

Section 1: Product & Company Information

Product Identifier: Sodium Metabisulfite

Other Means of Identification

Product Number: 132501

Recommended Use and Restrictions on Use

Recommended Use: Food Preservative, Lab Reagent

Restrictions on Use: Not known.

Manufacturer / Importer / Supplier / Distributor Information

Company Name: CORECHEM Inc.

Address: 4320 Greenway Drive
Knoxville, TN 37918 USA

Information Telephone Number: 1-865-524-4239

Fax Number: 1-865-524-3375

Website: www.corecheminc.com

Contact Person: Regulatory Manager

E-mail: regulatory@corecheminc.com

Emergency Phone Number: Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)

Section 2: Hazards Identification

GHS Hazard Classification(s)

In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Physical Hazard(s)

Not classified.

Health Hazard(s)

Acute Toxicity, Oral - 4

(Corrosion) Damage/Irritation, Eye - 1

Environmental Hazard(s)

Not classified.

Label Elements

Signal Word

DANGER

Hazard Symbol(s)



Hazard Statement(s)

H302: Harmful if swallowed.

H318: Causes serious eye damage.

Precautionary Statements

General

P102: Keep out of reach of children.

Prevention

P202: Do not handle until all safety precautions have been read and understood.

P264: Wash face, hands and any exposed skin thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER or doctor/physician.

Storage

Not applicable.

Disposal

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P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC)

None known.

Section 3: Composition/Information on Ingredients

Substance

Chemical Identity ²	Common Name/Synonym(s)	CAS # ³	Weight %	Impurity or Stabilizing Additive
Sodium Metabisulfite	Sodium Metabisulfite NSF	7681-57-4	>95%	No

- Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
- Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
- "—"Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

Section 4: First-Aid Measures

General Information

Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

Inhalation

Move to fresh air. Get medical attention if symptoms persist.

Skin Contact

Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing. Remove all contaminated clothing.

Eye Contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion

Rinse mouth thoroughly. Call a poison control center or doctor/physician if you feel unwell. Remove source of contamination or move victim to fresh air. Apply artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult.

Most important symptoms/effects, acute and delayed

Symptoms

Eyes: Causes serious eye damage. Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Skin: This produce can cause irritation of the skin, especially after prolonged exposures. Repeated skin contact may lead to skin sensitization an allergic reaction and dermatitis (red, cracked skin). Skin contact can cause allergic skin reaction in susceptible individuals, with symptoms including itching, rash and welts.

Ingestion: Ingestion of this product can irritate the tissues of the mouth, esophagus, and other tissues of the digestive system. Symptoms of exposure can include central nervous system depression, gastrointestinal and cardiac abnormalities, and violent colic. Sulfite compounds, such as this product, can cause a severe allergic reaction in sensitive individuals and some asthmatics, which can be life-threatening.

Inhalation: Breathing dusts or particulates generated by this product can lead to irritation of the nose, throat or respiratory system. Symptoms of such exposure could include coughing and sneezing. This product can cause an asthma-like allergy with symptoms such as shortness of breath, wheezing, coughing, urticaria, angioedema, nasal congestion, nasal polyp swelling and chest tightness. Severe general (anaphylactic) reactions can occur, which can be life-threatening in some cases.

Indication of immediate medical attention and special treatment needed

Hazards

No data available.

Treatment

Treat symptomatically. Symptoms may be delayed.

Section 5: Fire-Fighting Measures

General Fire Hazards

When involved in a fire, this material may decompose and produce irritating vapors, acrid smoke and toxic gases (i.e. sulfur oxides and sodium oxides). Contact with acids, water and ice produces sulfur oxide, which presents a fire hazard due to its flammability. Sodium Metabisulfite is a reducing agent and reacts explosively with oxidizers.

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

Water.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Chemical

During fire, gases hazardous to health may be formed.

Hazardous Combustion Products: Sodium sulfide and sulfur oxides.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

Special Protective Equipment for Fire-Fighters

As in any fire, wear self-contained breathing apparatus pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Evacuate spill area. Isolate hazard area and deny entry to unnecessary or unprotected personnel. Stay upwind and keep out of low area. Remove all possible sources of ignition in the surrounding area. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment. Ventilate contaminated area thoroughly shut off leaks if possible without personal risk.

Methods and Materials for Containment and Clean-Up

Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination. Stop the flow of material, if this can be done without risk.

Small releases can be cleaned-up wearing gloves, goggles and suitable body protection. In case of a large spill (in which excessive dust can be generated), clear the affected area, protect people, and respond with trained personnel. Place all spill residues in an appropriate container and seal. Thoroughly wash the area after a spill or leak clean-up.

Notification Procedures

Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.

Environmental Precautions

Prevent further leakage or spillage if safe to do so.

