# Safety Data Sheet

For INDIA, According to GHS (Rev. 8)

## SODIUM METABISULFITE - BASF (NON-FOOD GRADE)

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## SECTION 1: IDENTIFICATION

**1.1 GHS Product identifier:**

SODIUM METABISULFITE — BASF (NON-FOOD GRADE)
Synonyms: Sodium pyrosulfite; Disodium disulfite; Sodium disulphite

**CAS:** 7681-57-4

**Other means of identification:**

Not relevant

**1.2 Recommended use of the chemical and restrictions on use:**

Relevant uses: Reducing agent, dechlorination agent (water/effluent treatment), bleaching agent, photographic and leather industry, industrial preservative/antioxidant intermediate. Non-food industrial grade only – not for food, feed or pharmaceutical use. For industrial user only.

Uses advised against: All uses not specified in this section or in section 7.3.

**1.3 Supplier's details:**

**SURAJ CHEMICALS**
No 92, Govindappa Naicken Street, Shiva Complex, Chennai – 600001, Tamil Nadu, India
Tel: +91 - 7092722822, +91 - 9840284032 / +91 - 44 - 25393652, 42130281
Email: sales@surajchemicals.com | Website: www.surajchemicals.com
GST No: 33ACEPV8190L1ZZ

**1.4 Emergency phone number:**

Emergency Contact No: +91 - 7092722822, +91 - 9840284032

## SECTION 2: HAZARDS IDENTIFICATION

**2.1 Classification of the substance or mixture:**

**GHS:**
Classification of this product has been carried out in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

| | |
|---|---|
| Acute Tox. 4 | Acute oral toxicity, Category 4, H302 |
| Eye Irrit. 2 | Eye irritation, Category 2, H319 |
| STOT SE 3 | Respiratory tract irritation, single exposure, Category 3, H335 |

**2.2 GHS label elements, including precautionary statements:**

**GHS: Warning**

**Hazard statements:**

Acute Tox. 4: H302 – Harmful if swallowed.
Eye Irrit. 2: H319 – Causes serious eye irritation.
STOT SE 3: H335 – May cause respiratory irritation.

**Precautionary statements:**

P261: Avoid breathing dust.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/eye protection.
P301+P312: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P501: Dispose of the contents/containers in accordance with regulations on hazardous waste.

**2.3 Other hazards which do not result in classification:**

Releases sulfur dioxide ($SO_2$) gas on contact with acids or moisture over time; may trigger reactions in sulfite-sensitive/asthmatic individuals. Does not meet the PBT/vPvB criteria.

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

**3.1 Substances:**

**Chemical description:** Sodium Metabisulfite (technical/industrial, BASF-manufactured grade)

In accordance with Annex 4.3.3 of the GHS, the product contains:

| Identification | Chemical Name / Classification | Concentration |
|---|---|---|
| CAS: 7681-57-4 | Sodium Metabisulfite — Acute Tox. 4: H302; Eye Irrit. 2: H319; STOT SE 3: H335 – Warning | ≥ 97% |

*To obtain more information on the hazards of the substances, consult sections 11, 12 and 16.*

**3.2 Mixtures:**

Non-applicable

## SECTION 4: FIRST AID MEASURES

**4.1 Description of necessary first-aid measures:**

Request medical assistance immediately, showing the SDS of this product.

**By inhalation:**

Remove the person affected from the area of exposure, provide fresh air and keep at rest. $SO_2$ fumes may irritate airways – seek medical attention if breathing difficulty or wheezing (especially in sulfite-sensitive individuals) occurs.

**By skin contact:**

Remove contaminated clothing, rinse skin thoroughly with plenty of water and soap. Seek medical attention if irritation persists.

**By eye contact:**

Rinse eyes thoroughly with lukewarm water for at least 15 minutes, holding eyelids open. Remove contact lenses if present and easy to do. Seek medical attention.

