We create chemistry

Safety Data Sheet
Sodium Metabisulfite food grade (E223)

1. Identification

Product identifier used on the label

Sodium Metabisulfite food grade (E223)

Recommended use of the chemical and restriction on use

Recommended use*: food additive(s)
Recommended use*: inorganic reducing agents; initial product for chemical syntheses; process chemical
Unsuitable for use: Not intended for sale to or use by the general public.

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF Canada Inc.
5025 Creekbank Road
Building A, Floor 2
Mississauga, ON, L4W 0B6, CANADA

Telephone: +1 289 360-1300

Emergency telephone number
24 Hour Emergency Response Information
CHEMTREC: 1-800-424-9300
BASF HOTLINE: (800) 454-COPE (2673)
Other means of identification
Chemical family: salt of inorganic acids

2. Hazards Identification

According to Hazardous Products Regulations (HPR) (SOR/2022-272)

Classification of the product

Acute Tox.	4 (oral)	Acute toxicity
Eye Dam.	1	Serious eye damage
Aquatic Acute	3	Hazardous to the aquatic environment - acute

Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:

H318	Causes serious eye damage.
H302	Harmful if swallowed.
H402	Harmful to aquatic life.

Precautionary Statements (Prevention):

P280	Wear eye and face protection.
P273	Avoid release to the environment.
P270	Do not eat, drink or smoke when using this product.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

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 physician.
P330	Rinse mouth.

Precautionary Statements (Disposal):

P501	Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered. If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

Labeling of special preparations (GHS):
Contact with acids liberates toxic gas.

3. Composition / Information on Ingredients

According to Hazardous Products Regulations (HPR) (SOR/2022-272)

Sodium metabisulfite
CAS Number: 7681-57-4
Content (W/W): >= 80.0 - <= 100.0%
Synonym: Disulfurous acid disodium salt; Disodium disulfite

sodium sulphite
CAS Number: 7757-83-7
Content (W/W): >= 0.1 - < 1.0%
Synonym: Sodium sulfite

The actual concentration is withheld as a trade secret.

4. First-Aid Measures

Description of first aid measures

General advice:
Remove contaminated clothing.

If inhaled:
If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention. After inhalation of decomposition products: Immediately administer a corticosteroid from a controlled/metered dose inhaler. Seek medical attention.

If on skin:
Wash thoroughly with soap and water

If in eyes:
Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. Seek medical attention.

If swallowed:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Overexposure may cause:, vomiting, asthmatic complaints, abdominal cramps, dyspnea, nausea, diarrhea, coughing
Hazards: Risk of sulfur dioxide formation by reaction with gastric acid after swallowing.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:	Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Suitable extinguishing media:
water spray, carbon dioxide, foam, dry powder

Unsuitable extinguishing media for safety reasons:
water jet

Additional information:
Product will not burn.

Use extinguishing measures to suit surroundings.

Special hazards arising from the substance or mixture
Hazards during fire-fighting:
Sulphur dioxide,
The substances/groups of substances mentioned can be released if the product is involved in a fire.

Advice for fire-fighters
Protective equipment for fire-fighting:
Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:
Product itself is non-combustible; fire extinguishing method of surrounding areas must be considered. Contaminated extinguishing water must be disposed of in accordance with official regulations. In case of fire and/or explosion do not breathe fumes.

Impact Sensitivity:
Remarks: Based on the chemical structure there is no shock-sensitivity.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Avoid contact with the skin, eyes and clothing. Use personal protective clothing. Ensure adequate ventilation. Avoid dust formation.

Environmental precautions
Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil. Retain and dispose of contaminated wash water.

Methods and material for containment and cleaning up
Sweep/shovel up. Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Precautions for safe handling
Use only in well-ventilated areas. Avoid dust formation. Avoid contact with skin and eyes.

Protection against fire and explosion:
The substance/product is non-combustible. No special precautions necessary.

Conditions for safe storage, including any incompatibilities
Segregate from acids and acid forming substances. Segregate from oxidants.

