SAFETY DATA SHEET

SODIUM METABISULPHITE (SMBS)

CAS No.: 7681-57-4

This Safety Data Sheet is issued by Suraj Chemicals as the distributor/supplier of record, based on manufacturer and published GHS / regulatory reference data for this substance. Users should also consult the specific manufacturer's SDS where available.

1. IDENTIFICATION

GHS Product identifier

SODIUM METABISULPHITE (SMBS)
Sodium Pyrosulfite; Disodium Pyrosulfite; Sodium Disulphite
CAS: 7681-57-4

Other means of identification

Not relevant

Recommended use of the chemical and restrictions on use

Relevant uses: Food and pharmaceutical preservative, waste-water dechlorinating agent, laboratory reagent, bleaching/reducing agent in industrial processes. For industrial user only.

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

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

Emergency phone number

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

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS:
The manufacturer's source MSDS predates GHS labeling (Warning Statement: None; Hazard Rating Health=2, Fire=0, Reactivity=0). Classification below has been assigned using the standard, publicly documented GHS classification for sodium metabisulphite.

Acute Tox. 4 (Oral)	Acute oral toxicity, Category 4, H302
Eye Irrit. 2	Eye irritation, Category 2, H319
Skin Irrit. 2	Skin irritation, Category 2, H315
STOT SE 3	Respiratory tract irritation, Category 3, H335

GHS label elements, including precautionary statements

GHS: Warning

Hazard statements

H302: Harmful if swallowed.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.

Precautionary statements

P261: Avoid breathing dust/vapor.
P264: Wash exposed skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
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 contents/container in accordance with local/regional/national regulations.

Other hazards which do not result in classification

Capable of provoking bronchospasm in sulfite-sensitive individuals who have asthma. Decomposition (and solutions) may release toxic and hazardous fumes of sulfur oxides, including sulfur dioxide.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances

Chemical description: Sodium Metabisulfite (Na2S2O5)

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, Eye Irrit. 2, Skin Irrit. 2, STOT SE 3: H302, H315, H319, H335	95%
CAS: 7757-83-7	Sodium Sulfite	1%
CAS: 7757-82-6	Sodium Sulfate	1%

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

Mixtures

Non-applicable (technical grade single substance with minor process impurities as above)

4. FIRST AID MEASURES

Description of necessary first-aid measures

After first aid, get appropriate medical attention, showing the SDS of this product.

By inhalation

Sore throat, shortness of breath, coughing and congestion. Remove from exposure to fresh air. Seek medical attention in severe cases or if recovery is not rapid.

By skin contact

Irritation, itching, dermatitis. Wash with soap and drench with water. Remove contaminated clothing and wash before reuse.

By eye contact

Irritation to eyes and mucous membranes. Irrigate with water until no evidence of chemical remains. Obtain medical attention.

By ingestion/aspiration

Irritation to mucous membranes. Give large quantities of water or milk immediately. Obtain medical attention.

Most important symptoms/effects, acute and delayed

Acute effects include eye and mucous membrane irritation. Decomposition may release toxic and hazardous fumes of sulfur oxides, including sulfur dioxide. Acute SO2 poisoning is rare because the gas is easily detected and irritating, but workers who cannot escape exposure may suffer severe pulmonary damage which can be fatal.

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

Exposure may aggravate acute or chronic asthma, emphysema and bronchitis.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Suitable: Use extinguishing agent appropriate for surrounding fire conditions.
Unsuitable: None indicated.

Specific hazards arising from the chemical

Not combustible. May release hazardous sulfur oxide gases on thermal decomposition or in the presence of water/acid.

Special protective actions for fire-fighters

Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode.

Additional provisions

Do not release runoff from fire control methods to sewers or waterways.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Wear appropriate PPE – see section 8.

For emergency responders

Wear protective equipment as above.

Environmental precautions

Do not release runoff from fire control or cleanup methods to sewers or waterways.

Methods and materials for containment and cleaning up

Small spills/leaks can be neutralized with an alkaline material such as caustic soda. Leaks may be located by spraying the area with ammonium hydroxide solution, which forms a white fume in the presence of sulfur dioxide. Large spills should be handled according to a predetermined plan; dike far ahead of contaminated runoff for later disposal.

