SAFETY DATA SHEET

SODIUM BISULPHATE (PURE) MONOHYDRATE

CAS No.: 10034-88-5

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 BISULPHATE (PURE) MONOHYDRATE
Sodium Hydrogen Sulphate Monohydrate; Sodium Acid Sulphate
CAS: 10034-88-5

Other means of identification

Formula: $NaHSO_3 \cdot H_2O$ | Closely related anhydrous form: Sodium Bisulphate (CAS 7681-38-1), formula $NaHSO_3$, molecular weight 120.06 g/mol

Recommended use of the chemical and restrictions on use

Relevant uses: pH/alkalinity reducer (descalant), industrial cleaning, metal treatment, dye and textile processing. For industrial user only.
Uses advised against: All uses not specified in this section or in section 7.3.

Supplier's details

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2. HAZARDS IDENTIFICATION

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 source safety data for sodium bisulphate (very hazardous in case of skin/eye contact, corrosive) and the well-established public classification for this substance family:

Skin Irrit. 2	Skin irritation, Category 2, H315
Eye Dam. 1	Serious eye damage, Category 1, H318

GHS label elements, including precautionary statements

GHS: Danger

Hazard statements

Skin Irrit. 2: H315 – Causes skin irritation.
Eye Dam. 1: H318 – Causes serious eye damage.

Precautionary statements

P264: Wash hands thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352: IF ON SKIN: Wash with plenty of 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.
P310: Immediately call a POISON CENTER/doctor.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P362+P364: Take off contaminated clothing and wash it before reuse.
P501: Dispose of contents/container in accordance with local regulations on hazardous waste.

Other hazards which do not result in classification

Hygroscopic; keep container tightly closed. Do not mix with liquid chlorine bleach (hypochlorites), ammonia cleansers or similar products, or alcohols (may liberate hazardous gases/heat).

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances

Chemical description: Sodium Bisulphate (Sodium Hydrogen Sulphate) Monohydrate
In accordance with Annex 4.3.3 of the GHS, the product contains:

Identification	Chemical Name / Classification	Concentration
CAS: 10034-88-5	Sodium Bisulphate Monohydrate — Skin Irrit. 2: H315; Eye Dam. 1: H318 – Danger	100%

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

Mixtures

Non-applicable

4. FIRST AID MEASURES

Description of necessary first-aid measures

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

By inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

By skin contact

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse; clean shoes thoroughly before reuse. Get medical attention immediately.

By eye contact

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Do not use an eye ointment. Seek medical attention.

By ingestion/aspiration

Do not induce vomiting. Loosen tight clothing. If not breathing, perform artificial respiration. Seek immediate medical attention. WARNING: mouth-to-mouth resuscitation may be hazardous to the person providing aid when the ingested material is corrosive.

Most important symptoms/effects, acute and delayed

Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust produces irritation of the respiratory tract characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage.

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

Treat as a corrosive material and symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Suitable: Product is non-flammable; use extinguishing media appropriate for the surrounding fire.
Unsuitable: None known.

Specific hazards arising from the chemical

Non-flammable. No specific fire or explosion hazard known.

Special protective actions for fire-fighters

Wear appropriate protective equipment and self-contained breathing apparatus for surrounding fires.

Additional provisions

Not applicable.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Small spill: use appropriate tools to place the spilled solid in a convenient waste disposal container, avoiding dust generation.

For emergency responders

Large spill: corrosive solid – stop leak if without risk. Do not touch spilled material. Use water spray to reduce dust/vapours. Prevent entry into sewers, basements or confined areas; dike if needed.

Environmental precautions

Prevent contamination of drains, watercourses and soil.

Methods and materials for containment and cleaning up

Sweep up avoiding dust generation and place in a suitable container for disposal or recovery. Do not add water directly to the concentrated product.

Reference to other sections

See sections 8 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling

A. General precautions for safe use

Do not ingest. Do not breathe dust. Never add water to this product (add product to water if dilution is required, with care). Avoid contact with skin and eyes.

B. Technical recommendations for the prevention of fires and explosions

Not applicable – product is non-combustible.

C. Technical recommendations on general occupational hygiene

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

D. Technical recommendations to prevent environmental risks

Keep away from incompatibles such as oxidizing agents and alkalis; avoid discharge to drains.

Conditions for safe storage, including any incompatibilities

A. Specific storage requirements

Storage form	Keep container tightly closed – hygroscopic
Storage area	Cool, well-ventilated area

B. General conditions for storage

Keep locked up. Keep container dry.

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

No specific occupational exposure limit is listed for sodium bisulphate under the Factories Act, 1948; control airborne dust levels below those causing irritation using local exhaust ventilation.

Appropriate engineering controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

B. Respiratory protection

Dust respirator; use an approved/certified respirator where ventilation is inadequate.

C. Specific protection for the hands

Gloves (chemical-resistant).

D. Eye and face protection

Splash goggles.

E. Bodily protection

Lab coat/synthetic apron; full suit for large spills.