**By ingestion/aspiration:**

Rinse out the mouth with water. Do not induce vomiting. Give water to drink if the person is conscious. Seek medical attention, showing the SDS of the product.

**4.2 Most important symptoms/effects, acute and delayed:**

Acute and delayed effects are indicated in sections 2 and 11.

**4.3 Indication of immediate medical attention and special treatment needed, if necessary:**

Not relevant

## SECTION 5: FIRE-FIGHTING MEASURES

**5.1 Suitable extinguishing media:**

**Suitable:** Water spray/fog, foam, carbon dioxide, dry chemical powder – extinguishing media appropriate to the surrounding fire
**Unsuitable:** None known

**5.2 Specific hazards arising from the chemical:**

Non-combustible itself. On heating or in contact with fire, decomposes releasing toxic and irritating sulfur dioxide ($SO_2$) gas. Reacts with acids to liberate $SO_2$.

**5.3 Special protective actions for fire-fighters:**

Evacuate all non-essential personnel. Intervention only by capable personnel who are trained and aware of the hazards of the product. In all cases wear self-contained breathing apparatus. When intervention in close proximity, wear full protective chemical-resistant suit. After intervention, proceed to clean the equipment (take a shower, remove clothing carefully, clean and check).

**Additional provisions:**

If safe to do so, remove exposed containers or cool with water spray from a safe distance. Approach from upwind. Use self-contained breathing apparatus due to $SO_2$ generation risk.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment and emergency procedures:**

**For non-emergency personnel:**

Avoid generating dust. Sweep up spilled material into containers, provided there is no additional risk. Ventilate the area if $SO_2$ odour is noticeable. Use appropriate PPE (see section 8).

**For emergency responders:**

Wear protective equipment. Keep unprotected persons away. See section 8.

**6.2 Environmental precautions:**

Avoid release to drains, watercourses or soil – sulfite can deplete dissolved oxygen in water bodies. Notify the relevant authority in case of significant release to the environment.

**6.3 Methods and materials for containment and cleaning up:**

Sweep or vacuum up (avoid generating dust) and place in a labelled, dry container for reuse (preferred) or disposal. Wash the contaminated area with water after collection.

**6.4 Reference to other sections:**

See sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

**7.1 Precautions for safe handling:**

**A. General precautions for safe use:**

Avoid generating and inhaling dust and $SO_2$ fumes; use local exhaust ventilation. Keep away from acids and strong oxidizers. Keep containers tightly closed to prevent moisture ingress and slow decomposition.

**B. Technical recommendations for the prevention of fires and explosions:**

No special fire-prevention measures are required as the product is non-combustible; keep away from strong acids to prevent $SO_2$ gas release.

**C. Technical recommendations on general occupational hygiene:**

Do not eat or drink during the process; wash hands afterwards with suitable cleaning products.

**D. Technical recommendations to prevent environmental risks:**

Provide tight electrical equipment well protected against corrosion. Avoid atmospheric emissions. Warn people about the dangers of the product. Follow the protective measures given in the exposure controls/personal protection section. In industrial installations, apply the rules for the prevention of major accidents (consult an expert).

**7.2 Conditions for safe storage, including any incompatibilities:**

**A. Specific storage requirements:**

| | |
|---|---|
| Minimum Temp. | Ambient |
| Maximum Temp. | 30°C (store in a cool, dry place, away from direct sunlight) |
| Maximum time | 12 Months in original sealed packaging (degrades slowly with moisture/air exposure, releasing $SO_2$) |

**B. General conditions for storage:**

Store in a dry, cool, well-ventilated area in tightly sealed containers, away from acids and oxidizing agents to prevent gradual decomposition and $SO_2$ release. For additional information see subsection 10.5.

**7.3 Specific end use(s):**

Except for the instructions already specified, it is not necessary to provide any special recommendation regarding the uses of this product.

## SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

**8.1 Control parameters:**

Substances whose occupational exposure limits have to be assessed in the workplace, per the Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987):

| Identification | Occupational Exposure Limit Type | Value |
|---|---|---|
| Sodium Metabisulfite (as sulfite)<br>CAS: 7681-57-4 | OSHA PEL – TWA (8 hrs) | 5 mg/m³ |
| Sulfur Dioxide (decomposition product) | ACGIH TLV – TWA (8 hrs) / STEL (15 min) | 0.25 ppm / 0.5 ppm |

**8.2 Appropriate engineering controls:**

It is recommended to use localized extraction in the work area as a collective protection measure to avoid exceeding occupational exposure limits, in addition to individual protective equipment (PPE) as needed. Consult the manufacturer's information leaflet for storage, use, cleaning and maintenance of PPE.

**B. Respiratory protection:**

Particulate filter (FFP2/P2) mask for dust; combination particulate/acid-gas cartridge respirator where $SO_2$ fumes are possible.

**C. Specific protection for the hands:**

Protective gloves against minor risks (nitrile or PVC). Replace at any sign of damage.

**D. Eye and face protection:**

Chemical splash goggles.

**E. Bodily protection:**

Standard work clothing / coveralls; safety footwear for bulk handling.

**F. Additional emergency measures:**

Emergency shower (ANSI Z358-1, ISO 3864-1:2011, ISO 3864-4:2011) and eyewash stations (DIN 12 899, ISO 3864-1:2011, ISO 3864-4:2011) should be available.

**Environmental exposure controls:**

Avoid environmental spillage of both the product and its container. See subsection 7.1.D.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**9.1 Information on basic physical and chemical properties:**

| | |
|---|---|
| **Appearance** | |
| Physical state at 20°C | Solid (crystalline powder) |
| Appearance | White to slightly yellowish crystalline powder |
| Color | White to off-white |
| Odor | Pungent, sulfurous ($SO_2$-like) |
| Odour threshold | Available on request |
| **Volatility** | |
| Boiling point at atmospheric pressure | Non-applicable (solid; decomposes before boiling) |
| Vapour pressure at 20°C | Negligible (solid); $SO_2$ evolves slowly on exposure to air/moisture |
| Evaporation rate at 20°C | Not relevant * |
| **Product Description** | |
| Density / Relative density at 20°C | ~1.48 g/cm³ |
| Bulk density | ~1000–1300 kg/m³ |
| Concentration | ≥ 97% (as $Na_2S_2O_5$) |
| pH (5% aqueous solution, 20°C) | ~4.0–5.5 (acidic) |
| Partition coefficient n-octanol/water | Not applicable (inorganic salt) |
| Solubility in water at 20°C | ~540 g/L (highly soluble) |
| Decomposition temperature | ~150°C (releases $SO_2$) |
| Melting point/freezing point | Decomposes before melting (~150°C) |
| **Flammability** | |
| Flash Point | Non-applicable (solid, non-flammable) |
| Flammability (solid, gas) | Non-flammable |
| Autoignition temperature | Not relevant * |
| Lower / Upper flammability limit | Not relevant * |
| **Particle Characteristics** | |
| Median equivalent diameter | Available on request (grade-dependent) |

** Not relevant due to the nature of the product, not providing information on the properties of its hazards.*

**9.2 Other information:**

| | |
|---|---|
| Explosive properties | Not explosive |
| Oxidising properties | Not classified (this is a reducing agent, not an oxidizer) |
| Corrosive to metals | Can be mildly corrosive to certain metals in moist/aqueous conditions due to $SO_2$/sulfurous acid formation |
| Heat of combustion | Not relevant (non-combustible) |
| Surface tension at 20°C | Not relevant * |
| Refraction index | Not relevant * |

## SECTION 10: STABILITY AND REACTIVITY

**10.1 Reactivity:**

A strong reducing agent. Reacts with acids to liberate sulfur dioxide gas. Slowly oxidised on prolonged exposure to air/moisture, gradually releasing $SO_2$.