Suitable materials for containers: rubberized, Polyester resin, glass reinforced (Palatal A410), Stainless steel 1.4541, Stainless steel 1.4571, High density polyethylene (HDPE), Low density polyethylene (LDPE)

Further information on storage conditions: Keep away from heat. Keep container tightly closed in a cool, well-ventilated place. Keep container dry. The product consumes oxygen. Danger of lack of oxygen in containers and tanks.

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

Sodium metabisulfite	ACGIH, US:	TWA value 5 mg/m3 ;

The substance mentioned develops if the regulation/notes for storage and handling are not observed.

Sulphur dioxide	ACGIH, US:	STEL value 0.25 ppm ;
	OSHA Z1:	PEL 5 ppm 13 mg/m3 ;

Advice on system design:
Provide local exhaust ventilation to control dust.

Personal protective equipment

Respiratory protection:
Wear a NIOSH-certified (or equivalent) particulate respirator. Do not exceed the maximum use concentration for the respirator facepiece/cartridge combination. For emergency or non-routine, high exposure situations, use a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:
Chemical resistant protective gloves should be worn to prevent all skin contact., Suitable materials may include, nitrile rubber (Buna N), chloroprene rubber (Neoprene), polyvinylchloride (Pylox), Consult with glove manufacturer for testing data., Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:
Tightly fitting safety goggles (chemical goggles).

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:
Avoid inhalation of dust. Hands and/or face should be washed before breaks and at the end of the shift.

9. Physical and Chemical Properties

Physical state:	solid	
Form:	powder, crystalline	
Odour:	faint odour, of sulfur dioxide	
Odour threshold:	Not determined due to potential health hazard by inhalation.	
Colour:	white to slightly yellow	
pH value:	4.0 - 4.8 (5 %(m), 20 °C)	(pH Meter)
Melting point:	> 150 °C The substance / product decomposes.	(other)

	The substance / product decomposes.not applicable	
Freezing point:	not applicable	
Boiling point:	The substance / product decomposes therefore not determined.	
Boiling range:	not applicable	
Sublimation point:	No data available.	
Flash point:	not applicable, the product is a solid	
Flammability:	not flammable	(other)
Lower explosion limit:	For solids not relevant for classification and labelling.	
Upper explosion limit:	For solids not relevant for classification and labelling.	
Autoignition:	not applicable	
Vapour pressure:	The vapour pressure of the aqueous solution consists of the partial pressure for water and the partial pressure for sulphur dioxide.	
Density:	2.36 g/cm3 (20 °C)	(OECD Guideline 109)
Relative density:	No data available.	
Bulk density:	1,000 - 1,200 kg/m3	
Relative vapour density:	The product is a non-volatile solid.	
Partitioning coefficient n-octanol/water (log Pow):	not applicable	
Thermal decomposition:	150 °C To avoid thermal decomposition, do not overheat.	
Viscosity, dynamic:	not applicable, the product is a solid	
Viscosity, kinematic:	No applicable information available.	
Solubility in water:	667 g/l (25 °C) Literature data.	
Solubility (quantitative):	No data available.	
Solubility (qualitative):	No data available.	
Molecular weight:	No data available.	
Evaporation rate:	The product is a non-volatile solid.	

Particle characteristics

Particle size distribution:	169.68 - 173.41 µm (standard deviation 1.25 µm) fine particles	(D50, ISO 13320-1)
	422.29 - 443.58 µm (standard deviation 4.40 µm) fine particles	(D90, ISO 13320-1)
	49.49 - 51.34 µm (standard deviation 0.63 µm) fine particles	(D10, ISO 13320-1)

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
Reacts with nitrites. Reacts with nitrates. Reacts with oxidizing agents. Generation of sulphur dioxide upon exposure to acids. (or conditions.) The product consumes oxygen.

Conditions to avoid
Avoid humidity.

