

SAFETY DATA SHEET

Sodium Bisulphate

Page 1
Issued: 26/03/2025
Revision No: 4

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product identifier:

Product Name: SODIUM HYDROGENSULPHATE
Index No.: 016-046-00-X
EC Number: 231-665-7
CAS No.: 7681-38-1
Synonyms: SODIUM BISULPHATE, SODIUM BISULPHATE BE, SODIUM BISULPHATE FR, SODIUM BISULPHATE ZW, SODIUM BISULPHATE DNX, SODIUM BISULPHATE HEI, SODIUM BISULFATE, ANHYDROUS, TECHNICAL GRADE
Pure substance/mixture: Substance
Molecular weight: 120.06 g/mol

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

Recommended use: Industrial use
 pH control
 Metal cleaning
 Manufacture of substance
 Formulation & (re)packing of substances and mixtures.
 Cleaning agent

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Serious eye damage/eye irritation: Category 1 (H318)

Label elements:



Signal word: Danger.

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SAFETY DATA SHEET

Sodium Bisulphate

Issued: 26/03/2025

Page 2

| | |
|----------------------------------|--|
| Hazard statements: | H318 Causes serious eye damage. |
| Precautionary statements: | P102 - Keep out of reach of children. P262 - Do not get in eyes, on skin, or on clothing. P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER/ doctor. |
| Additional information: | This product requires child resistant fastenings if supplied to the general public. This product requires tactile warnings if supplied to the general public. |
| Other hazards: | No information available. |

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances:

| | |
|--|-----------------------------------|
| Chemical name: | SODIUM HYDROGENSULPHATE 7681-38-1 |
| Weight-%: | >=90% |
| EC No. (EU Index No.): | 231-665-7 (016-046-00-X) |
| UK REACH registration No.: | - |
| Classification according to GB CLP (SI 2020/1567 as amended): | Eye Dam. 1 (H318) |
| Specific concentration limit (SCL): | - |
| M-Factor: | - |
| M-Factor (long-term): | - |

Full text of H- and EUH-phrases: see section 16: This product does not contain candidate substances of very high concern at a concentration >= 0.1% (UK REACH Article 59).

4. FIRST AID MEASURES

Description of first aid measures:

| | |
|----------------------|--|
| Inhalation: | IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. If breathing is irregular or stopped, administer artificial respiration. Place unconscious person on the side in the recovery position and ensure breathing can take place. Get medical attention immediately if symptoms occur. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| Eye contact: | Remove affected person from source of contamination. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur. |
| Skin contact: | Remove affected person from source of contamination. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Get medical attention if symptoms occur. |

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SAFETY DATA SHEET

Sodium Bisulphate

Issued: 26/03/2025

Page 3

Ingestion:

Rinse mouth thoroughly with water. Do NOT induce vomiting. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Place unconscious person on the side in the recovery position and ensure breathing can take place. Get medical attention immediately if symptoms occur. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Self-protection of the first aider: No action shall be taken involving any personal risk or without suitable training.

Most important symptoms and effects, both acute and delayed:**Symptoms:**

Eye: Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated. Causes eye burns. Overexposure may cause the following adverse effects. May cause redness and tearing of the eyes. Pain.

Dermal: Overexposure may cause the following adverse effects. Pain. Irritation. Redness. Blistering.

Ingestion: Overexposure may cause the following adverse effects Stomach pain.

Indication of any immediate medical attention and special treatment needed:

Notes for the doctor: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Dry chemical, CO₂, alcohol-resistant foam or water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire: CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media: Do not scatter spilled material with high pressure water streams.

Special hazards arising from the substance or mixture:

Specific hazards arising from the chemical: When heated and in case of fire, toxic vapours/gases may be formed.

Hazardous combustion products: Sodium Oxides. Oxides of Sulphur.