**10.2 Chemical stability:**

Chemically stable under the indicated conditions of storage, handling and use.

**10.3 Possibility of hazardous reactions:**

Contact with strong acids or strong oxidizing agents may cause a vigorous reaction and release of $SO_2$ gas. Under recommended dry storage conditions no hazardous reactions are expected.

**10.4 Conditions to avoid:**

| Shock/Friction | Contact with Air | Increase in Temperature | Sunlight | Humidity |
|---|---|---|---|---|
| Not applicable | Slow oxidation/$SO_2$ release over time | Avoid strong heating (decomposition ~150°C) | Not applicable | Avoid moisture – accelerates decomposition |

**10.5 Incompatible materials:**

| Strong Acids | Strong Oxidizing Agents | Moisture |
|---|---|---|
| Avoid contact – releases $SO_2$ gas | Avoid contact – vigorous reaction | Avoid prolonged exposure – gradual decomposition |

**10.6 Hazardous decomposition products:**

Sulfur dioxide ($SO_2$) gas, especially on contact with acids, moisture or heat.

## SECTION 11: TOXICOLOGICAL INFORMATION

**11.1 Information on toxicological effects:**

In case of exposure that is repetitive, prolonged, or at concentrations higher than the recommended occupational exposure limits, adverse health effects may result depending on the means of exposure:

**A. Ingestion (acute effect):**

Harmful if swallowed. May cause gastrointestinal irritation, nausea and vomiting; sulfite-sensitive/asthmatic individuals may experience allergic-type reactions.

**B. Inhalation (acute effect):**

Dust and liberated $SO_2$ fumes are irritating to the respiratory tract; may cause coughing and breathing difficulty, particularly in sulfite-sensitive or asthmatic individuals.

**C. Contact with skin and eyes (acute effect):**

Causes serious eye irritation. May cause mild skin irritation on prolonged contact.

**D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity):**

Classification criteria for carcinogenicity, mutagenicity and reproductive toxicity are not met based on available data. IARC: Not classified.

**E. Sensitizing effects:**

Not classified as a skin sensitizer. Known to provoke hypersensitivity/asthma-like reactions in sulfite-sensitive individuals via inhalation or ingestion, though this is not a formal GHS sensitisation classification.

**F. Specific target organ toxicity (STOT) – single exposure:**

May cause respiratory irritation (H335) due to $SO_2$ release.

**G. Specific target organ toxicity (STOT) – repeated exposure:**

Classification criteria are not met based on available data.

**H. Aspiration hazard:**

Non-applicable (solid).

**Product-specific toxicological information:**

| Identification | Acute Toxicity | Genus |
|---|---|---|
| Sodium Metabisulfite (technical/industrial, BASF-manufactured grade)<br>CAS: 7681-57-4 | LD50 oral: ~1500 mg/kg | Rat |
| | LD50 dermal: >2000 mg/kg | Rabbit |
| | LC50 inhalation: Available on request | – |

## SECTION 12: ECOLOGICAL INFORMATION

**Not classified as hazardous to the aquatic environment under standard GHS criteria, but sulfite can deplete dissolved oxygen in water.**

**12.1 Toxicity:**

| Identification | Acute Toxicity | Species | Genus |
|---|---|---|---|
| Sodium Metabisulfite<br>CAS: 7681-57-4 | LC50: ~200 mg/L (96h) | Various | Fish |
| | EC50: Available on request | – | Crustacean |

**12.2 Persistence and degradability:**

Rapidly oxidised in the environment to sulfate; not persistent as the sulfite/metabisulfite ion, but can cause transient localized oxygen depletion (BOD) in receiving water.

**12.3 Bioaccumulative potential:**

Not expected to bioaccumulate (highly water soluble inorganic salt).

**12.4 Mobility in soil:**

| Koc | Henry | Dry Soil | Moist Soil |
|---|---|---|---|
| Not applicable | Not applicable | No | Dissolves readily |

**12.5 Results of PBT and vPvB assessment:**

This substance does not meet the PBT/vPvB criteria of Annex XIII.

