Safety Data Sheet · OSHA HCS 2024

Sodium Bisulfite 40% Technical Grade

Technical · 40%

Standard	Revised	Emergency
OSHA HCS 2024 · GHS Rev. 7	2026-11-12	Chemtel 1-800-255-3924 (24/7)

1 Identification

Product Identifier	Sodium Bisulfite 40% Technical Grade
Grade	Technical
Concentration	40% w/w
CAS Number	7631-90-5
Chemical Formula	NaHSO3
Molecular Weight	104.06 g/mol
Manufacturer	Alliance Chemical 204 South Edmond Street, Taylor, TX 76574
Emergency Phone	Chemtel 1-800-255-3924 (24/7)
Synonyms	Sodium hydrogen sulfite solution; sodium bisulfite liquor; SBS solution
Recommended Use	Dechlorination of water and wastewater; oxygen scavenger; reducing agent in water treatment, pulp and textile processing.
Restrictions on Use	Technical / water-treatment grade: not for food, beverage or drug use (see Sodium Metabisulfite Food Grade). Never mix with acids.

2 Hazard Identification



Corrosive



Irritant / harmful

Classification	Acute toxicity (oral), Category 4 Serious eye damage/eye irritation, Category 1
Signal Word	**Danger**
Hazard Statements	EUH031 Contact with acids liberates toxic gas H302 Harmful if swallowed H318 Causes serious eye damage

Precautionary Statements

P264 Wash hands and face thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves, protective clothing, and eye/face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER or 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.

P310 Immediately call a POISON CENTER or doctor.

P330 Rinse mouth.

P501 Dispose of contents and container in accordance with local, regional, national, and international regulations.

Classification, hazard (H) and precautionary (P) statements and pictograms per OSHA HCS 2024 (29 CFR 1910.1200, Appendices A–C), aligned with GHS Rev. 7.

3 Composition / Information on Ingredients

Component	CAS No.	Formula	Concentration
Sodium bisulfite (sodium hydrogen sulfite)	7631-90-5	NaHSO3	38-42% (w/w)
Water	7732-18-5	H2O	Balance (w/w)

Concentrations are nominal; lot-specific values appear on the Certificate of Analysis. Components not contributing to classification are omitted.

4 First-Aid Measures

Eyes
Rinse with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention immediately.

Skin
Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing. Wash with soap. Get medical attention immediately.

Inhalation
Move person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

Ingestion
Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

Most Important Symptoms and Effects
Eye contact causes serious eye damage: pain, redness and corneal injury, which may be permanent.

Ingestion may cause nausea, vomiting and abdominal pain; larger amounts may cause systemic poisoning.

Immediate Medical Attention and Special Treatment
Immediate medical attention is required after eye contact; eye damage may continue after exposure ends.

5 Fire-Fighting Measures

Suitable Extinguishing Media
Dry chemical, CO2, water spray. Use water spray to cool containers.

Unsuitable Extinguishing Media
Do not use a solid water stream as it may scatter and spread fire.

Specific Hazards Arising from the Chemical
Fire may release corrosive and toxic gases. Containers may rupture when heated.

Protective Equipment
Wear self-contained breathing apparatus and full protective clothing.

Hazardous Combustion Products
Sulfur dioxide on heating or contact with acids; sulfur oxides in a fire.

6 Accidental Release Measures

Personal Precautions
Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.

Hazard-Specific Precautions	Do not touch spilled material without protective equipment. Neutralize residue only with a method suitable for the material, then collect.
Environmental Precautions	Prevent leakage or spillage from entering drains, sewers, or waterways.
Containment & Cleanup	Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

7 Handling and Storage

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area. Use corrosion-resistant containers. Keep away from incompatible materials (see Section 10). Keep containers tightly closed.
Specific Storage Precautions	Keep tightly closed in a cool, ventilated area in polyethylene, fiberglass or stainless-steel containers, away from acids and oxidizers. Protect from freezing (crystallizes near 5 °C).

8 Exposure Controls / Personal Protection

Occupational Exposure Limits

Limit	Value
ACGIH TLV	5 mg/m^3 TWA
NIOSH REL	5 mg/m^3 TWA

Engineering Controls	Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.
Eye/Face Protection	Wear chemical safety goggles or face shield.
Skin Protection	Wear chemical-resistant gloves and protective clothing.
Respiratory Protection	Use NIOSH-approved respirator if exposure limits are exceeded or irritation occurs.

Exposure limits sourced from NIOSH Pocket Guide, OSHA 29 CFR 1910.1000 and ACGIH TLVs.

