

Material Safety Data Sheet

Sodium bisulfite

ACC# 21001

Section 1 - Chemical Product and Company Identification

MSDS Name: Sodium bisulfite

Catalog Numbers: AC223070000, AC223070010, AC419440000, AC419440010, AC419440025, AC419440050, AC419441000, S80171, S654-3, S654-3LC, S654-500, XXS654100LB

Synonyms: Sodium bisulfite; Sodium hydrogen sulfite; Sulfurous acid, monosodium salt; Sodium acid sulfite. The bisulfite of commerce consists chiefly of sodium metabisulfite, Na₂S₂O₅, and for all practical purposes possesses the same properties as the true bisulfite.

Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7631-90-5	Sodium bisulfite	45	231-548-0
7681-57-4	Sodium metabisulfite	45	231-673-0
7757-82-6	Sodium sulfate, anhydrous	10	231-820-9

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white solid.

Warning! May cause allergic respiratory and skin reaction. Causes eye, skin, and respiratory tract irritation. May be harmful if swallowed. Contact with acids liberates toxic gas, sulfur dioxide. On exposure to air it loses some SO₂ and is gradually oxidized to sulfate. Corrosive to aluminum in aqueous solution.

Target Organs: Respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation.

Skin: May cause skin irritation. May be harmful if absorbed through the skin. May cause an allergic reaction in certain individuals.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed. Sulfite compounds may cause a severe allergic reaction in sensitive individuals and some asthmatics.

Inhalation: May cause allergic respiratory reaction. May cause effects similar to those described for ingestion. Inhalation of dust may cause respiratory tract irritation.

Chronic: Prolonged or repeated skin contact may cause dermatitis. Repeated or prolonged exposure may cause allergic reactions in sensitive individuals.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Substance is noncombustible.

Extinguishing Media: Use water fog, dry chemical, carbon dioxide, or regular foam.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid breathing dust.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from strong acids. Do not store in aluminum containers. Keep away from oxidizing agents.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Sodium bisulfite	5 mg/m ³ TWA	5 mg/m ³ TWA	none listed
Sodium metabisulfite	5 mg/m ³ TWA	5 mg/m ³ TWA	none listed
Sodium sulfate, anhydrous	none listed	none listed	none listed
Sulfur dioxide	2 ppm TWA; 5 ppm STEL	2 ppm TWA; 5 mg/m ³ TWA 100 ppm IDLH	5 ppm TWA; 13 mg/m ³ TWA
Sodium metabisulfite mixture with sodium bisulfite	none listed	none listed	none listed

OSHA Vacated PELs: Sodium bisulfite: 5 mg/m³ TWA Sodium metabisulfite: 5 mg/m³ TWA Sodium sulfate, anhydrous: No OSHA Vacated PELs are listed for this chemical. Sulfur dioxide: 2 ppm TWA; 5 mg/m³ TWA Sodium metabisulfite mixture with sodium bisulfite: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: white

Odor: sulfur dioxide odor

pH: acidic in solution

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Evaporation Rate: Not applicable.

Viscosity: Not applicable.

Boiling Point: Not applicable.

Freezing/Melting Point: 150 deg C

Decomposition Temperature: 150 deg C

Solubility: Soluble.

Specific Gravity/Density: 1.48

Molecular Formula: mixture

Molecular Weight: Not available

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. On exposure to air it loses some SO₂ and is gradually oxidized to sulfate.

Conditions to Avoid: Dust generation, exposure to air, excess heat, Corrosive to aluminum in aqueous solution..

Incompatibilities with Other Materials: Strong oxidizing agents, acids.

Hazardous Decomposition Products: Oxides of sulfur, toxic fumes of sodium oxide.

Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#:

CAS# 7631-90-5: VZ2000000

CAS# 7681-57-4: UX8225000

CAS# 7757-82-6: WE1650000

CAS# 7446-09-5: WS4550000

CAS# 120002-56-4 unlisted.

LD50/LC50:

CAS# 7631-90-5:

Oral, rat: LD50 = 2 gm/kg;

CAS# 7681-57-4:

Dermal, guinea pig: LD50 = >1 gm/kg;

Draize test, rabbit, eye: 100 mg/24H Mild;

Draize test, rabbit, skin: 500 mg;

Oral, rat: LD50 = 1131 mg/kg;

Skin, rat: LD50 = >2 gm/kg;

CAS# 7757-82-6:

Oral, mouse: LD50 = 5989 mg/kg;

CAS# 7446-09-5:

Draize test, rabbit, eye: 6 ppm/32D Mild;

Inhalation, mouse: LC50 = 3000 ppm/30M;

Inhalation, rat: LC50 = 2520 ppm/1H;

Inhalation, rat: LC50 = 2168 mg/m3;

CAS# 120002-56-4:

Carcinogenicity:

CAS# 7631-90-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 7681-57-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 7757-82-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 7446-09-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 120002-56-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: Two cases of occupational asthma in laundry workers exposed to sodium metabisulfite were reported. Sodium metabisulfite may be considered to be the anhydride of sodium bisulfite and is the chief constituent of commercial dry sodium bisulfite.

Teratogenicity: No information found

Reproductive Effects: See actual entry in RTECS for complete information.

Mutagenicity: See actual entry in RTECS for complete information.

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	Not regulated	Not Regulated
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 7631-90-5 is listed on the TSCA inventory.

CAS# 7681-57-4 is listed on the TSCA inventory.

CAS# 7757-82-6 is listed on the TSCA inventory.

CAS# 7446-09-5 is listed on the TSCA inventory.

CAS# 120002-56-4 is not listed on the TSCA inventory. It is for research and development use only.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 7631-90-5: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

CAS# 7446-09-5: 500 lb TPQ

SARA Codes

CAS # 7631-90-5: immediate.

CAS # 7681-57-4: immediate.

CAS # 7446-09-5: immediate, sudden release of pressure.

Section 313 No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

CAS# 7631-90-5 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

CAS# 7446-09-5 is considered highly hazardous by OSHA.

STATE

CAS# 7631-90-5 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 7681-57-4 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 7757-82-6 can be found on the following state right to know lists: Pennsylvania, Massachusetts.

CAS# 7446-09-5 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 120002-56-4 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN

Risk Phrases:

R 22 Harmful if swallowed.

R 31 Contact with acids liberates toxic gas.

Safety Phrases:

S 25 Avoid contact with eyes.

S 46 If swallowed, seek medical advice immediately and show this container or label.

WGK (Water Danger/Protection)

CAS# 7631-90-5: 1

CAS# 7681-57-4: 1

CAS# 7757-82-6: 0

CAS# 7446-09-5: 1

CAS# 120002-56-4: No information available.

Canada - DSL/NDSL

CAS# 7631-90-5 is listed on Canada's DSL List.

CAS# 7681-57-4 is listed on Canada's DSL List.

CAS# 7757-82-6 is listed on Canada's DSL List.

CAS# 7446-09-5 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 7631-90-5 is listed on the Canadian Ingredient Disclosure List.

CAS# 7681-57-4 is listed on the Canadian Ingredient Disclosure List.

CAS# 7446-09-5 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 9/02/1997

Revision #6 Date: 6/22/2006

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.