

TECHNICAL DATA SHEET

Sodium Metabisulfite - Food Grade

Food Grade

|            |                                 |            |
|------------|---------------------------------|------------|
| CAS NUMBER | ALLIANCE CODE                   | GENERATED  |
| 7681-57-4  | sodium-metabisulfite-food-grade | 2026-08-31 |
| REVISION   | REVIEWED                        |            |
| 1.1        | 2026-07-17 · Andre Taki         |            |

IDENTITY & COMPOSITION

|                                   |                                 |
|-----------------------------------|---------------------------------|
| PRODUCT NAME                      | ALLIANCE CODE                   |
| Sodium Metabisulfite – Food Grade | sodium-metabisulfite-food-grade |
| GRADE                             | CONCENTRATION                   |
| Food Grade                        | —                               |
| CAS NUMBER                        | FORMULA                         |
| 7681-57-4 <a href="#">PubChem</a> | Na2O5S2 <a href="#">PubChem</a> |
| MOLECULAR WEIGHT                  | PRODUCT TYPE                    |
| 190.11 <a href="#">PubChem</a>    | pure_substance                  |

SPECIFICATIONS

| TEST               | SPECIFICATION                                           | TYPICAL | METHOD | SOURCE                                 |
|--------------------|---------------------------------------------------------|---------|--------|----------------------------------------|
| Assay<br>(Na2S2O5) | Not less than 90.0% and not more than 100.5% of Na2S2O5 | 95.25 % | —      | <a href="#">FCC</a>                    |
| Arsenic (As)       | 0.0 – 1.0 ppm                                           | 0.1 ppm | —      | <a href="#">Supplier specification</a> |

| TEST                                                                | SPECIFICATION                                                           | TYPICAL     | METHOD                                                 | SOURCE                 |
|---------------------------------------------------------------------|-------------------------------------------------------------------------|-------------|--------------------------------------------------------|------------------------|
| Heavy metals<br>(as Pb)                                             | 0.0 – 10.0 ppm                                                          | 0.5 ppm     | —                                                      | Supplier specification |
| Identification                                                      | A 1:10 aqueous solution gives positive tests for Sodium and for Sulfite | Passes test | —                                                      | FCC                    |
| Insoluble matter                                                    | < 0.005 wt. %                                                           | 0.001 %     | —                                                      | Supplier specification |
| Lead (Pb)                                                           | Not more than 2 mg/kg                                                   | 0.1 mg/kg   | —                                                      | FCC                    |
| Screen size, through 20 mesh (U.S. Sieve), % by weight              | 99.0 – 100.0 %                                                          | 99.5 %      | —                                                      | Supplier specification |
| Selenium                                                            | < 5.0 ppm                                                               | 0.1 mg/kg   | —                                                      | Supplier specification |
| Chloride (Cl)                                                       | 0.0 – 0.02 %                                                            | 0.005 %     | —                                                      | Supplier specification |
| Iron (Fe)                                                           | Not more than 10 mg/kg                                                  | 2 mg/kg     | —                                                      | FCC                    |
| Sodium thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) | 0.0 – 0.04 %                                                            | 0.005 %     | —                                                      | Supplier specification |
| Sodium sulfite (Na <sub>2</sub> SO <sub>3</sub> )                   | 0.0 – 0.6 %                                                             | 0.15 %      | —                                                      | Supplier specification |
| Mercury (Hg)                                                        | Not more than 1 mg/kg                                                   | 0.01 mg/kg  | Cold vapour AAS (FCC Mercury Limit Test / AOAC 971.21) | Interpreted            |

| TEST                                         | SPECIFICATION | TYPICAL | METHOD                                     | SOURCE      |
|----------------------------------------------|---------------|---------|--------------------------------------------|-------------|
| Sulfur dioxide (SO <sub>2</sub> ), available | Min. 65.0%    | 66.2%   | Iodometric titration (FCC assay procedure) | Interpreted |

Specification values are guaranteed limits. Typical values are representative of production lots and are not guaranteed. Lot-specific certificates of analysis ship with every order.

AVAILABLE GRADES SAME CAS, ALTERNATE GRADES AND CONCENTRATIONS

| GRADE                 | CONCENTRATION | TYPICAL ASSAY | SKU                                  |
|-----------------------|---------------|---------------|--------------------------------------|
| THIS GRADE Food Grade | —             | —             | current                              |
| ACS Grade             | —             | —             | sodium-metabisulfite-acs-grade       |
| Technical Grade       | —             | —             | sodium-metabisulfite-technical-grade |

Typical assay shown is the rolling-window mean from the sibling product's most recent lots. Grade selection drives downstream end-use — verify the sibling grade matches your specification before substitution.

## PHYSICAL & CHEMICAL PROPERTIES

One or more physical-property values are temporarily suppressed pending verification against vendor COA data. For complete properties refer to the Safety Data Sheet (SDS) or contact [sales@alliancechemical.com](mailto:sales@alliancechemical.com).

| PROPERTY      | VALUE                                                                      | SOURCE                 |
|---------------|----------------------------------------------------------------------------|------------------------|
| Appearance    | Colorless crystals or a white to yellow, crystalline powder                | FCC                    |
| Odor          | In the presences of traces of water, it develops an odor of sulfur dioxide | Published reference    |
| pH            | 4.0–4.8                                                                    | Supplier specification |
| Density       | 1.4 (NIOSH, 2024) – Denser than water; will sink                           | Published reference    |
| Boiling Point | Decomposes (NIOSH, 2024)                                                   | Published reference    |
| Melting Point | greater than 302 °F (Decomposes) (NIOSH, 2024)                             | Published reference    |

## MATERIALS OF CONSTRUCTION

| MATERIAL                   | RATING     | CONDITIONS                                                                                                  | SOURCE         |
|----------------------------|------------|-------------------------------------------------------------------------------------------------------------|----------------|
| polyethylene (sealed bags) | Compatible | dry granular solid as supplied in manufacturer's standard packaging; no concentration or temperature stated | essecous a.com |
| polypropylene (bulk sacks) | Compatible | dry granular solid as supplied in manufacturer's standard packaging; no concentration or temperature stated | essecous a.com |

Compatibility is drawn from published manufacturer and supplier documentation for this product; each rating is sourced. Confirm against your specific duty cycle before equipment selection.

