

Safety data sheet

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BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 20.01.2016

Version: 1.0

Product: **Sodium Metabisulfite non food grade**

(ID no. 30042378/SDS_GEN_00/EN)

Date of print 11.02.2019

1. Identification

Product identifier

Sodium Metabisulfite non food grade

Chemical name: Disodium disulphite

INDEX-Number: 016-063-00-2

CAS Number: 7681-57-4

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

Relevant identified uses: Chemical

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

Details of the supplier of the safety data sheet

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Monomers Division E-CMI

Telephone: +49 621 60-40055

E-mail address: reach-inorganics@basf.com

Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

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According to UN GHS criteria

Acute Tox. 4 (oral)

Eye Dam./Irrit. 1

Aquatic Acute 3

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

Label elementsGlobally Harmonized System (GHS)

Pictogram:



Signal Word:

Danger

Hazard Statement:

H318 Causes serious eye damage.

H302 Harmful if swallowed.

H402 Harmful to aquatic life.

Precautionary Statements (Prevention):

P280 Wear eye/face protection.

P273 Avoid release to the environment.

P270 Do not eat, drink or smoke when using this product.

P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P310 Immediately call a POISON CENTER or doctor/physician.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301 + P330 IF SWALLOWED: rinse mouth.

Precautionary Statements (Disposal):

P501 Dispose of contents/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: disodium disulphite

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Other hazards

According to UN GHS criteria

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

Chemical nature

sodium metabisulphite

CAS Number: 7681-57-4

EC-Number: 231-673-0

INDEX-Number: 016-063-00-2

Na₂S₂O₅

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

Mixtures

Not applicable

4. First-Aid Measures

Description of first aid measures

Remove contaminated clothing.

If inhaled:

If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention. After inhalation of decomposition products: Immediately administer a corticosteroid from a controlled/metered dose inhaler.

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:

Rinse mouth and then drink plenty of water.

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Most important symptoms and effects, both acute and delayed

Symptoms: Overexposure may cause: vomiting, asthmatic complaints, abdominal cramps, shortness of breath, nausea, diarrhea, coughing

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:
foam

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 a self-contained breathing apparatus.

Further information:

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**

Use personal protective clothing. Ensure adequate ventilation. Avoid dust formation. Avoid contact with eyes.

Environmental precautions

Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

Methods and material for containment and cleaning up

Sweep/shovel up. Correctly dispose of recovered product immediately.

Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

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7. Handling and Storage

Precautions for safe handling

Use only in well-ventilated areas. Avoid dust formation.

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.

Do not store with: Sodium nitrate, sodium nitrite, disodium sulfide; sodium sulfide

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place. Keep container in a well-ventilated place.

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

7446-09-5: Sulphur dioxide

7681-57-4: sodium metabisulphite

7757-82-6: Sodium sulphate

Exposure controls

Personal protective equipment

Respiratory protection:

Breathing protection if dusts are formed. Suitable respiratory protection for lower concentrations or short-term effect: Particle filter with low efficiency for solid particles (e.g. EN 143 or 149, Type P1 or FFP1) Breathing protection if breathable aerosols/dust are formed. Combination filter for gases/vapours of organic, inorganic, acid inorganic, alkaline compounds and toxic particles (e. g. EN 14387 Type ABEK-P3)

Hand protection:

Chemical resistant protective gloves (EN 374)

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

polyvinylchloride (PVC) - 0.7 mm coating thickness

nitrile rubber (NBR) - 0.4 mm coating thickness

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.

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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 inhale vapours or dust. Hands and/or face should be washed before breaks and at the end of the shift.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form:	powder, crystalline
Colour:	white to slightly yellow
Odour:	faint odour, of sulfur dioxide
Odour threshold:	Not determined due to potential health hazard by inhalation.
pH value:	4,0 - 4,8 (5 %(m), 20 °C)
decomposition point:	> 150 °C
Boiling point:	The substance / product decomposes therefore not determined.
Flash point:	not applicable, the product is a solid
Evaporation rate:	The product is a non-volatile solid.
Flammability:	not flammable
Lower explosion limit:	For solids not relevant for classification and labelling.
Upper explosion limit:	For solids not relevant for classification and labelling.
Vapour pressure:	The vapour pressure of the aqueous solution consists of the partial pressure for water and the partial pressure for sulphur dioxide.
Density:	2,36 g/cm ³ (20 °C)

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Solubility in water: Literature data.
667 g/l
(25 °C)
Partitioning coefficient n-octanol/water (log Kow):
not applicable
Thermal decomposition: 150 °C
To avoid thermal decomposition, do not overheat.
Viscosity, dynamic:
not applicable

Other information

Burning rate: 0 mm/s, 0 s (Directive 92/69/EEC, A.10)
Bulk density: 1.000 - 1.200 kg/m³
pK_A:
not applicable

10. Stability and Reactivity**Reactivity**

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals: No corrosive effect on metal.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

Reacts with nitrites. Reacts with nitrates. Reacts with oxidizing agents.

