheet

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BASF Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 26.09.2024

Version: 2.0

Product: **Sodium Bisulfite Solution 38-40% non food grade**

(ID no. 30042368/SDS_GEN_00/EN)

Date of print 13.10.2025

1. Identification

Product identifier

Sodium Bisulfite Solution 38-40% non food grade

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

Relevant identified uses: Chemical

Recommended use: inorganic reducing agents, initial product for chemical syntheses, process chemical

Details of the supplier of the safety data sheet

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Division Monomers

Telephone: +49 621 60 42737

E-mail address: pss.monomers@basf.com

Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

2. Hazards Identification

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Classification of the substance or mixture

According to UN GHS criteria

Acute Tox. 4 (oral)

Aquatic Acute 3

For the classifications not written out in full in this section the full text can be found in section 16.

Label elements

Globally Harmonized System (GHS)

Pictogram:



Signal Word:

Warning

Hazard Statement:

H302

Harmful if swallowed.

H402

Harmful to aquatic life.

Precautionary Statements (Prevention):

P273

Avoid release to the environment.

P270

Do not eat, drink or smoke when using this product.

P264

Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P312

Call a POISON CENTER or physician if you feel unwell.

P301 + P330 + P331

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Precautionary Statements (Disposal):

P501

Dispose of contents and container to hazardous or special waste collection point.

Labeling of special preparations (GHS):

Contact with acids liberates toxic gas.

According to UN GHS criteria

Hazard determining component(s) for labelling: sodium hydrogensulphite (aqueous solution)

Other hazards

According to UN GHS criteria

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No specific dangers known, if the regulations/notes for storage and handling are considered. If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition/Information on Ingredients

Substances

Not applicable

Mixtures

Chemical nature

aqueous solution, Sodium hydrogensulfite
NaHSO₃

Hazardous ingredients (GHS)

According to UN GHS criteria

Sodium hydrogensulfite

Content (W/W): $\geq 38\%$ - $\leq 42\%$	Acute Tox. 4 (oral)
CAS Number: 7631-90-5	Aquatic Acute 3
EC-Number: 231-548-0	H302, H402
INDEX-Number: 016-064-00-8	EUH031

For the classifications not written out in full in this section the full text can be found in section 16.

4. First-Aid Measures

Description of first aid measures

Immediately remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention. After inhalation of decomposition products: Immediately administer a corticosteroid from a controlled/metered dose inhaler. Seek medical attention.

On skin contact:

Wash thoroughly with soap and water

On contact with eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

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Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., Many individuals are sensitive to sulphite additives and may experience a range of symptoms, including dermatitis, urticaria, angio-oedema, abdominal pain, diarrhoea, bronchoconstriction and anaphylaxis.

Hazards: Risk of sulfur dioxide formation by reaction with gastric acid after swallowing.

Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures**Extinguishing media**

Suitable extinguishing media:
water spray, carbon dioxide, foam, dry powder

Additional information:
Product will not burn.

Use extinguishing measures to suit surroundings.

Special hazards arising from the substance or mixture

Sulphur dioxide

The substances/groups of substances mentioned can be released if the product is involved in a fire.

Advice for fire-fighters

Special protective equipment:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Product itself is non-combustible; fire extinguishing method of surrounding areas must be considered. Contaminated extinguishing water must be disposed of in accordance with official regulations. In case of fire and/or explosion do not breathe fumes.

6. Accidental Release Measures**Personal precautions, protective equipment and emergency procedures**

Breathing protection required.

Avoid contact with the skin, eyes and clothing. Use personal protective clothing. Ensure adequate ventilation.

Environmental precautions

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Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.
Retain and dispose of contaminated wash water.

Methods and material for containment and cleaning up

For small amounts: Pick up with suitable absorbent material.

For large amounts: Pump off product.

Dispose of absorbed material in accordance with regulations.

7. Handling and Storage**Precautions for safe handling**

Use only in well-ventilated areas. Do not inhale vapours / aerosols. Avoid contact with skin and eyes.
Breathing must be protected when large quantities are decanted without local exhaust ventilation.

Protection against fire and explosion:

The substance/product is non-combustible. No special precautions necessary.

Conditions for safe storage, including any incompatibilities

Segregate from acids and acid forming substances. Segregate from oxidants.

