

CATALYSED SODIUM SULPHITE

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SECTION 1: IDENTIFICATION

1.1 GHS Product identifier:

CATALYSED SODIUM SULPHITE
Sodium Sulfit (catalysed grade for oxygen scavenging); Na&sub2;SO&sub3;
CAS: 7757-83-7 (base substance, sodium sulphite; trace catalyst component proprietary – see section 3.1)

Other means of identification:

Not relevant

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses: Oxygen scavenger for boiler feedwater treatment (the catalyst accelerates the reaction with dissolved oxygen, improving corrosion protection at lower dosage/reaction time versus uncatalysed sodium sulphite), dechlorination, industrial water treatment. For industrial user only – not intended for food use.
Uses advised against: All uses not specified in this section or in section 7.3.

1.3 Supplier's details:

SURAJ CHEMICALS
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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), based on the classification of its major component, sodium sulphite.

Acute Tox. 4 (Oral)	Acute oral toxicity, Category 4, H302
Eye Irrit. 2	Eye irritation, Category 2, H319

2.2 GHS label elements, including precautionary statements:

GHS: Warning
Hazard statements:
Acute Tox. 4 (Oral): H302 – Harmful if swallowed.
Eye Irrit. 2: H319 – Causes serious eye irritation.

Precautionary statements:

P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
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.
P330: Rinse mouth.
P337+P313: If eye irritation persists: Get medical advice/attention.
P501: Dispose of contents/container in accordance with local regulations.

2.3 Other hazards which do not result in classification:

This is a catalysed grade of sodium sulphite: a small quantity of a proprietary oxidation-acceleration catalyst is incorporated to speed the reaction with dissolved oxygen. The exact catalyst identity, CAS number and concentration are manufacturer-proprietary and are **available on request**; they are not disclosed in this SDS as they are not established/standardised public data for this product. Reacts with strong acids to liberate toxic sulphur dioxide gas. Sulphite-sensitive individuals (e.g. some asthmatics) may experience allergic-type reactions on significant exposure. Not a PBT or vPvB substance.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances:

Chemical description: Sodium sulphite (Na&sub2;SO&sub3;), catalysed grade
In accordance with Annex 4.3.3 of the GHS, the product contains:

Identification	Chemical Name / Classification	Concentration
CAS: 7757-83-7	Sodium Sulphite — Acute Tox. 4 (Oral): H302; Eye Irrit. 2: H319 – Warning	≥ 97%
Not disclosed (proprietary)	Oxidation-acceleration catalyst (trace, typically a transition-metal salt used industry-wide for this purpose)	< 0.5% – exact identity and concentration available on request

To obtain more information on the hazards of the substances, consult sections 11, 12 and 16. Full catalyst disclosure available on request from Suraj Chemicals for site-specific risk assessment purposes.

3.2 Mixtures:

This product is a catalysed formulation of sodium sulphite; see 3.1 above.

SECTION 4: FIRST AID MEASURES

4.1 Description of necessary first-aid measures:

Request medical assistance if irritation is significant or persistent, showing the SDS of this product.

By inhalation:

Remove person to fresh air and keep at rest. Seek medical attention if breathing difficulty or irritation persists, particularly in sulphite-sensitive/asthmatic individuals.

By skin contact:

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

By eye contact:

Rinse immediately and thoroughly with plenty of water for at least 15 minutes, holding eyelids apart. Remove contact lenses if present and easy to do. Seek medical attention.

By ingestion/aspiration:

Rinse mouth with water. Do not induce vomiting. Give water to drink if the person is conscious. Seek immediate medical attention – harmful if swallowed.

4.2 Most important symptoms/effects, acute and delayed:

Harmful if swallowed; causes serious eye irritation. May release sulphur dioxide gas on contact with acids, causing respiratory irritation. Acute and delayed effects are also indicated in sections 2 and 11.

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

Treat symptomatically. Advise treating physician that the product may release sulphur dioxide on contact with acids.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media:

Suitable: Product is non-combustible. Use extinguishing media suitable for the surrounding fire (water spray, foam, dry chemical powder, carbon dioxide).

Unsuitable: None known

5.2 Specific hazards arising from the chemical:

Not flammable, not explosive. Product itself will not burn. Acts as a reducing agent (this is the basis of its use as an oxygen scavenger) – keep away from strong oxidisers, which may react. Strong heating or contact with acids liberates toxic sulphur dioxide gas.

5.3 Special protective actions for fire-fighters:

Wear self-contained breathing apparatus and full protective clothing in the event of a significant fire involving this product, due to possible SO₂ release.

Additional provisions:

Cool fire-exposed containers with water if practical. Approach from upwind.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Avoid contact with skin and eyes and avoid generating dust. Keep away from acids. Use personal protective equipment as described in section 8.

For emergency responders:

Wear protective equipment (gloves, goggles, and respiratory protection if SO₂; odour is detected). Keep unprotected persons away.