Conditions to avoid

Avoid humidity.

Incompatible materials

Substances to avoid:
acids, oxidizing agents, nitrites, nitrates, sulfides

Hazardous decomposition products

Hazardous decomposition products:
Sulphur dioxide

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

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Acute toxicity

Assessment of acute toxicity:

Of moderate toxicity after single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Experimental/calculated data:

LD50 rat (oral): 1.540 mg/kg (OECD Guideline 401)

LC50 rat (by inhalation): > 5,5 mg/l 4 h (IRT)

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

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

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)

Serious eye damage/irritation rabbit: irreversible damage (OECD Guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:

Skin sensitizing effects were not observed in animal studies. 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)

Germ cell mutagenicity

Assessment of mutagenicity:

No mutagenic effect was found in various tests with bacteria and mammalian cell culture. The substance was not mutagenic in studies with mammals.

Carcinogenicity

Assessment of carcinogenicity:

In long-term studies in rats in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Assessment of reproduction toxicity:

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

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Developmental toxicity

Assessment of teratogenicity:

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

Experiences in humans

Experimental/calculated data:

Skin irritations described in isolated cases.

Specific target organ toxicity (single exposure)

Assessment of STOT single:

Apart from effects causing lethality, no specific target organ toxicity was observed in experimental studies.

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.

Aspiration hazard

not applicable

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:

Acutely harmful for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish:

LC50 (96 h) 316 mg/l, *Leuciscus idus* (DIN 38412 Part 15, static)

The details of the toxic effect relate to the nominal concentration. The product has not been tested.

The statement has been derived from substances/products of a similar structure or composition.

Aquatic invertebrates:

EC50 (48 h) 89 mg/l, *Daphnia magna* (Directive 79/831/EEC, static)

Nominal concentration.

Aquatic plants:

EC50 (72 h) 43,8 mg/l (growth rate), algae (other, static)

Nominal concentration.

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Microorganisms/Effect on activated sludge:

No observed effect concentration (3 h) > 1.000 mg/l, (OECD Guideline 209, aquatic)

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

Chronic toxicity to fish:

No observed effect concentration (34 d) > 316 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.

Chronic toxicity to aquatic invertebrates:

No observed effect concentration (21 d) > 10 mg/l, Daphnia magna (OECD Guideline 202, part 2, semistatic)

Nominal concentration.

Assessment of terrestrial toxicity:

Study scientifically not justified.

Persistence and degradabilityAssessment biodegradation and elimination (H₂O):

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

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.

Mobility in soil

Assessment transport between environmental compartments:

Volatility: The substance will not evaporate into the atmosphere from the water surface.

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

Results of PBT and vPvB assessment

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

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

Additional information

Sum parameter

Chemical oxygen demand (COD): (calculated) 165 mg/g

Other ecotoxicological advice:

Higher concentrations of the substance may cause a strong chemical oxygen consumption in biological sewage-treatment plants and/or waterways.

13. Disposal Considerations

14. Transport Information

Land transport

ADR

Not classified as a dangerous good under transport regulations

UN 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: 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

Inland waterway transport

ADN

Not classified as a dangerous good under transport regulations

UN number: Not applicable

UN proper shipping name: Not applicable

Transport hazard class(es): Not applicable

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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:	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:	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

UN number

See corresponding entries for "UN number" for the respective regulations in the tables above.

UN proper shipping name

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

Transport hazard class(es)

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

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Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

Special precautions for user

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

Transport in bulk according to Annex II of MARPOL and the IBC Code

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

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 InformationAssessment of the hazard classes according to UN GHS criteria (most recent version)

Acute Tox. 4 (oral)
Eye Dam./Irrit. 1
Aquatic Acute 3

chemical industry

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

Acute Tox.	Acute toxicity
Eye Dam./Irrit.	Serious eye damage/eye irritation
Aquatic Acute	Hazardous to the aquatic environment - acute

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. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility

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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.