Suitable materials for containers: Polyester resin, glass reinforced (Palatal A410), rubberized,
Stainless steel 1.4462, Stainless steel 1.4402 (V4A), Stainless steel 1.4404

Further information on storage conditions: Keep away from heat. Keep container tightly closed in a cool, well-ventilated place. Keep container dry. The product consumes oxygen. Danger of lack of oxygen in containers and tanks.

Specific end use(s)

See exposure scenario(s) in the attachment to this safety data sheet.

8. Exposure Controls/Personal Protection**Control parameters**Components with occupational exposure limits

7631-90-5: Sodium hydrogensulfite

7757-82-6: Sodium sulphate

Exposure controlsPersonal protective equipment

Respiratory protection:

Respiratory protection in case of release of decomposition products. Suitable respiratory protection for lower concentrations or short-term effect: Gas filter for gases/vapours of inorganic compounds (e.g. EN 14387 Type B) Suitable respiratory protection for higher concentrations or long-term effect: Self-contained breathing apparatus.

Hand protection:

Chemical resistant protective gloves (EN ISO 374-1)

Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1):

e.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), polyvinylchloride (0.7 mm) and other

Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:

Tightly fitting safety goggles (splash goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Do not breathe vapour/spray. Hands and/or face should be washed before breaks and at the end of the shift.

9. Physical and Chemical Properties**9.1. Information on basic physical and chemical properties**

State of matter: liquid

Form: aqueous solution

Colour: colourless to yellow

Odour: pungent

Odour threshold: Not determined due to potential health hazard by inhalation.

crystallization temperature: < 5 °C

Boiling point: 100 °C

(1.013 mbar)

Information applies to the solvent.

Flammability: not flammable

Lower explosion limit:

For liquids not relevant for classification and labelling.

Upper explosion limit:

For liquids not relevant for classification and labelling.

Flash point:

not applicable

Auto-ignition temperature:

not applicable

Self-ignition temperature:

Test type: Self-ignition at high temperatures.

not self-igniting

Thermal decomposition: It is not a self-decomposable substance.

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pH value:	3,5 - 5,0	(DIN 19268)
Viscosity, kinematic:	not determined	
Viscosity, dynamic:	3,64 mPa.s (20 °C)	(DIN 51562)
Solubility in water:	approx. 515 g/l (20 °C)	
Solubility (quantitative) solvent(s):	Water approx. 515 g/l (20 °C)	
	The values mentioned are those of the solved solid.	

*Information on: Sodium hydrogensulfite**Partitioning coefficient n-octanol/water (log Kow):**not applicable*

Vapour pressure:	approx. 155 mbar (55 °C) approx. 124 mbar (50 °C) approx. 24 mbar (20 °C)	
	The vapour pressure of the aqueous solution consists of the partial pressure for water and the partial pressure for sulphur dioxide. 27 hPa (20 °C) 103 hPa (50 °C)	
Density:	1,325 g/cm ³ (20 °C)	(DIN 51757)

Particle characteristics

Particle size distribution: The substance / product is marketed or used in a non solid or granular form. -

9.2. Other information**Information with regard to physical hazard classes**ExplosivesExplosion hazard: Based on the chemical structure
there is no indication of explosive
properties.Oxidizing properties

Fire promoting properties: not fire-propagating

Flammable solids

Burning rate: not applicable

Pyrophoric propertiesSelf-ignition temperature: Test type: Spontaneous self-
ignition at room-temperature.

not self-igniting

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Other safety characteristics

pKA:

not applicable

Adsorption/water - soil:

Study scientifically not justified.

Surface tension:

Based on chemical structure, surface activity is not to be expected.

Evaporation rate:

Value can be approximated from Henry's Law Constant or vapor pressure.

10. Stability and Reactivity**Possibility of hazardous reactions**

Reacts with nitrites. Reacts with nitrates. Reacts with oxidizing agents. Generation of sulphur dioxide upon exposure to acids. (or conditions.) The product consumes oxygen.

