TECHNICAL DATA SHEET

Sodium Bisulfite 25% Solution – Technical Grade (NaHSO3)

Revised: 02/20/2026

PRODUCT IDENTIFICATION

Product Name: Sodium Bisulfite 25% Solution – Technical Grade (NaHSO3)
CAS Number: 7631-90-5
Molecular Formula: $HNaO_3S$
Molecular Weight: 104.06 g/mol
Grade: Technical Grade
Purity / Concentration: 25%
Synonyms: Sodium Hydrogen Sulfite, Sodium Bisulfite Solution

PRODUCT OVERVIEW

Sodium Bisulfite 25% Solution (Technical Grade) is a versatile reducing agent and preservative. This solution, with an assay of 25.3%, is commonly used in water treatment to dechlorinate and control oxidation states. It also complies with relevant food-grade testing when applicable, and serves as a precursor in chemical syntheses.

Grade Significance: Technical Grade Sodium Bisulfite 25% Solution is suitable for industrial applications where high purity is not a strict requirement. It offers a cost-effective solution for applications like water treatment and chemical synthesis where trace impurities do not significantly impact the process.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	25.3	24	26	Titration with Iodine
Color (APHA)	APHA	15	—	30	ASTM D1209
pH	pH Units	4.5	4	5	pH Meter
Specific Gravity (20°C)	g/mL	1.22	1.21	1.23	Hydrometer
Heavy Metals (as Pb)	ppm	ND	—	5	ICP-OES
Iron (Fe)	ppm	1	—	5	ICP-OES

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless to pale yellow liquid	**Form**	Liquid
Flash Point	Not applicable (aqueous solution; not classified as flammable)	**Specific Gravity**	1.22
Solubility	Soluble in water and alcohol	**Molecular Formula**	$HNaO_3S$
Molecular Weight	104.06 g/mol		

APPLICATIONS

1. **Water Treatment** — Used as a reducing agent to dechlorinate water and control oxidation states, ensuring water quality meets regulatory standards. This helps remove excess chlorine and prevent corrosion in water systems.
2. **Food and Beverage** — Acts as a preservative to prevent spoilage and maintain the color and freshness of various food products. It complies with relevant food-grade testing when applicable.
3. **Chemical Synthesis** — Serves as a precursor in the synthesis of various chemicals, including dyes and pharmaceuticals. Its reducing properties are crucial for specific reaction pathways.
4. **Analytical Chemistry** — Used in redox titrations and as a reducing agent in various analytical procedures. It helps determine the concentration of oxidizing agents in a sample.
5. **Pharmaceuticals** — Used as a reducing agent in the manufacturing of certain pharmaceutical compounds. It plays a role in controlling the oxidation state of reactants during synthesis.
6. **Textile Industry** — Functions as a bleaching agent and antichlor in the textile industry. It helps remove excess chlorine after bleaching processes, preventing damage to fabrics.

STORAGE & HANDLING

Proper storage is crucial to maintain the stability and effectiveness of Sodium Bisulfite 25% Solution. Exposure to air and elevated temperatures can cause degradation, reducing its potency. As the product is harmful if swallowed, store in a tightly sealed container in a cool, well-ventilated area away from incompatible materials.

- Store in a cool, dry place away from direct sunlight.
- Use containers made of HDPE or glass to prevent chemical reactions.
- Avoid contact with strong oxidizing agents and acids.
- Ensure proper ventilation during handling.
- Maintain sealed containers; minimal headspace to reduce oxidation.
- PPE: gloves, splash goggles, and lab coat.

AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 15 Gallon
- 55 Gallon
- 275 Gallon
- 330 Gallon

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: Warning

Hazard Statements:

- H302: Harmful if swallowed [Warning Acute toxicity, oral]

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

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