

Safety data sheet

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BASF Safety data sheet

Date / Revised: 03.08.2016

Product: **Sodium Metabisulfite food grade (E223)**

Version: 8.0

(30042375/SDS_GEN_VN/EN)

Date of print 04.08.2016

1. Substance/preparation and manufacturer/supplier identification

Sodium Metabisulfite food grade (E223)

Use: food additive(s)

2. Hazard identification

Classification of the substance and mixture:

Acute toxicity: Cat. 4 (oral)

Serious eye damage/eye irritation: Cat. 1

Hazardous to the aquatic environment - acute: Cat. 3

Label elements and precautionary statement:

Pictogram:



Signal Word:

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Danger

Hazard Statement:

Causes serious eye damage. Harmful if swallowed. Harmful to aquatic life.

Precautionary Statements (Prevention):

Wear eye/face protection. Avoid release to the environment. Do not eat, drink or smoke when using this product. Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

Immediately call a POISON CENTER or doctor/physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF SWALLOWED: rinse mouth.

Precautionary Statements (Disposal):

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

Other hazards which do not result in classification:

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.

Contact with acids liberates toxic gas.

3. Composition/information on ingredients

Chemical nature

disodium disulphite

CAS Number: 7681-57-4

Na₂S₂O₅

4. First-Aid Measures

General advice:

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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Note to physician:

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.

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

5. Fire-Fighting Measures

Suitable extinguishing media:
foam

Specific hazards:

Sulphur dioxide

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

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:

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 for cleaning up or taking up:

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

7. Handling and Storage

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.

Storage

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

Do not store with: sodium nitrate, sodium nitrite, 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.

8. Exposure controls and personal protection

Components with occupational exposure limits

disodium disulphite, 7681-57-4;
TWA value 5 mg/m³ (ACGIHTLV)
TWA value 5 mg/m³ (OEL (VN))

The substance mentioned develops if the regulation/notes for storage and handling are not observed.

Sulphur dioxide, 7446-09-5;
STEL value 0.25 ppm (ACGIHTLV)
STEL value 10 mg/m³ (OEL (VN))
TWA value 5 mg/m³ (OEL (VN))

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.

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

| | |
|---|--|
| 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 (solid/gas): | not flammable (other) |
| Lower explosion limit: | For solids not relevant for classification and labelling. |
| Upper explosion limit: | For solids not relevant for classification and labelling. |
| Thermal decomposition: | 150 °C To avoid thermal decomposition, do not overheat. |
| 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) |
| Bulk density: | 1,000 - 1,200 kg/m ³ |
| Solubility in water: | Literature data. 667 g/l (25 °C) |
| Partitioning coefficient n-octanol/water (log Pow): | not applicable |
| Viscosity, dynamic: | not applicable |

10. Stability and Reactivity

Conditions to avoid:
Avoid humidity.

Thermal decomposition: 150 °C
To avoid thermal decomposition, do not overheat.

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

Corrosion to metals: No corrosive effect on metal.

Hazardous reactions:
Reacts with nitrites. Reacts with nitrates. Reacts with oxidizing agents.

Hazardous decomposition products:
Sulphur dioxide

11. Toxicological Information

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.

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

Ecotoxicity

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.

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.

Mobility

Assessment transport between environmental compartments:

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

Adsorption to solid soil phase is not expected.

Persistence and degradability

Assessment of stability in water:

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

Study scientifically not justified.

Sum parameter

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

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Bioaccumulation potential

Assessment bioaccumulation potential:
Accumulation in organisms is not to be expected.

Bioaccumulation potential:
Study scientifically not justified.

Additional information

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

Contact manufacturer regarding recycling.
Contact waste centre regarding recycling.
Must be disposed of or incinerated in accordance with local regulations.

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

Domestic transport:

Not classified as a dangerous good under transport regulations

Sea transport IMDG

Not classified as a dangerous good under transport regulations

Air transport IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Hazard determining component(s) for labelling: disodium disulphite

Other regulations

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

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16. Other Information

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

chemical industry

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

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.