Reference to other sections

See sections 8 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling

A. General precautions for safe use

Avoid contact with product. Do not breathe dust or vapor.

B. Technical recommendations for the prevention of fires and explosions

Not combustible; no specific fire prevention measures beyond general good practice.

C. Technical recommendations on general occupational hygiene

Do not eat, drink or smoke in work areas. Practice good personal hygiene, especially before food or beverage consumption.

D. Technical recommendations to prevent environmental risks

Segregate from acids and oxidizers to prevent release of sulfur dioxide gas.

Conditions for safe storage, including any incompatibilities

A. Specific storage requirements

Storage condition	Store away from heat and moisture, protected from physical damage
Incompatible materials	Acids, water/moisture, powdered potassium/sodium metals, alkali and oxidizing agents, chlorates

B. General conditions for storage

Avoid heat or moisture. Segregate from acids and oxidizers.

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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Identification	Occupational Exposure Limit Type	Value
Sodium Metabisulfite CAS: 7681-57-4	TWA	5 mg/m³
Sodium Sulfite / Sodium Sulfate	TWA / STEL / IDLH	None established

Appropriate engineering controls

Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA limits (see section 2). Local exhaust ventilation is preferred as it controls contaminant dispersion at the source.

B. Respiratory protection

Follow OSHA respirator regulations (29 CFR 1910.134); wear an MSHA/NIOSH-approved respirator selected for the working conditions. Wear SCBA for emergency or non-routine operations (spill cleanup, reactor vessels, storage tanks).

C. Specific protection for the hands

Protective gloves as needed to prevent excessive skin contact.

D. Eye and face protection

Protective eyeglasses or goggles per OSHA 29 CFR 1910.133.

E. Bodily protection

Protective boots and clothing when necessary to prevent excessive skin contact.

F. Additional emergency measures

Make emergency eyewash stations, showers and washing facilities available in the work area.

Environmental exposure controls

Do not release runoff from fire control methods to sewers or waterways.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	
Physical state at 20°C	Solid crystal
Appearance	White solid crystal
Odor	Pungent SO2 odor
Odour threshold	Pungent SO2 odor (threshold not quantified)
Volatility	
Boiling point	Not established (decomposes before boiling)
Melting Point	150°C (decomposes)
Vapour pressure	Not established
Evaporation rate	Normal
Product Description	
Formula weight	190.11 g/mol
Specific gravity (H2O=1)	1.5
pH	Acidic (aqueous solution)
Water solubility	45% @ 20°C
Other solubilities	Not applicable
% Volatile	Not applicable
Flammability	
Flash Point	Not combustible
Flammability (solid, gas)	Not flammable
Autoignition temperature	Not applicable
Lower / Upper flammability limit	Not applicable

Other information

Explosive properties	Not applicable
Oxidising properties	Not applicable
Density (bulk)	Not available

10. STABILITY AND REACTIVITY

Reactivity

In the presence of water or acid, sodium metabisulfite (and solutions) may release toxic and hazardous fumes of sulfur oxides, including sulfur dioxide. Reacts with water and steam to form corrosive sulfurous acid; reacts with chlorates to form unstable chlorine dioxide.

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

Hazardous polymerization will not occur. Contact with powdered potassium, sodium metals, alkali and oxidizing agents produces violent reactions.

Conditions to avoid

Shock/Friction	Contact with Air	Increase in Temperature	Sunlight	Humidity
Not applicable	Not applicable	Avoid excessive heat/open flame	Not applicable	Avoid moisture

Incompatible materials

Water/acid, powdered potassium/sodium metals, alkalis, oxidizing agents, chlorates.

Hazardous decomposition products

May release hazardous sulfur dioxide gas.

11. TOXICOLOGICAL INFORMATION

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)
Not likely to occur under normal handling; irritation to mucous membranes if ingested.

B. Inhalation (acute effect)
Irritant. Acute inhalation effects (rat): not available.

C. Contact with skin and eyes (acute effect)
Skin: irritant (non-corrosive per rabbit data). Eye: irritant (eye effects data not available).

D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity)
IARC, NTP and OSHA do not list sodium metabisulfite as a carcinogen.