F. Additional emergency measures

Emergency shower and eyewash stations should be available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	
Physical state at 20°C	Solid (granular)
Color	Off-white
Odor	Odourless
Volatility	
Melting Point (anhydrous form, CAS 7681-38-1)	157.22°C
Product Description	
Specific gravity (anhydrous form, Water=1)	2.435
Solubility in water	Soluble
Solubility notes	Decomposed by alcohol into sodium sulphate and free H_2SO_3
Flammability	
Flammability	Non-flammable
Flash Point / Auto-ignition	Not applicable
Explosive Properties	Not available

Values above are drawn from the source SDS for the closely related anhydrous compound (Sodium Bisulphate, CAS 7681-38-1), as this monohydrate grade's specific physical constants were not provided in the source document.

Other information

Corrosivity	Non-corrosive in presence of glass
Polymerization	Will not occur

10. STABILITY AND REACTIVITY

Reactivity

Reactive with oxidizing agents and alkalis. Do not mix with liquid chlorine bleach (hypochlorites), ammonia cleansers or similar products, or alcohols.

Chemical stability

The product is stable under normal storage conditions; hygroscopic – keep container tightly closed.

Possibility of hazardous reactions

Polymerization will not occur.

Conditions to avoid

Shock/Friction	Contact with Air	Increase in Temperature	Sunlight	Humidity
Not available	Not applicable	Not available	Not applicable	Avoid – hygroscopic

Incompatible materials

Oxidizing Agents	Alkalis	Hypochlorites / Ammonia Cleansers	Alcohols
Avoid contact	Avoid contact	Avoid mixing	Avoid contact (decomposes to sulphate + H_2SO_3)

Hazardous decomposition products

Not available. Decomposed by alcohol into sodium sulphate and free sulphuric acid.

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)

Causes gastrointestinal tract irritation and burns. Symptoms may include nausea and vomiting. May cause severe and permanent damage to the digestive tract.

B. Inhalation (acute effect)

Destructive to the mucous membranes of the upper respiratory tract. Causes irritation and chemical burns to the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath, and pulmonary oedema. Inhalation may be fatal in severe cases as a result of spasm, inflammation, oedema of the larynx and bronchi, and chemical pneumonitis.

C. Contact with skin and eyes (acute effect)

Can cause severe skin irritation or burns. Can cause severe irritation or burns of the eyes; corneal damage or blindness possible.

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

Carcinogenic effects: not available. Mutagenic effects: may affect genetic material (mutagenic for bacteria and/or yeast in in-vitro test systems); not classified as a human mutagen based on available data. Reproductive/developmental toxicity: not available.

E. Sensitizing effects

Not known to be a skin or respiratory sensitiser.

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

Destructive to mucous membranes of the upper respiratory tract on inhalation of dust.

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

Repeated exposure may cause erosion of teeth, lung irritation, bronchitis, persistent coughing.

H. Aspiration hazard

Not available.

Product-specific toxicological information

Identification	Acute Toxicity	Genus
Sodium Bisulphate CAS: 10034-88-5 (source data for CAS 7681-38-1)	LD50 oral: 2800 mg/kg	Rat

Note: the source document also listed an unrelated LD50 entry for "Sodium iodide" that appears to be a copy-paste artefact of the original manufacturer's SDS template and is not applicable to this product; it has been omitted here.

12. ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity: Not available from the source. Possibly hazardous short-term biodegradation products are not likely; long-term degradation products may arise. The product itself and its degradation products are not considered toxic.

Persistence and degradability

Not available

Bioaccumulative potential

Not available

Mobility in soil

Koc	Henry	Dry Soil	Moist Soil
Not relevant	Not relevant	No	No

Results of PBT and vPvB assessment

Non-applicable

Other adverse effects

Not described

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste must be disposed of in accordance with national, state and local environmental control regulations, via an authorised hazardous/industrial waste handler.

14. TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR/RID)

14.1 UN number	UN1759
14.2 UN proper shipping name	CORROSIVE SOLID, N.O.S. (Sodium Bisulphate)
14.3 Transport hazard class(es)	8
14.4 Packing group	III
14.5 Environmental hazard	No
14.6 Special precautions for user	Physico-chemical properties: see section 9
14.7 Transport in bulk	Not relevant

Transport of dangerous goods by sea (IMDG)

14.1 UN number	UN1759
14.2 UN proper shipping name	CORROSIVE SOLID, N.O.S. (Sodium Bisulphate)
14.3 Transport hazard class(es)	8
14.4 Packing group	III
14.5 Marine pollutant	No
14.6 Special precautions for user	Not relevant
14.7 Transport in bulk	Not relevant

Transport of dangerous goods by air (IATA/ICAO)

14.1 UN number	UN1759
14.2 UN proper shipping name	CORROSIVE SOLID, N.O.S. (Sodium Bisulphate)
14.3 Transport hazard class(es)	8
14.4 Packing group	III
14.5 Environmental hazard	No
14.6 Special precautions for user	Not relevant
14.7 Transport in bulk	Not relevant

15. REGULATORY INFORMATION

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)
Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016

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

H315: Causes skin irritation.
H318: Causes serious eye damage.

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. Source R/S phrases R34, R41, S24/25, S26, S36/37/39 have been translated above to GHS H/P statements per standard public mapping tables.

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

Original manufacturer's Material Safety Data Sheet (Indenta Chemicals (India) Pvt. Ltd. – anhydrous sodium bisulphate); standard public R/S-to-GHS translation tables.

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 | 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.

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