**12.6 Other adverse effects:**

Not described

## SECTION 13: DISPOSAL CONSIDERATIONS

**13.1 Disposal methods:**

Neutralise/oxidise under controlled conditions or collect for approved chemical waste disposal in accordance with local regulations. Avoid uncontrolled discharge to drains (oxygen depletion risk). For packaging: rinse containers with water before disposal or recycling.

Refer to national and local regulations on waste management, including the Hazardous and Other Wastes (Management and Transboundary Movement) Rules.

## SECTION 14: TRANSPORT INFORMATION

**Transport of dangerous goods by land (ADR 2023 / RID 2023):**

| | |
|---|---|
| 14.1 UN number | Not regulated |
| 14.2 UN proper shipping name | Non-applicable (solid form not assigned a UN number under ADR/IMDG/IATA) |
| 14.3 Transport hazard class(es) | Non-hazardous for transport (solid) |
| 14.4 Packing group | N/A |
| 14.5 Environmental hazard | No |
| 14.6 Special precautions for user | Physico-chemical properties: see section 9 |
| 14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code) | Not relevant |

**Transport of dangerous goods by sea (IMDG 41-22):**

| | |
|---|---|
| 14.1 UN number | Not regulated |
| 14.2 UN proper shipping name | Non-applicable (solid form not assigned a UN number under ADR/IMDG/IATA) |
| 14.3 Transport hazard class(es) | Non-hazardous for transport (solid) |
| 14.4 Packing group | N/A |
| 14.5 Marine pollutant | No |
| 14.6 Special precautions for user | EmS Codes: Not applicable \| Limited quantities: Not applicable \| Segregation group: Not relevant |
| 14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code) | Not relevant |

**Transport of dangerous goods by air (IATA/ICAO 2024):**

| | |
|---|---|
| 14.1 UN number | Not regulated |
| 14.2 UN proper shipping name | Non-applicable (solid form not assigned a UN number under ADR/IMDG/IATA) |
| 14.3 Transport hazard class(es) | Non-hazardous for transport (solid) |
| 14.4 Packing group | N/A |
| 14.5 Environmental hazard | No |
| 14.6 Special precautions for user | Physico-chemical properties: see section 9 |
| 14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code) | Not relevant |

## SECTION 15: REGULATORY INFORMATION

**15.1 Safety, health and environmental regulations specific for the product in question:**

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of local circumstances, in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

**Other legislation:**

Manufacture, Storage and Import of Hazardous Chemicals Rules 1989
The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)
The Chemical Accidents (Emergency Planning, Preparedness, and Response) Rules, 1996
Public Liability Insurance Act, 1991

## SECTION 16: OTHER INFORMATION

**Legislation related to safety data sheets:**

This safety data sheet has been designed in accordance with Annex 4 – Guidance on the preparation of Safety Data Sheets of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

**Texts of the legislative phrases mentioned in sections 2 and 3:**

H302: Harmful if swallowed.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.

*The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.*

**Advice related to training:**

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources:**

The United Nations Economic Commission for Europe (UNECE); European Chemicals Agency (ECHA) classification and labelling inventory; ACGIH Threshold Limit Values.

**Abbreviations and acronyms:**

ADR: European agreement concerning the international carriage of dangerous goods by road | IMDG: International maritime dangerous goods code | IATA: International Air Transport Association | ICAO: International Civil Aviation Organisation | COD: Chemical Oxygen Demand | BOD5: 5-day biochemical oxygen demand | BCF: Bioconcentration factor | LD50: Lethal Dose 50 | LC50: Lethal Concentration 50 | EC50: Effective Concentration 50 | Log-POW: Octanol-water partition coefficient | Koc: Partition coefficient of organic carbon | IARC: International Agency for Research on Cancer



**END OF SAFETY DATA SHEET**