9 Physical & Chemical Properties

Appearance	Clear, colorless to pale yellow liquid
Odor	Pungent, sulfur dioxide odor
Odor Threshold	No data available
pH	3.5–5.0
Melting Point / Freezing Point	About 5 °C (41 °F), crystallization point; keep from freezing
Boiling Point	About 100–104 °C (212–219 °F), with release of sulfur dioxide
Flash Point	Not applicable
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosive Limits	No data available

Vapor Pressure	About 18–32 mmHg at 20 °C (water and sulfur dioxide)
Vapor Density	No data available
Relative Density	1.32–1.35 at 20 °C (water = 1)
Solubility	Completely miscible with water
Partition Coefficient (n-octanol/water)	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	3.6 mPa·s at 20 °C
Particle Characteristics	Not applicable
Form	Liquid
Density	1.32-1.35 g/cm^3 (20°C)

Values shown reflect product-specific canonical data. Lot-specific ranges may vary; see the Certificate of Analysis for the shipped lot.

10 Stability and Reactivity

Reactivity	Not reactive under normal conditions of use and storage.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	Contact with acids; elevated temperature; prolonged exposure to air (slowly oxidizes to sulfate); freezing.
Incompatible Materials	Acids (release toxic sulfur dioxide gas); oxidizing agents; nitrites and nitrates.
Hazardous Decomposition Products	Sulfur dioxide on heating or contact with acids; sulfur oxides in a fire.

11 Toxicological Information

See below for route-specific acute toxicity data.

Likely Routes of Exposure	Inhalation, skin contact, eye contact, ingestion.
Symptoms	Eye contact causes serious eye damage: pain, redness and corneal injury, which may be permanent. Ingestion may cause nausea, vomiting and abdominal pain; larger amounts may cause systemic poisoning.
Delayed and Chronic Effects	No delayed or chronic effects identified beyond the classification in Section 2.

Route	Value
LD50 Oral (rat)	1,310–2,610 mg/kg (as sodium bisulfite)
LD50 Dermal (rabbit)	> 2,000 mg/kg (rat)
LC50 Inhalation (rat, 4h)	> 5.5 mg/L (rat, 4 h)

Carcinogen Classification

Agency	Status

Agency	Status
IARC	Group 3 — not classifiable as to its carcinogenicity to humans (Sodium bisulfite; IARC agent: Bisulfites, Vol. 54).
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12 Ecological Information

Ecotoxicity	Daphnia EC50: ~ 102 mg/L (100 h, Daphnia magna — 100-h toxicity threshold (non-standard window)); Fish LC50: 240 mg/L (96 h, Gambusia affinis, turbid water 17–22 °C)
Persistence & Degradability	Not persistent (inorganic; bisulfite oxidizes to sulfate); raises aquatic COD — Rapid biological decomposition (oxidizes to sulfate)
Bioaccumulative Potential	Not Available
Mobility in Soil	Slight soil absorption/mobility

13 Disposal Considerations

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

EPA RCRA Waste Codes	Not a listed waste and not characteristically corrosive (pH 3.5–5.0). Never discharge into acidic waste streams (releases sulfur dioxide).

If discarded, this material may be a corrosive hazardous waste (EPA RCRA D002, 40 CFR 261.22): aqueous with pH ≤ 2 or ≥ 12.5, or a liquid that corrodes steel at more than 6.35 mm per year. The waste generator must make the final hazardous-waste determination.

14 Transport Information

US DOT (49 CFR)

UN Number	UN2693
Proper Shipping Name	Bisulfites, aqueous solutions, n.o.s. (Sodium bisulfite)
Hazard Class	8
Packing Group	III

IMDG / IATA classifications may differ from US DOT. Verify current regulations before international shipment.

15 Regulatory Information

Inventory / List	Status
California Proposition 65	Not listed
US EPA TSCA Active Inventory	Listed
EPCRA SARA 313 (TRI)	Not listed

CERCLA Reportable Quantity (RQ)	Sodium bisulfite (CAS 7631-90-5) 5,000 lb (2,270 kg), about 12,500 lb or 1,100 US gal of 40% solution; no single Alliance package reaches it. Not an EPCRA Section 313 chemical.

SARA 311/312 hazard categories correspond to the GHS classification in Section 2. Data retrieved as of: California Proposition 65 2026-11-02; US EPA TSCA Active Inventory 2026-11-02; EPCRA SARA 313 (TRI) 2026-11-02.

16 Other Information

Revision Date	2026-11-12
Format	16-section format per OSHA HCS 2024 (29 CFR 1910.1200, Appendix D), aligned with GHS Rev. 7.

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