# TECHNICAL DATA SHEET

**Sodium Metabisulfite - Technical Grade**

Revised: 08/11/2026

## PRODUCT IDENTIFICATION


**Product Name:** Sodium Metabisulfite - Technical Grade
**CAS Number:** 7681-57-4
**Molecular Formula:** $Na_2O_5S_2$
**Molecular Weight:** 190.11 g/mol
**Grade:** Technical Grade
**Purity / Concentration:** Not Available
**Synonyms:** Sodium Pyrosulfite, Disodium Metabisulfite

## PRODUCT OVERVIEW

Sodium Metabisulfite (CAS 7681-57-4) is a high-purity technical grade white crystalline powder, boasting an assay of 100.0% and minimal impurity levels such as iron at 2 ppm. This potent reducing agent is essential for applications requiring precise chemical oxidation control in industrial and water treatment processes.

**Grade Significance:** Technical grade signifies that this product is manufactured for industrial and manufacturing utility where high consistency and controlled impurity levels are required for reliable chemical performance.

## 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 | % | ≤ 0.04 % | — | — | Karl Fischer |
| Non-Volatile Residue | % | 0.1 | — | 1 | Residue on Ignition |
| Arsenic As | ppm | ≤ 0.4 ppm | — | — | ICP-MS |
| Heavy Metals As Pb | ppm | ≤ 10 ppm | — | — | ICP-MS (as Pb) |
| Iron | ppm | 2 | — | 10 | ICP |
| Lead Pb | ppm | ≤ 5 ppm | — | — | ICP-MS |
| Chloride Cl | % | ≤ 0.05 % | — | — | ICP |
| Insoluble Matter | % | ≤ 0.01 % | — | — | Gravimetric |
| Mercury Hg | ppm | ≤ 0.1 ppm | — | — | ICP-MS |
| Selenium Se | ppm | ≤ 5 ppm | — | — | ICP-MS |
| Sulfite | % | ≤ 2 % | — | — | Per specification |

*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** | $Na_2O_5S_2$ |
| **Molecular Weight** | 190.11 g/mol | **Density (25°C)** | 1.48 g/mL |

## APPLICATIONS

1. **Water Treatment** — It acts as an effective dechlorinating agent, removing residual chlorine and other oxidizing agents from municipal and industrial water supplies.
2. **Food Processing** — Used as a preservative, it helps maintain product freshness and prevent spoilage in various food applications.
3. **Photography** — It is utilized in photographic development processes to effectively control oxidation and maintain chemical stability.
4. **Chemical Manufacturing** — Serves as a reliable reducing agent in the synthesis of various specialty chemicals and industrial compounds.

## STORAGE & HANDLING

Sodium Metabisulfite must be stored in a cool, dry, and well-ventilated area to prevent moisture absorption and chemical degradation. Proper storage is critical because the material can release sulfur dioxide gas if exposed to moisture or acids, posing significant inhalation risks and respiratory hazards.

- Store in a cool, dry place away from moisture and incompatible materials.
- Use appropriate personal protective equipment (PPE) such as gloves and goggles.
- Keep containers tightly closed when not in use to prevent moisture absorption.
- Avoid exposure to strong acids or bases to maintain product integrity.
- Ensure adequate ventilation in storage areas to prevent accumulation of vapors.

## 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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