

PRODUCT IDENTIFICATION



Product Name: Sodium Bisulfite 40% ACS Grade

CAS Number: 7631-90-5

Molecular Formula: HNaO_3S

Molecular Weight: 104.06 g/mol

Grade: ACS Grade

Purity / Concentration: 40%

Synonyms: Sodium Hydrogen Sulfite, Sodium Bisulfite Solution

PRODUCT OVERVIEW

Alliance Chemical offers high-purity Sodium Bisulfite 40% in an ACS Grade liquid solution, characterized by its precise 40% assay and strictly controlled impurity levels such as 3 ppm iron and 20 ppm chloride. This versatile chemical serves as a powerful reducing agent, essential for applications requiring consistent chemical reactivity and minimal contamination.

Grade Significance: ACS Grade indicates that this product meets the rigorous purity standards set by the American Chemical Society, ensuring it is suitable for use in precise laboratory and analytical environments where quality consistency is non-negotiable.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay	%	40	39.5	40.5	Titration/Gravimetric
pH	—	4	3.5	5	pH Meter
Specific Gravity (20°C)	g/mL	1.326	1.31	1.37	Hydrometer @ 20°C
Arsenic As	ppm	0.0050	0	0.01	ICP-MS
Calcium Ca	ppm	20	0	50	ICP-MS
Iron	ppm	3	—	10	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 to pale yellow liquid	Odor	Sulfide-like odor
Form	Liquid	Boiling Point	Not characterized for the 40% solution
Melting / Freezing Point	Not characterized for the 40% solution	Flash Point	Non-flammable
Specific Gravity	1.36	Solubility	Highly soluble in water, moderate alcohol soluble
Molecular Formula	HNaO_3S	Molecular Weight	104.06 g/mol
Density (25°C)	1.2 g/mL		

APPLICATIONS

1. **Water Treatment** — Functions as a reliable dechlorinating agent to neutralize residual chlorine and other oxidizing agents in municipal and industrial water systems.
2. **Analytical Chemistry** — Acts as a standardized reducing agent in various titration procedures and laboratory analytical methods requiring high-purity reagents.
3. **Food Processing** — Utilized as a food-grade antioxidant and preservative to maintain product stability and prevent unwanted oxidation in specific food manufacturing processes.
4. **Photography** — Serves as an effective preservative in photographic developer solutions, protecting the chemical integrity of the mixture during development.

STORAGE & HANDLING

Proper storage is critical because Sodium Bisulfite 40% can release toxic sulfur dioxide gas if it comes into contact with acids, as noted by hazard statement EUH031. It must be kept in a cool, well-ventilated area in tightly sealed containers to prevent oxidation and ensure the chemical remains stable for its intended use.

- Store in a cool, dry place away from light and moisture.
- Use HDPE containers to prevent chemical interaction.
- Avoid contact with strong oxidizers and acids.
- Ensure proper ventilation when handling to minimize inhalation risks.
- Wear appropriate personal protective equipment (PPE) including gloves and goggles.

AVAILABLE PACKAGING

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

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Danger**



Hazard Statements:

- EUH031: Contact with acids liberates toxic gas
- H302: Harmful if swallowed
- H318: Causes serious eye damage

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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