## REGULATORY & TRANSPORT

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### DOT / 49 CFR

UN NUMBER

Not regulated [Adjudicated](#)

PACKING GROUP

Not regulated [Adjudicated](#)

HAZARD CLASS

Not regulated [Adjudicated](#)

PROPER SHIPPING NAME

Not regulated [Adjudicated](#)

### GHS / OSHA HAZCOM 2012

SIGNAL WORD

Danger [Adjudicated](#)

H-CODES (HAZARD STATEMENTS)

H302, H318 [Adjudicated](#)

P-CODES (PRECAUTIONARY STATEMENTS)

P264, P270, P280, P301+P312,  
P305+P351+P338, P313, P330, P501

[Adjudicated](#)

### OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)

— [no canonical](#)

ACGIH TLV

— [no canonical](#)

NIOSH REL

— [no canonical](#)

NIOSH IDLH

— [no canonical](#)

Transport descriptions reflect 49 CFR 172.101 lookup at time of publication. Sourced data: ECHA CLP Annex VI for harmonised classifications, NIOSH Pocket Guide for REL/IDLH, OSHA Z-Tables for PEL. Always verify against the latest regulatory text before shipment-critical decisions.

## APPLICATIONS

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Additive, preservative, antioxidant, anti-microbial agent and leavening agent in the food industry

[essecousa.com](#)

Preservative in food applications, cherry brining, dechlorination in municipal wastewater / pulp & paper / textile water treatment, oxygen scavenging, and gold mining

[ineos.com](#)

FCC food-grade function: preservative and antioxidant [mubychem.com](#)

Reducing agent for chemical manufacturing, preservative, water treatment and photographic auxiliary, bleaching agent, and ensiling agent (FCC 97%+ material)

[wintersunchemical.com](#)

Oxygen scavenging in steam boiler water treatment and removal of excess chlorine from wastewater

[essecousa.com](#)

Reducing and sulfonating agent in chemical processing, including surfactants and polymerization

[essecousa.com](https://essecousa.com)

Preservation of silage in feed applications. [essecousa.com](https://essecousa.com)

Used as a preservative excipient in the pharmaceutical industry. [essecousa.com](https://essecousa.com)

Component of photographic developer baths and stabilizing agent for fixers. [essecousa.com](https://essecousa.com)

Applications are drawn from published manufacturer and supplier documentation; each is sourced. Suitability for a specific use is the buyer's to confirm.

## STORAGE & HANDLING

### RECOMMENDED STORAGE

Controlled indoor environment that is cool, dry, and well ventilated

[essecousa.com](https://essecousa.com)

### INCOMPATIBILITIES

Consult the SDS for material-specific incompatibilities.

Class-level guidance — not product-specific; the SDS controls.

### HANDLING PRECAUTIONS

Use standard chemical PPE — splash goggles, gloves, lab coat. Refer to SDS for hazard-specific PPE requirements.

Class-level guidance — not product-specific; the SDS controls.

### SHELF LIFE

36 months [essecousa.com](https://essecousa.com)

properly stored in original packaging, in a controlled indoor environment that is cool, dry and well ventilated

For full hazard, PPE, and emergency response guidance, refer to the Safety Data Sheet (SDS) for this product. The SDS controls in all cases where guidance differs.

## PACKAGING & LOGISTICS

### SHIPPING DESCRIPTION (US DOT)

Not regulated for transport.

Confirm against shipping documents and carrier requirements before tender.

NMFC CLASS  
70

## REVISION HISTORY

Last reviewed 2026-07-17 by Andre Taki, DOT Hazmat Specialist.

| VERSION | DATE       | CHANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | TRIGGER          |
|---------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| 1.1     | 2026-07-17 | <p>Canonical data re-verified: 7 fields updated against independent vendor SDSs, CLP Annex VI, 49 CFR, and OSHA HazCom 2024 (GHS classification, hazard/precautionary codes, signal word, physical properties as applicable).</p> <ul style="list-style-type: none"> <li>• <code>countryOfOrigin</code> · canonical adjudication / reground (<code>coa.data_provenance</code>)</li> <li>• <code>dotSubsidiaryHazardClass</code> · canonical adjudication / reground (<code>coa.data_provenance</code>)</li> <li>• <code>ghsClassification</code> · canonical adjudication / reground (<code>coa.data_provenance</code>)</li> <li>• <code>hazard_h_codes</code> · canonical adjudication / reground (<code>coa.data_provenance</code>)</li> <li>• <code>hazard_p_codes</code> · canonical adjudication / reground (<code>coa.data_provenance</code>)</li> <li>• <code>hsCode</code> · canonical adjudication / reground (<code>coa.data_provenance</code>)</li> <li>• <code>physicalProperties</code> · canonical adjudication / reground (<code>coa.data_provenance</code>)</li> </ul> | canonical_change |
| 1.0     | 2026-05-20 | Initial URL—first TDS published from canonical chemistry registry.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | initial          |

This Technical Data Sheet is provided for technical reference. The Safety Data Sheet (SDS) controls in all cases where guidance differs. Values reflect Alliance Chemical canonical data at time of generation; subsequent revisions are recorded in the Revision History above.