Advice for firefighters:**Special protective equipment and precautions for fire-fighters:**

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

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SAFETY DATA SHEET

Sodium Bisulphate

Issued: 26/03/2025

Page 4

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal precautions: Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Do not handle until all safety precautions have been read and understood. No action shall be taken involving any personal risk or without suitable training. Evacuate personnel to safe areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. In case of inadequate ventilation wear respiratory protection.

Other information: Refer to protective measures listed in Sections 7 and 8.

For emergency responders: Use personal protection recommended in Section 8.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

Methods and material for containment and cleaning up:

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up: Move containers from fire area if you can do it without risk. Keep upwind. Do not allow run-off from fire-fighting to enter drains or water courses. Avoid generation of dust. Remove spillage with vacuum cleaner. If not possible, collect spillage with shovel, broom or the like. Pick up and transfer to properly labelled containers.

Prevention of secondary hazards: Clean contaminated objects and areas thoroughly observing environmental regulations.

Reference to other sections: See section 8 for more information. See section 13 for more information.

7. HANDLING AND STORAGE

Precautions for safe handling:

Advice on safe handling: Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with eyes, skin and clothing. Do not breathe dust. Do not swallow. Keep container closed when not in use. Handle in accordance with good industrial hygiene and safety practice. Avoid direct contact with the substance.

General hygiene considerations: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. Remove contaminated clothing and protective equipment before entering eating areas. When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities:

Storage Conditions: Keep container tightly closed in a dry and well-ventilated place. Hygroscopic. Keep away from food, drink and animal feeding stuffs. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store away from the following materials. Strong bases. Strong oxidising agents.

Specific end use(s): See section 1 for more information.

Risk Management Methods (RMM): The information required is contained in this Safety Data Sheet.

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SAFETY DATA SHEET

Sodium Bisulphate

Issued: 26/03/2025

Page 5

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Exposure Limits: This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region-specific regulatory bodies.

Biological occupational exposure limits: This product, as supplied, does not contain any hazardous materials with biological limits established by the region-specific regulatory bodies.

Derived No Effect Level (DNEL) – Workers: No information available.

Derived No Effect Level (DNEL) - General Public: No information available.

Predicted No Effect Concentration (PNEC):

| Chemical name | Freshwater | Freshwater (intermittent release) | Marine water | Marine water (intermittent release) | Air |
|-----------------------------------|------------|-----------------------------------|--------------|-------------------------------------|-----|
| SODIUM HYDROGENSULPHATE 7681-38-1 | 11.09 mg/l | 17.66 mg/l | 1.109 mg/l | | |

| Chemical name | Freshwater sediment | Marine sediment | Sewage treatment | Soil | Food chain |
|-----------------------------------|---------------------|-----------------|------------------|------------|------------|
| SODIUM HYDROGENSULPHATE 7681-38-1 | 40.2 mg/kg | 4.02 mg/kg | 800 mg/l | 1.54 mg/kg | |

Exposure controls:

Engineering controls: No information available.

Personal protective equipment:

Eye/face protection: Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.

Hand protection: Wear suitable gloves. Gloves must conform to standard EN 374.

| Gloves | | | |
|----------------------|---------------------------------------|-----------------|--------------------|
| Duration of contact | PPE – Glove material | Glove thickness | Break through time |
| Long term (repeated) | Wear protective nitrile rubber gloves | >0.11mm | 480 minutes |
| Short term | Wear protective nitrile rubber gloves | >0.11mm | 480 minutes |

Skin and body protection: Wear appropriate clothing to prevent reasonably probable skin contact.

Respiratory protection: Use appropriate respiratory protection.

Recommended filter type: Particulate filter P1. or. Particulate filter P3. Particulates filter conforming to EN 143.

General hygiene considerations: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. Remove contaminated clothing and protective equipment before entering eating areas. When using do not eat, drink or smoke.