Section 7: Handling and Storage

Precautions for Safe Handling

Minimize dust generation and accumulation. Avoid inhalation of dust. Avoid contact with eyes, skin, and clothing. Use personal protective equipment as required. Wash thoroughly after handling. Use this product only with adequate ventilation. Wash thoroughly after handling. Remove contaminated clothing immediately. Keep in dust-tight containers. Keep away from all heat sources. Contact with acids, water or ice releases sulfur dioxide gas which may be harmful or deadly if inhaled. Use of this product in confined spaces may cause suffocation leading to death. Do not use in unventilated areas such as in the holds of fishing boats, walk-coolers or confined spaces. Individuals responsible for the procurement, use or application of Sodium Metabisulfite must familiarize themselves with the appropriate safety and handling precautions involved. Specifically, for the prevention of Black Spot on shrimp, Sodium Metabisulfite should only be used as a dilute (1.25%) solution and only in well-ventilated area.

Never use sodium metabisulfite in a dry form directly on the shrimp and never in a confined such as the hold of a shrimp boat or a walk-in cooler. Deadly sulfur dioxide gas can be generated and accumulated in confined spaces, creating an extremely hazardous condition which can cause suffocation leading to death.

Conditions for Safe Storage, including any Incompatibilities

Keep container tightly closed. Store in a cool, dry, well-ventilated place. All employees who handle this material should be trained to handle it safely. Open containers slowly on a stable surface. Containers of this product must be properly labeled. Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care. Keep this product in an airtight container. Store away from incompatible materials. Do not store this material in open or unlabeled containers.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Value	Source
Sodium Metabisulfite	TWA	5 mg/m3	US. ACGIH Threshold Limit Values
Sodium Metabisulfite	TWA	5 mg/m3	US NIOSH
Sulfur Dioxide	TWA	5.2 mg/m3	US. ACGIH Threshold Limit Values
Sulfur Dioxide	STEL	13 mg/m3	US. ACGIH Threshold Limit Values
Sulfur Dioxide	TWA	13 mg/m3	OSHA
Sulfur Dioxide	TWA	5 mg/m3	OSHA
Sulfur Dioxide	STEL	13 mg/m3	OSHA
Sulfur Dioxide	TWA	5 mg/m3	US NIOSH
Sulfur Dioxide	STEL	13 mg/m3	US NIOSH
Sulfur Dioxide	IDLH	100 ppm	US NIOSH
Sulfur Dioxide	TWA	5.3 mg/m3 (inhalable fraction)	DFG MAKs
Sulfur Dioxide	STEL	1 ppm	DFG MAKs

Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

Appropriate Engineering Controls

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Use mechanical ventilation such as dilution and local exhaust, necessary for use in enclosed or confined spaces due to the slow release of sulfur dioxide. Use a corrosion-resistant ventilation system and exhaust directly to the outside. Treatment of exhaust gases may be required to prevent environmental contamination. Supply ample air replacement.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Eye/Face Protection

Wear tight-fitting goggles or face shield.

Skin Protection

Hand Protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing. Wear boots and coveralls to avoid skin contact.

Respiratory Protection

In case of inadequate ventilation use suitable respirator. If airborne concentrations are above the applicable exposure limits, use NIOSH-approved respiratory protection. If respiratory protection is needed, use only protection authorized in the OSHA standard.

Hygiene Measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

Section 9: Physical and Chemical Properties

Appearance:

Physical State:

Solid

Color:

White to Yellowish

Odor:

Odor of Sulfur Dioxide (Milk odor of rotten eggs)

Odor Threshold:

No data available.

pH:

4.5 – 5 (10% Solution)

Melting Point/Freezing Point:

150 °C

Initial Boiling Point and Boiling Range:

No data available.

Flash Point:

No data available.

Evaporation Rate (butyl acetate=1):

No data available.

Flammability (solid, gas):

Noncombustible Solid

Upper/Lower Limit on Flammability or Explosive Limits

Flammability Limit – Upper:

No data available.

Flammability Limit – Lower:

No data available.

Explosive Limit – Upper:

No data available.

Explosive Limit – Lower:

No data available.

Vapor Pressure:

Estimated < 0.01 kPa (25 °C)

Vapor Density (air =1):

No data available.

Relative Density (water=1):

1.4 (20 °C)

Solubility(ies):

Solubility in water:

540 g/l

Solubility (other):

No data available.

Partition coefficient (n-octanol/water):

No data available.

Auto-Ignition Temperature:

No data available.

Decomposition Temperature:

No data available.

Viscosity:

No data available.

Other Information:

Molecular Weight:

190.11 g/mol

Formula:

H₂O₂S₂2Na

Section 10: Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical Stability

Material is stable under normal conditions. Product is sensitive to air and moisture sensitive and releases sulfur dioxide slowly at ambient temperatures. Sodium Metabisulfite will decompose on heating to form sodium sulfate.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

Moisture.

Incompatible Materials

Alkalies. Acids. Oxidizing agents. Sodium Nitrite. Large scale addition of solid sodium disulfite to an unstirred and too-concentrated solution of sodium nitrite may cause a vigorous exothermic reaction.

Hazardous Decomposition Products

Contact with acids liberates toxic gas. Oxides of sulfur. Sodium oxides. Product of thermal decomposition includes sodium sulfate. Products of hydrolysis include sodium dioxide.

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: May be harmful if swallowed.