Conditions to avoid

avoid atmospheric oxygen

Incompatible materials

Substances to avoid:

nitrites, nitrates, oxidizing agents, acids

Hazardous decomposition products

Hazardous decomposition products:

Sulphur dioxide

11. Toxicological Information**Information on toxicological effects**Acute toxicity

LC50 rat (by inhalation): > 5,5 mg/l 4 h (OECD Guideline 403)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

LD50 rat (dermal): > 2.000 mg/kg (OECD Guideline 402)

No mortality was observed. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

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*Information on: Sodium hydrogensulfite**Assessment of acute toxicity:**Of moderate toxicity after single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.*
-----*Information on: Sodium hydrogensulfite**Experimental/calculated data:**LD50 rat (oral): approx. 2.610 mg/kg (similar to OECD guideline 401)**The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.*

Irritation

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

Literature data.

Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)

Literature data.

Respiratory/Skin sensitization

Assessment of sensitization:

A sensitizing effect on particularly sensitive individuals cannot be excluded.

Experimental/calculated data:

Mouse Local Lymph Node Assay (LLNA) mouse: Non-sensitizing. (OECD Guideline 429)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Germ cell mutagenicity

Assessment of mutagenicity:

The substance was not mutagenic in a test with mammals.

Carcinogenicity

Assessment of carcinogenicity:

No reliable data was available concerning carcinogenic activity. The chemical structure does not suggest a specific alert for such an effect.

Reproductive toxicity

Assessment of reproduction toxicity:

The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity

Assessment of teratogenicity:

No indications of a developmental toxic / teratogenic effect were seen in animal studies.

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Experiences in humans

Experimental/calculated data:

-

With sensitive persons it can lead to an over sensitive reaction.

Specific target organ toxicity (single exposure)

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:

No substance-specific organotoxicity was observed after repeated administration to animals. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aspiration hazard

No aspiration hazard expected.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:

Acutely harmful for aquatic organisms.

Chronic toxicity to fish:

No observed effect concentration (34 d) ≥ 50 mg/l, *Brachydanio rerio* (OECD Guideline 210, Flow through.)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Nominal concentration.

Chronic toxicity to aquatic invertebrates:

No observed effect concentration (21 d) > 10 mg/l, *Daphnia magna* (OECD Guideline 211, semistatic)

Nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

*Information on: Sodium hydrogensulfite**Toxicity to fish:**LC50 (96 h) 316 mg/l, *Leuciscus idus* (DIN 38412 Part 15, static)**The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Nominal concentration.*

*Information on: Sodium hydrogensulfite**Aquatic invertebrates:**(48 h) 89 mg/l, *Daphnia magna* (Directive 79/831/EEC, static)*

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Nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: Sodium hydrogensulfite

Aquatic plants:

EC50 (72 h) 43,8 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static)

Nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: Sodium hydrogensulfite

Microorganisms/Effect on activated sludge:

EC10 (3 h) 634,4 mg/l, (OECD Guideline 209, static)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Nominal concentration.

Assessment of terrestrial toxicity:

Study scientifically not justified.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

Inorganic product which cannot be eliminated from water by biological purification processes.

Decomposition products formed by microbiotic degradation may affect the activity in biological waste water treatment plants.

Assessment of stability in water:

According to structural properties, hydrolysis is not expected/probable.

Study scientifically not justified.

Bioaccumulative potential

Assessment bioaccumulation potential:

Accumulation in organisms is not to be expected.

Bioaccumulation potential:

Study scientifically not justified.

Information on: Sodium hydrogensulfite

Assessment bioaccumulation potential:

Accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments:

Adsorption in soil: Adsorption to solid soil phase is not expected.

Results of PBT and vPvB assessment

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According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative). Self classification

Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

Additional information

Other ecotoxicological advice:

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations. At the present state of knowledge, no negative ecological effects are expected.

13. Disposal Considerations

Waste treatment methods

Must be disposed of or incinerated in accordance with local regulations.
Observe national and local legal requirements.

Contaminated packaging:

Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Land transport

ADR

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

RID

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable

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Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

Inland waterway transport

ADN

Not classified as a dangerous good under transport regulations
UN number or ID number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

Not classified as a dangerous good under transport regulations
UN number or ID number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations
UN number or ID number: Not applicable
UN proper shipping name: Not applicable
Transport hazard class(es): Not applicable
Packing group: Not applicable
Environmental hazards: Not applicable
Special precautions for user: None known

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

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15. Regulatory Information

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

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

16. Other Information

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Acute Tox.	Acute toxicity
Aquatic Acute	Hazardous to the aquatic environment - acute
H302	Harmful if swallowed.
H402	Harmful to aquatic life.
EUH031	Contact with acids liberates toxic gas.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.