6.2 Environmental precautions:

Avoid release of large quantities into waterways – sodium sulphite consumes dissolved oxygen in receiving water, which can be harmful to aquatic life. Notify the relevant authority in case of significant environmental release.

6.3 Methods and materials for containment and cleaning up:

Sweep up/vacuum spilled material avoiding dust generation, place in a suitable labelled container for reuse or disposal. Wash residual area with water, containing washings for appropriate disposal.

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 contact with skin and eyes and avoid generating dust. Keep away from acids (releases toxic SO₂; gas) and strong oxidisers.

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

Not applicable – product is non-combustible; keep away from strong oxidising agents as a general reactive-chemical precaution.

C. Technical recommendations on general occupational hygiene:

Do not eat, drink or smoke while handling. Wash hands and exposed skin thoroughly after handling.

D. Technical recommendations to prevent environmental risks:

Avoid uncontrolled release of large quantities to water bodies (dissolved-oxygen depletion). Follow the protective measures given in section 8.

7.2 Conditions for safe storage, including any incompatibilities:

A. Specific storage requirements:

Storage temperature	Ambient, dry conditions
Recommended shelf life	12 months in original sealed packaging, stored dry (susceptible to slow air oxidation)

B. General conditions for storage:

Store in a cool, dry, well-ventilated place in tightly closed containers, away from acids, strong oxidisers and moisture. Prolonged exposure to air/moisture will slowly oxidise the product to sodium sulphate, reducing its effectiveness.

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:

No substance-specific occupational exposure limit has been established for sodium sulphite by OSHA, ACGIH or Indian regulatory bodies. If decomposition/acid contact liberates sulphur dioxide, the following applies to SO₂; itself:

Identification	Occupational Exposure Limit Type	Value
Sulphur Dioxide (decomposition product) CAS: 7446-09-5	Time Weighted average concentration (8 hrs)	2 ppm
	Short-term exposure limit (15 min)	5 ppm
Sodium Sulphite (as inert/nuisance dust guidance) CAS: 7757-83-7	Inhalable fraction, 8-hr TWA	10 mg/m ³

8.2 Appropriate engineering controls:

Use local exhaust ventilation where dust is generated or where the product may contact acids. Provide eyewash facilities near handling points.

B. Respiratory protection:

Dust mask/particulate respirator recommended during bagging, milling or extended dusty operations. Use an SO₂-rated cartridge respirator if working near acid-contact points.

C. Specific protection for the hands:

Chemical-resistant gloves (nitrile or PVC) recommended when handling.

D. Eye and face protection:

Chemical safety goggles mandatory – product causes eye irritation.

E. Bodily protection:

Protective overalls for bagging, loading and dosing operations.

F. Additional emergency measures:

Emergency shower and eyewash station recommended (ANSI Z358-1 / ISO 3864 compliant) in areas of regular handling.

Environmental exposure controls:

Avoid environmental spillage of both product and 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 (powder or granules)
Appearance	White to off-white powder/granules
Color	White / off-white
Odor	Odorless to faint sulphurous odor
Odour threshold	Not established
Volatility	
Boiling point at atmospheric pressure	Not applicable (solid, decomposes on strong heating)
Vapour pressure at 20°C	Not applicable (negligible, solid)
Evaporation rate	Not applicable
Product Description	
Density at 20°C	~2.63 g/cm³ (anhydrous Na&sub2;SO&sub3;)
Molecular weight	126.04 g/mol (base substance, anhydrous Na&sub2;SO&sub3;)
pH (10% aqueous solution, 20°C)	~9.0–10.0 (alkaline)
Solubility in water at 20°C	~270 g/L
Partition coefficient n-octanol/water	Not applicable (inorganic salt)
Decomposition temperature	Decomposes/disproportionates above ~600°C (releases SO&sub2;)
Melting point/freezing point	~33.4°C (heptahydrate form); decomposes before melting as anhydrous
Flammability	
Flash Point	Non-applicable (non-combustible solid)
Flammability (solid, gas)	Non-flammable
Autoignition temperature	Not applicable
Lower / Upper flammability limit	Not applicable
Particle Characteristics	
Median particle size	Grade dependent – available on request

Physical constants given for the sodium sulphite base substance; the trace catalyst does not materially change bulk physical properties. Exact catalyst composition available on request.

9.2 Other information:

Explosive properties	Not explosive
Oxidising properties	Not an oxidiser – acts as a reducing agent (basis of oxygen-scavenging function)
Corrosive to metals	Not generally corrosive; concentrated solutions may be mildly corrosive to some metals over time
Heat of combustion	Not applicable (non-combustible)
Surface tension	Not relevant (solid)
Viscosity	Not applicable (solid)

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

Reacts with strong acids liberating toxic sulphur dioxide gas. Acts as a reducing agent and reacts with strong oxidising agents, potentially violently with concentrated oxidisers. Slowly oxidised by atmospheric oxygen (particularly in moist conditions) to sodium sulphate, which is the basis of its intended use as an oxygen scavenger.