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SAFETY DATA SHEET

Sodium Bisulphate

Issued: 26/03/2025

Page 6

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

| | |
|-------------------------|---|
| Physical state: | Solid |
| Appearance: | Solid crystalline powder, dusty powder |
| Colour: | White/off-white to light (or pale) yellow |
| Odour: | Odourless. Fresh to pungent. |
| Odour threshold: | No information available |

| Property | Value | Remarks • Method |
|--|---------------------------------|---------------------------|
| Melting point / freezing point | 177 - 315°C | |
| Initial boiling point and boiling range | | No information available. |
| Flammability | | No information available. |
| Flammability Limit in Air | | No information available. |
| Upper flammability or explosive limits | | |
| Lower flammability or explosive limits | | |
| Flash point | | No information available. |
| Autoignition temperature | | No information available. |
| Decomposition temperature | > 350°C | |
| pH | <= 1.0 | Solution (5 %) @ 20°C. |
| pH (as aqueous solution) | | No information available. |
| Kinematic viscosity | | No information available. |
| Dynamic viscosity | | No information available. |
| Water solubility | Partially to completely soluble | |
| Solubility(ies) | | No information available. |
| Partition coefficient | | No information available. |
| Vapour pressure | | No information available. |
| Relative density | 1.28 - 2.44 | |
| Bulk density | | No information available |
| Liquid Density | | No information available |
| Relative vapour density | | No information available. |
| Particle characteristics | | No information available. |
| Particle Size | | No information available |
| Particle Size Distribution | | No information available |
| Explosive properties | | No information available. |
| Oxidising properties | | No information available. |
| Molecular weight: | 120.06 g/mol | |

10. STABILITY AND REACTIVITY

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical stability:

Stability: Stable under normal conditions.

Explosion data:

Sensitivity to mechanical impact: None.

Sensitivity to static discharge: None.

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SAFETY DATA SHEET

Sodium Bisulphate

Issued: 26/03/2025

Page 7

Possibility of hazardous reactions: None under normal processing.

Conditions to avoid: Protect from moisture, water, humidity.

Incompatible materials: Strong acids. Strong bases. Strong oxidising agents. DO NOT MIX dry or concentrated solutions of this product with concentrated solutions of chlorine bleach, ammonia cleansers or similar products.

Hazardous decomposition products: Sodium Oxides. Oxides of sulphur.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Information on likely routes of exposure:

Product Information:

Inhalation: Inhalation of dust in high concentration may cause irritation of respiratory system.

Eye contact: Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated. Causes eye burns. Overexposure may cause the following adverse effects. May cause redness and tearing of the eyes. Pain.

Skin contact: Overexposure may cause the following adverse effects. Pain. Irritation. Redness. Blistering.

Ingestion: Overexposure may cause the following adverse effects. Stomach pain.

Symptoms related to the physical, chemical and toxicological characteristics:

Symptoms:

Acute toxicity:

Numerical measures of toxicity: No information available.

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|-------------------------|--------------------|-------------|--------------------|
| SODIUM HYDROGENSULPHATE | = 2140 mg/kg (rat) | - | >2.4 mg/l (rat) 4h |

Delayed and immediate effects as well as chronic effects from short and long-term exposure:

Skin corrosion/irritation: Based on available data the classification criteria are not met.

SODIUM HYDROGENSULPHATE (7681-38-1)

| Method | Species | Exposure route | Effective dose | Exposure time | Results |
|--|---------|----------------|----------------|---------------|--------------|
| OECD Test No. 404: Acute Dermal Irritation/Corrosion | Rabbit | Dermal | | 4 hours | Non-irritant |

Serious eye damage/eye irritation: Causes serious eye damage. May cause permanent damage if eye is not immediately irrigated. Causes eye burns.

| Method | Species | Exposure route | Effective dose | Exposure time | Results |
|---|---------|----------------|----------------|---------------|---|
| OECD Test No. 405: Acute Eye Irritation/Corrosion | Rabbit | Eye | | | Cause serious eye damage. May cause permanent damage if eye is not immediately irrigated. Causes eye burns. |

[cont...]