E. Sensitizing effects
Prolonged or repeated exposure may cause dermatitis and sensitization reactions. Capable of provoking bronchospasm in sulfite-sensitive individuals who have asthma.

F. Specific target organ toxicity (STOT) – single exposure
May cause respiratory irritation (target organs: respiratory system, eyes, skin).

G. Specific target organ toxicity (STOT) – repeated exposure
Decomposition products (sulfur oxides, including SO2) may cause permanent pulmonary impairments from acute and chronic exposure. IDLH level for SO2 is 100 ppm.

H. Aspiration hazard
Not likely to occur.

Product-specific toxicological information

Identification	Acute Toxicity	Genus
Sodium Metabisulfite CAS: 7681-57-4	Acute oral LD50 = 115 mg/kg (as reported in manufacturer's source SDS)	Rat

Note: the oral LD50 value above is reported exactly as given in the manufacturer's source SDS. Published literature values for sodium metabisulfite oral LD50 in rats are typically substantially higher (in the range of several hundred to a few thousand mg/kg); this figure has not been independently re-verified by Suraj Chemicals and is carried over from the source document without alteration, per no-fabrication policy.

12. ECOLOGICAL INFORMATION

Non-hazardous solid commonly used as a waste-water dechlorinating agent.

Toxicity
Sodium metabisulfite is a non-hazardous solid commonly used as a waste-water dechlorinating agent. High concentrations will contribute to elevated chemical oxygen demand (COD) in aquatic environments.

Persistence and degradability
Rapid biological decomposition.

Bioaccumulative potential
Not established.

Mobility in soil

Koc	Henry	Dry Soil	Moist Soil
Not established	Not established	Soluble in water; slight soil absorption/mobility	

Results of PBT and vPvB assessment
Not applicable.

Other adverse effects
Elevated chemical oxygen demand at high concentrations.

13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste determinations typically consider sodium metabisulfite-contaminated materials to be non-hazardous. Follow applicable Federal, state and local regulations for disposal and container cleaning.

Refer to national and local regulations on waste management.

14. TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR/RID / DOT 49 CFR 172.101)

14.1 UN number	Non-regulated material
14.2 UN proper shipping name	Sodium Metabisulfite, non-regulated material
14.3 Transport hazard class(es)	N/A
14.4 Packing group	N/A
14.5 Environmental hazard	No
14.6 Special precautions for user	None
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not applicable

Transport of dangerous goods by sea (IMDG)

14.1 UN number	Non-regulated material
14.2 UN proper shipping name	Sodium Metabisulfite, non-regulated material
14.3 Transport hazard class(es)	N/A
14.4 Packing group	N/A
14.5 Marine pollutant	No
14.6 Special precautions for user	None
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not applicable

Transport of dangerous goods by air (IATA/ICAO)

14.1 UN number	Non-regulated material
14.2 UN proper shipping name	Sodium Metabisulfite, non-regulated material
14.3 Transport hazard class(es)	N/A
14.4 Packing group	N/A
14.5 Environmental hazard	No
14.6 Special precautions for user	None
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not applicable

15. REGULATORY INFORMATION

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

RCRA Hazardous Waste Classification: Not listed. CERCLA Hazardous Substance: Not listed. SARA Title III Sections 302/313: Not listed. TSCA: Inventory-listed chemical. FDA: Regulated when used as a food preservative.

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)

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). The source manufacturer's MSDS predates GHS labeling requirements; hazard statements in section 2 reflect the standard, publicly documented GHS classification for sodium metabisulfite.

Texts of the legislative phrases mentioned in sections 2 and 3

H302: Harmful if swallowed.
H315: Causes skin irritation.
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

Manufacturer's reference MSDS for Sodium Metabisulfite (CAS 7681-57-4); publicly available GHS classification guidance.

Abbreviations and acronyms

IDLH: Immediately Dangerous to Life or Health | SCBA: Self-Contained Breathing Apparatus | RCRA: Resource Conservation and Recovery Act | CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act | SARA: Superfund Amendments and Reauthorization Act | TSCA: Toxic Substances Control Act | COD: Chemical Oxygen Demand | LD50: Lethal Dose 50

Disclaimer: The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product; it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within Suraj Chemicals' awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

(This document is computer generated and therefore does not require any signature.)