10.2 Chemical stability:

Chemically stable under normal conditions of dry storage. Reactive with oxygen/oxidisers, moisture and acids as noted above – this reactivity is the intended functional property of the product.

10.3 Possibility of hazardous reactions:

Contact with strong acids may generate sulphur dioxide gas under pressure in closed containers. Contact with strong oxidisers may generate heat.

10.4 Conditions to avoid:

Shock/Friction	Contact with Air	Increase in Temperature	Sunlight	Humidity
Not applicable	Avoid prolonged exposure (slow oxidation)	Avoid strong heating (SO&sub2; release)	Not applicable	Avoid – accelerates oxidation/caking

10.5 Incompatible materials:

Strong Acids	Strong Oxidisers	Moisture / Air
Avoid – releases toxic SO&sub2; gas	Avoid – vigorous/exothermic reaction possible	Avoid prolonged exposure – slow oxidation to sulphate

10.6 Hazardous decomposition products:

Sulphur dioxide gas on contact with acids or strong heating. Sodium sulphate on slow atmospheric oxidation.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

In case of exposure that is repetitive, prolonged, or at concentrations higher than recommended, 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. Sulphite-sensitive individuals may experience more pronounced reactions.

B. Inhalation (acute effect):

Dust may cause irritation of the nose, throat and respiratory tract. Sulphite-sensitive/asthmatic individuals may be more susceptible to respiratory effects.

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 for sodium sulphite based on available data. The proprietary catalyst's CMR profile is not established in this SDS – available on request from the manufacturer.

E. Sensitizing effects:

Not classified as a skin or respiratory sensitiser; sulphite sensitivity (an intolerance reaction, distinct from classical sensitisation) is recognised in a subset of the population, particularly asthmatics.

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

May cause respiratory irritation from dust; not classified.

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

Classification criteria are not met based on available data.

H. Aspiration hazard:

Not applicable (solid).

Product-specific toxicological information:

Identification	Acute Toxicity	Genus
Sodium Sulphite CAS: 7757-83-7	LD50 oral: 820 mg/kg	Rat
	LD50 dermal: Not established	–
Trace catalyst component	Not established – available on request	–

SECTION 12: ECOLOGICAL INFORMATION

Sodium sulphite exerts an oxygen demand in aquatic systems (it is a reducing agent) and can be harmful to aquatic life if released in quantity due to dissolved-oxygen depletion.

12.1 Toxicity:

Acute Toxicity	Species	Genus
LC50: ~160–190 mg/L (96h, order-of-magnitude range reported)	Non-applicable	Fish
EC50: Not established	Non-applicable	Crustacean

12.2 Persistence and degradability:

Not applicable in the biodegradation sense – inorganic salt; oxidises in the environment to sulphate.

12.3 Bioaccumulative potential:

Not expected to bioaccumulate (inorganic, water-soluble ionic species).

12.4 Mobility in soil:

Koc	Henry	Dry Soil	Moist Soil
Not relevant (ionic)	Not relevant	Mobile (soluble)	Mobile

12.5 Results of PBT and vPvB assessment:

Non-applicable for the base substance – not a PBT or vPvB substance. Not established for the trace catalyst component – available on request.

12.6 Other adverse effects:

Consumes dissolved oxygen in receiving waters (biochemical/chemical oxygen demand) – manage discharge per local effluent regulations.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

Dilute with large volumes of water and dispose of via authorized effluent treatment systems (noting oxygen demand), or dispose of as non-hazardous/chemical waste, subject to local regulatory approval. Empty packaging can be recycled or disposed of as non-hazardous waste after ensuring it is empty of residue.

Refer to national and local regulations on waste management.

SECTION 14: TRANSPORT INFORMATION

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

14.1 UN number	Not assigned – not regulated as dangerous goods
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Non-hazardous for transport
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 relevant

Transport of dangerous goods by sea (IMDG):

14.1 UN number	Not assigned – not regulated as dangerous goods
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Non-hazardous for transport
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 relevant

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

14.1 UN number	Not assigned – not regulated as dangerous goods
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Non-hazardous for transport
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 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. Full disclosure of the proprietary catalyst component is available on request for site-specific COSHH/risk assessments.

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)
Water (Prevention and Control of Pollution) Act, 1974 – relevant to oxygen-demand discharge limits

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.

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:

Publicly available chemical safety data for sodium sulphite (CAS 7757-83-7), including PubChem and standard industry safety data sheets. Catalyst-specific data available on request from the manufacturer.

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 | LD50: Lethal Dose 50 | LC50: Lethal Concentration 50 | EC50: Effective Concentration 50 | Koc: Partition coefficient of organic carbon | IARC: International Agency for Research on Cancer | PBT: Persistent, Bioaccumulative and Toxic | vPvB: very Persistent, very Bioaccumulative

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.

END OF SAFETY DATA SHEET