TECHNICAL DATA SHEET

Sodium Bisulfite 40%

Revised: 07/22/2026

PRODUCT IDENTIFICATION

Product Name: Sodium Bisulfite 40%
CAS Number: 7631-90-5
Molecular Formula: $HNaO_3S$
Molecular Weight: 104.06 g/mol
Grade: Technical Grade
Purity / Concentration: 40%
Synonyms: Sodium Hydrogen Sulfite, Sodium Bisulfite Solution

PRODUCT OVERVIEW

Sodium Bisulfite 40% is a versatile technical grade solution widely utilized for its effective reducing properties. Featuring a precise assay of 40.5% and a pH of 4.8, this liquid chemical is essential for applications requiring reliable oxidation control and preservation.

Grade Significance: Technical Grade indicates that this product is manufactured to meet industrial performance standards, ensuring consistent quality for manufacturing and processing applications where high purity is not strictly required.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay	%	40.5	38	42	Titration/Gravimetric
pH	—	4.1	3.6	4.6	pH Meter
Specific Gravity (20°C)	g/mL	1.326	1.31	1.37	Hydrometer @ 25°C
Arsenic As	ppm	0.0050	0	0.01	ICP-MS
Calcium Ca	ppm	20	0	50	ICP-MS
Iron	%	0.0003	—	0.0005	ICP
Magnesium Mg	ppm	10	0	20	ICP-MS
Potassium K	%	0.0050	0	0.01	ICP-MS
Chloride Cl	ppm	20	0	50	ICP
Insoluble Matter	%	0.0050	0	0.01	Gravimetric

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless to pale yellow liquid	**Odor**	Slight sulfurous odor
Form	Liquid	**Boiling Point**	Not characterized for the 40% solution
Melting / Freezing Point	Not characterized for the 40% solution	**Specific Gravity**	1.36
Solubility	Soluble in water and alcohol	**Molecular Formula**	$HNaO_3S$
Molecular Weight	104.06 g/mol	**Density (25°C)**	1.25 g/mL

APPLICATIONS

1. **Water Treatment** — Functions as a powerful reducing agent to efficiently remove residual chlorine and other oxidizing agents from water supplies.
2. **Food Processing** — Acts as a critical preservative and antioxidant to maintain freshness and prevent spoilage in various food products.
3. **Photography** — Serves as a key reducing agent in chemical baths to properly develop images during the photographic printing process.
4. **Chemical Manufacturing** — Utilized as a reactive intermediate in the synthesis of complex chemical compounds, including specialized dyes and pharmaceuticals.

STORAGE & HANDLING

Proper storage is vital to prevent the degradation of Sodium Bisulfite and to mitigate potential health risks associated with its acute toxicity. It must be kept in a cool, well-ventilated area to maintain stability and prevent the release of sulfur dioxide gas, which can occur if the product is stored improperly or exposed to incompatible substances.

- Store in a cool, dry place away from direct sunlight.
- Use appropriate personal protective equipment (PPE) such as gloves and goggles.
- Compatible with HDPE and glass containers; avoid metal containers.
- Keep away from strong oxidizing agents and acids.

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.

Alliance Chemical | 204 South Edmond St, Taylor, Texas 76574 | 512-365-6838 | www.alliancechemical.com