Inhalation: May cause irritation to the respiratory system.

Skin Contact: May cause irritation.

Eye Contact: Causes serious eye damage.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

Sodium Metabisulfite: LD 50 (Rat): 5989 mg/kg

Sodium Metabisulfite: TDL0 (Rat): 75 mg/kg (15 days continuous) kidney, urethra, bladder: other changes; biochemical enzyme inhibition, induction, or change in blood tissue levels: phosphatases, enzyme inhibition, induction, or change in blood or tissue levels: dehydrogenases.

Sodium Metabisulfite: TDL0 (Pig): 562 g/kg (48 weeks continuous): liver: changes in liver weight; kidney, urethra, bladder: changes in bladder weight; nutritional and gross metabolic: weight loss or decreased weight gain

Sodium Metabisulfite: TDL0 (Rat): 20 g/kg: multigenerations: reproductive effects on newborn: still birth

Sodium Metabisulfite: TDL0 (Rat): 40 g/kg: multigenerations: reproductive effects on newborn: weaning or lactation index

Sodium Metabisulfite: TDL0 (Rat): 14 g/kg: 8-12 days after conception: reproductive effects on newborn: other neonatal measures or effects

Dermal

Sodium Metabisulfite: TDL0 (Mouse): 806 mg/kg/26 weeks intermittent: tumorigenic: equivocal tumorigenic agent by RTECS criteria; Skin and appendages: tumor

Inhalation

No data available.

Repeated Dose Toxicity

No data available.

Skin Corrosion/Irritation

May cause skin irritation.

Serious Eye Damage/Eye Irritation

Causes serious eye damage.

Respiratory/Skin Sensitization

Not a skin sensitizer.

Carcinogenicity

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

US. National Toxicology Program (NTP) Report on Carcinogens

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Germ Cell Mutagenicity

In Vitro

No mutagenic components identified.

In Vivo

No mutagenic components identified.

Reproductive Toxicity

None known.

Specific Target Organ Toxicity – Single Exposure

None known.

Specific Target Organ Toxicity – Repeated Exposure

None known.

Aspiration Hazard

Not classified.

Other Effects

Chronic: Prolonged or repeated contact may cause allergic respiratory and skin reactions in sensitive individuals.

Section 12: Ecological Information

Ecotoxicity

Acute Hazards to the Aquatic Environment

Fish

No data available.

Aquatic Invertebrates

Sodium Metabisulfite: LC 50 (Bluegill Sunfish, 96 h): 32 mg/l

Toxicity to Aquatic Plants

No data available.

Chronic Hazards to the Aquatic Environment

Fish

No data available.

Aquatic Invertebrates

No data available.

Toxicity to Aquatic Plants

No data available.

Persistence and Degradability

Biodegradation

There are no data on the degradability of this product.

BOD/COD Ratio

COD: 165 mg oxygen/g compound

Bioaccumulative Potential

Bioconcentration Factor (BCF)

No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)

No data available.

Mobility in Soil

The product is water soluble and may spread in water systems.

Other Adverse Effects

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Section 13: Disposal Considerations

Disposal Instructions

Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated Packaging

Since emptied containers retain product residue, follow label warnings even after container is emptied.

Section 14: Transportation Information

US Department of Transportation (DOT)

This material is not regulated as a hazardous material for transport by the U.S. Department of Transportation in accordance with 49 CFR 172.101.

Section 15: Regulatory Information

US Federal Regulations

Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

No chemical(s) in this material are subject to the reporting requirements of CERCLA.

Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: No

Sudden Release of Pressure: No

Reactive: Yes

Acute (Immediate) Health Hazard: Yes

Chronic (Delayed) Health Hazard: Yes

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

This material does not contain any chemical(s) with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

Section 16: Other Information

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 2

Chronic Health Hazard: /

Flammability: 0

Physical Hazard: 1

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 2

Fire Hazard: 0

Reactivity Hazard: 1

Special: N/A

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

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Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate
BCF - Bioconcentration Factor
EC50 - Effective concentration, 50%
IDHL - Immediately Dangerous to Life and Health
Kg - Kilogram
l - Liter
lb - Pound
LC50 - Lethal Concentration, 50%
LD50 - Lethal Dose, 50%
mg - milligram
ml - milliliter
N/A - Not Applicable
N/D - Not Determined
PEL - Permissible Exposure Limit
REL - Recommended Exposure Limit
STEL - Short-term Exposure Limit
TWA - Time weighted average

ACGIH - American Conference of Industrial Hygienists
AIHA - American Industrial Hygiene Association
BEI - Biological Exposure Indices
CAS - Chemical Abstracts Service
DOT - US Department of Transportation
EPA - US Environmental Protection Agency
GHS - Globally Harmonized System of Classification and Labelling of Chemicals
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IBC - Intermediate Bulk Container
IMDG - International Maritime Dangerous Goods
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - US Occupational Health and Safety Administration
SARA - US EPA Superfund Amendments and Reauthorization Act
TSCA - US EPA Toxic Substances Control Act
UN - United Nations

References

HSDB® - Hazardous Substances Data Bank

Disclaimer

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