Incompatible materials
nitrites, nitrates, oxidizing agents, acids

Hazardous decomposition products

Decomposition products:
Hazardous decomposition products: Sulphur dioxide

Thermal decomposition:
150 °C
To avoid thermal decomposition, do not overheat.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Of moderate toxicity after single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Information on: Sodium metabisulfite
Assessment of acute toxicity:Of moderate toxicity after single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Oral
Type of value: LD50
Species: rat (male/female)
Value: 1,540 mg/kg (OECD Guideline 401)

Inhalation
Type of value: LC50
Species: rat (male/female)
Value: > 5.5 mg/l (IRT)
Exposure time: 4 h

Tested as dust aerosol.
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Dermal
Type of value: LD50
Species: rat (male/female)
Value: > 2,000 mg/kg (OECD Guideline 402)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Assessment other acute effects
Assessment of STOT single:
Apart from effects causing lethality, no specific target organ toxicity was observed in experimental studies.

Irritation / corrosion
Assessment of irritating effects: Risk of serious damage to eyes. Not irritating to the skin.

Information on: Sodium metabisulfite
Assessment of irritating effects: Not irritating to the skin. May cause severe damage to the eyes.

Skin
Species: rabbit
Result: non-irritant
Method: OECD Guideline 404

Eye
Species: rabbit
Result: irreversible damage
Method: OECD Guideline 405

Sensitization
Assessment of sensitization: Skin sensitizing effects were not observed in animal studies. A sensitizing effect on particularly sensitive individuals cannot be excluded.

Mouse Local Lymph Node Assay (LLNA)
Species: mouse
Result: Non-sensitizing.
Method: OECD Guideline 429

Aspiration Hazard
not applicable

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: No substance-specific organtoxicity was observed after repeated administration to animals.

Genetic toxicity
Assessment of mutagenicity: No mutagenic effect was found in various tests with bacteria and mammalian cell culture. The substance was not mutagenic in studies with mammals.

Carcinogenicity
Assessment of carcinogenicity: In long-term studies in rats in which the substance was given by feed, a carcinogenic effect was not observed.

Reproductive toxicity
Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

Teratogenicity
Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies.

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
Acutely harmful for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish
LC50 (96 h) 316 mg/l, Leuciscus idus (DIN 38412 Part 15, static)
The details of the toxic effect relate to the nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic invertebrates
EC50 (48 h) 89 mg/l, Daphnia magna (Directive 79/831/EEC, static)
Nominal concentration.

Aquatic plants
EC50 (72 h) 43.8 mg/l (growth rate), algae (other, static)
Nominal concentration.

Chronic toxicity to fish
No observed effect concentration (34 d) > 316 mg/l, Brachydanio rerio (OECD Guideline 210, Flow through.)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Chronic toxicity to aquatic invertebrates
No observed effect concentration (21 d) > 10 mg/l, Daphnia magna (OECD Guideline 202, part 2, semistatic)
Nominal concentration.

Assessment of terrestrial toxicity
Study scientifically not justified.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms
OECD Guideline 209 aquatic
activated sludge of a predominantly domestic sewage/No observed effect concentration (3 h): > 1,000 mg/l

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Persistence and degradability

Assessment biodegradation and elimination (H2O)
Inorganic product which cannot be eliminated from water by biological purification processes.

Assessment of stability in water
According to structural properties, hydrolysis is not expected/probable.
Study scientifically not justified.

Bioaccumulative potential

Assessment bioaccumulation potential
Accumulation in organisms is not to be expected.

Bioaccumulation potential
Study scientifically not justified.

Mobility in soil

Assessment transport between environmental compartments
The substance will not evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is not expected.

Additional information

Sum parameter

Chemical oxygen demand (COD): (calculated) 165 mg/g

Other ecotoxicological advice:
Higher concentrations of the substance may cause a strong chemical oxygen consumption in biological sewage-treatment plants and/or waterways.

13. Disposal considerations

Waste disposal of substance:
Dispose of in accordance with national, state and local regulations. This material and its container must be disposed of in a safe way.

Container disposal:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Land transport
TDG

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Chemical	DSL, CA	released / listed
Food	DSL, CA	released / listed

NFPA Hazard codes:
Health: 3 Fire: 0 Reactivity: 0 Special:

Assessment of the hazard classes according to UN GHS criteria (most recent version):

Acute Tox.	4 (oral)	Acute toxicity
Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Aquatic Acute	3	Hazardous to the aquatic environment - acute

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2025/09/02

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

chemical industry

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END OF DATA SHEET