

PRODUCT IDENTIFICATION



Product Name: Sodium Metabisulfite - ACS Grade

CAS Number: 7681-57-4

Molecular Formula: $\text{Na}_2\text{O}_5\text{S}_2$

Molecular Weight: 190.11 g/mol

Grade: ACS Grade

Purity / Concentration: Not Available

Synonyms: Sodium Pyrosulfite, Disodium Metabisulfite

PRODUCT OVERVIEW

Sodium Metabisulfite ACS Grade is a high-purity white crystalline powder characterized by its potent reducing properties and exceptional consistency. With an assay of 100.0% and strictly controlled impurity levels, such as arsenic at 0.3 ppm and iron at 2 ppm, it is the ideal choice for demanding analytical and industrial applications.

Grade Significance: Choosing ACS Grade ensures the product meets the rigorous purity standards set by the American Chemical Society, providing users with the highest reliability for critical analytical and industrial processes.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay	%	100.0	99.5	100.5	Titration/Gravimetric
pH	—	4.5	4	5	pH Meter
Moisture	%	0.01	0	0.04	Karl Fischer
Arsenic As	ppm	0.3	0	1	ICP-MS
Calcium Ca	ppm	20	0	50	ICP-MS
Heavy Metals As Pb	ppm	3	0	10	ICP-MS (as Pb)
Iron	ppm	2	0	10	ICP
Lead Pb	ppm	0.6	0	2	ICP-MS
Magnesium Mg	ppm	10	0	20	ICP-MS
Potassium K	%	0.0050	0	0.01	ICP-MS
Chloride Cl	%	0.015	0	0.05	ICP
Insoluble Matter	%	0.0030	0	0.01	Gravimetric
Mercury Hg	ppm	0.05	0	0.1	ICP-MS
Selenium Se	ppm	1.5	0	5	ICP-MS

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	White crystalline powder	Odor	Slight sulfurous odor
Boiling Point	Decomposes (NIOSH, 2024)	Melting / Freezing Point	greater than 302 °F (Decomposes) (NIOSH, 2024)
Solubility	Soluble in water	Molecular Formula	Na ₂ O ₅ S ₂
Molecular Weight	190.11 g/mol	Vapor Pressure (20°C)	0.02 mmHg
Density (25°C)	1.48 g/mL		

APPLICATIONS

- Food Processing** — Functions as a critical preservative to prevent oxidation and spoilage in various food products, extending shelf life.
- Water Treatment** — Acts as an efficient reducing agent to neutralize residual chlorine, protecting downstream equipment and membranes.
- Laboratory Analysis** — Utilized in precise titrations and analytical procedures to accurately determine the concentration of various oxidizing agents.
- Photography** — Serves as a reliable reducing agent in traditional film development processes to ensure consistent image quality.

STORAGE & HANDLING

Proper storage is vital because Sodium Metabisulfite can release sulfur dioxide gas if exposed to moisture or acidic conditions, posing inhalation risks. Keeping the container tightly sealed in a cool, dry place prevents degradation and minimizes the risk of eye damage or accidental ingestion.

- Store in a cool, dry place away from moisture and incompatible materials.
- Use HDPE containers for storage to prevent chemical reactions.
- Avoid exposure to air to minimize oxidation and degradation.
- Use appropriate personal protective equipment (PPE) such as gloves and goggles when handling.
- Ensure adequate ventilation in the storage area to prevent accumulation of fumes.

AVAILABLE PACKAGING

- 2 lbs.
- 5 Lbs.
- 50 Lbs.

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Danger**



Hazard Statements:

- 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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