Technical Data Sheet

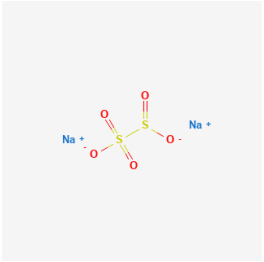
Sodium Metabisulfite - Food Grade

Food Grade

Alliance Code	Revised	Revision
sodium-metabisulfite-food-grade	2026-10-13	1.5

CAS number

7681-57-4



Structure · PubChem

Grade	Signal word
Food Grade	**Danger**

Hazards

Corrosive | Irritant / harmful | H302 H318

IDENTITY & COMPOSITION

PRODUCT NAME

Sodium Metabisulfite - Food Grade

ALLIANCE CODE

sodium-metabisulfite-food-grade

GRADE

Food Grade

CONCENTRATION

—

CAS NUMBER

7681-57-4 PubChem

FORMULA

Na2S2O5 PubChem

PRODUCT TYPE

Pure substance

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Assay (Na2S2O5)	Not less than 90.0% and not more than 100.5% of Na2S2O5	—	—	Interpreted

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Arsenic (As)	0.0 – 1.0 ppm	—	—	Interpreted
Heavy metals (as Pb)	0.0 – 10.0 ppm	—	—	Interpreted
Identification	A 1:10 aqueous solution gives positive tests for Sodium and for Sulfite	—	—	Interpreted
Insoluble matter	< 0.005 wt. %	—	—	Interpreted
Lead (Pb)	Not more than 2 mg/kg	—	—	Interpreted
Screen size, through 20 mesh (U.S. Sieve), % by weight	92 - 100 %	—	—	Interpreted
Selenium	< 5.0 ppm	—	—	Interpreted
Chloride (Cl)	0.0 – 0.02 %	—	—	Interpreted
Iron (Fe)	Not more than 10 mg/kg	—	—	Interpreted
Sodium thiosulfate (Na2S2O3)	0.0 – 0.04 %	—	—	Interpreted
Sodium sulfite (Na2SO3)	0.0 – 0.6 %	—	—	Interpreted
Mercury (Hg)	Not more than 1 mg/kg	—	Cold vapour AAS (FCC Mercury Limit Test / AOAC 971.21)	Interpreted

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Sulfur dioxide (SO2), available	Min. 65.0%	—	Iodometric titration (FCC assay procedure)	Interpreted
on no. 40	10 - 50 %	—	—	Interpreted
through no. 100	0 - 15 %	—	—	Interpreted

Values are reproduced from the current product reference. Source labels do not by themselves establish a supplier guarantee or a test result for your lot. Confirm applicable acceptance limits and request lot-specific documentation.

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 for each grade is the average of its recent lots. Confirm a grade meets your specification before substituting it.

PHYSICAL & CHEMICAL PROPERTIES

Additional physical properties are listed in the Safety Data Sheet (SDS). For anything not shown, contact sales@alliancechemical.com.

PROPERTY	VALUE	SOURCE
Appearance	Colorless crystals or a white to yellow, crystalline powder	Interpreted
Odor	In the presences of traces of water, it develops an odor of sulfur dioxide	Published reference
pH	4.0-4.8	Interpreted
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)	Adjudicated

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	essecousa.com
polypropylene (bulk sacks)	Compatible	dry granular solid as supplied in manufacturer's standard packaging; no concentration or temperature stated	essecousa.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

DOT / 49 CFR

UN NUMBER

Not regulated Adjudicated

HAZARD CLASS

Not regulated Adjudicated

PACKING GROUP

Not regulated Adjudicated

PROPER SHIPPING NAME

Not regulated Adjudicated

GHS / OSHA HCS 2024

SIGNAL WORD

Danger Adjudicated

H-CODES (HAZARD STATEMENTS)

H302, H318 Adjudicated

P-CODES (PRECAUTIONARY STATEMENTS)

P264, P270, P280, P301+P312, P305+P351+P338, P310, P313, P330, P501

Adjudicated

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)

— no canonical

ACGIH TLV

— no canonical

NIOSH REL

5 mg/m^3 TWA NIOSH Pocket Guide

NIOSH IDLH

— no canonical

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

APPLICATIONS

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

Preservation of silage in feed applications. essecousa.com

Used as a preservative excipient in the pharmaceutical industry. essecousa.com

Component of photographic developer baths and stabilizing agent for fixers. 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

Keep containers tightly closed in a cool, dry, well-ventilated place away from heat, moisture, water, acids and oxidizing agents; it releases sulfur dioxide slowly in humid air. The product consumes oxygen, so oxygen deficiency can develop in closed containers and tanks.

Adjudicated

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.

INCOMPATIBILITIES

Acids (release toxic sulfur dioxide gas); water and ice; strong oxidizing agents; nitrites and nitrates; chlorates; alkalis and strong bases; heavy-metal compounds.

Adjudicated

SHELF LIFE

36 months 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)

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Not regulated for transport.
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Confirm against shipping documents and carrier requirements before tender.

NMFC CLASS

70

REVISION HISTORY

Last reviewed 2026-10-13 by Andre Taki, Chief Commercial Officer, DOT Hazmat–certified (49 CFR 172.704).

VERSION	DATE	CHANGE	TRIGGER
1.5	2026-10-13	Canonical data updated: 4 fields changed via the provenance/adjudication pipeline. • storage_precautions · canonical change (coa.data_provenance / adjudication) • incompatible_materials · canonical change (coa.data_provenance / adjudication) • conditions_to_avoid · canonical change (coa.data_provenance / adjudication) • hazardous_decomposition_products · canonical change (coa.data_provenance / adjudication)	canonical_change
1.4	2026-10-07	Canonical data updated: 3 fields changed via the provenance/adjudication pipeline. • ghsClassification · canonical change (coa.data_provenance / adjudication) • hazard_h_codes · canonical change (coa.data_provenance / adjudication) • hazard_p_codes · canonical change (coa.data_provenance / adjudication)	canonical_change
1.3	2026-10-05	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. • oel_niosh_rel · canonical change (coa.data_provenance / adjudication)	canonical_change
1.2	2026-09-30	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. • meltingPoint · canonical change (coa.data_provenance / adjudication)	canonical_change
1.1	2026-07-17	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). • countryOfOrigin · canonical adjudication / reground (coa.data_provenance) • dotSubsidiaryHazardClass · canonical adjudication / reground (coa.data_provenance) • ghsClassification · canonical adjudication / reground (coa.data_provenance) • hazard_h_codes · canonical adjudication / reground (coa.data_provenance) • hazard_p_codes · canonical adjudication / reground (coa.data_provenance) • hsCode · canonical adjudication / reground (coa.data_provenance) • physicalProperties · canonical adjudication / reground (coa.data_provenance)	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.