SAFETY DATA SHEET

Sodium Bisulphate

Issued: 26/03/2025

Page 8

Respiratory or skin sensitisation: Based on available data the classification criteria are not met.

Germ cell mutagenicity: Based on available data the classification criteria are not met.

Carcinogenicity: Based on available data the classification criteria are not met.

Reproductive toxicity: Based on available data the classification criteria are not met.

STOT - single exposure: Based on available data the classification criteria are not met.

STOT - repeated exposure: Based on available data the classification criteria are not met.

Aspiration hazard: Based on available data the classification criteria are not met.

Other adverse effects: No information available.

12. ECOLOGICAL INFORMATION

Toxicity:

Ecotoxicity: The environment impact of this product has not been fully investigated.

| Method | Species | Endpoint type | Effective dose | Exposure time | Results |
|------------------|------------------------|---------------|----------------|---------------|--------------------------------|
| EPA 600/4-90/027 | Pimephales Promelas | LC50 | 7960 mg/l | 96 hours | Sodium Sulphate Read-across |
| EPA 600/R-94/024 | Daphnia magna | LC50 | 1766 mg/l | 48 hours | Sodium Sulphate Read-across |
| ASTM E 1295-01 | Ceriodaphnia dubia | NOEC | 1109 mg/l | | Sodium Sulphate Read-across |
| | Nitzschia linearis | EC50 | 1900 mg/l | 120 hours | Sodium Sulphate Read-across |
| | Hyalella azteca | LC50 | 757 mg/l | 96 hours | Sodium Sulphate Read-across |

SODIUM HYDROGENSULPHATE (7681-38-1)

| Method | Species | Endpoint | Effective dose | Exposure time | Results |
|--------|-----------------------------|----------|----------------|---------------|---------|
| | Freshwater algae | EC50 | 1900 mg/l | | |
| | Toxicity to micro-organisms | EC50 | 8 mg/l | | |

Persistence and degradability: The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulation: Not likely to bioaccumulate.

Mobility in soil: Completely soluble.

Results of PBT and vPvB assessment:

PBT and vPvB assessment: The product does not contain any substance(s) classified as PBT or vPvB.

| Chemical name | PBT and vPvB assessment |
|-------------------------|-------------------------------|
| SODIUM HYDROGENSULPHATE | PBT assessment does not apply |

Other adverse effects: No information available.

[cont...]

SAFETY DATA SHEET

Sodium Bisulphate

Issued: 26/03/2025

Page 9

13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Waste from residues/unused products: Dispose of in accordance with local regulations.

Dispose of waste in accordance with environmental legislation.

Contaminated packaging: Do not reuse empty containers.

14. TRANSPORT INFORMATION

General: The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

UN number: No information required.

UN proper shipping name: No information required.

Transport hazard class(es): No information required.

Packing group: No information required.

Environmental hazards:

Environmentally hazardous substance/marine pollutant: No.

Special precautions for user: No information required.

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: No information required.

15. REGULATORY INFORMATION

Chemical safety assessment: A chemical safety assessment has been carried out.

International Inventories:

| | |
|----------------------|--|
| TSCA | Contact supplier for inventory compliance status |
| DSL/NDL | Contact supplier for inventory compliance status |
| EINECS/ELINCS | Contact supplier for inventory compliance status |
| ENCS | Contact supplier for inventory compliance status |
| IECSC | Contact supplier for inventory compliance status |
| KECI | Contact supplier for inventory compliance status |
| PICCS | Contact supplier for inventory compliance status |
| AIIC | Contact supplier for inventory compliance status |
| NZIoC | Contact supplier for inventory compliance status |

[cont...]

SAFETY DATA SHEET

Sodium Bisulphate

Issued: 26/03/2025

Page 10

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Legal disclaimer: The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.