

SAFETY DATA SHEET

North American Version

SODIUM BISULFITE

1. PRODUCT AND COMPANY IDENTIFICATION

1.1. Identification of the substance or preparation

Product name : SODIUM BISULFITE
Molecular Weight : 126,04 g/mol

1.2. Use of the Substance/Preparation

Recommended use : - Pulp and paper
- Photographic chemical
- Water treatment
- Reducing agents
- Dyes
- Bleaching agent
Recommended use : - Food additive

1.3. Company/Undertaking Identification

Address : SOLVAY CHEMICALS, INC.
3333 RICHMOND AVENUE
HOUSTON TX 77098-3099
United States

1.4. Emergency and contact telephone numbers

Emergency telephone : 1 (800) 424-9300 CHEMTREC® (USA & Canada)
01-800-00-214-00 (MEX. REPUBLIC)

Contact telephone number : US: +1-800-765-8292 (Product information)
(product information): US: +1-713-525-6500 (Product information)

2. HAZARDS IDENTIFICATION

2.1. Emergency Overview:

NFPA : H= 2 F= 0 I= 1 S= None
HMIS : H= 2 F= 0 R= 1 PPE = Supplied by User; dependent on local conditions

General Information

Appearance : Cloudy liquid @ 25 °F
Colour : yellow
Odour : slight, Odor of sulfur dioxide

Main effects

- Harmful if swallowed.
- Irritating to eyes.
- May cause sensitization by inhalation.
- Hazardous decomposition products formed under fire conditions.

2.2. Potential Health Effects:

Inhalation

- Mild respiratory irritant
- May cause severe allergic respiratory reaction.
- Breathing of dust may aggravate asthma or other pulmonary diseases.
- Symptoms: Headache, Breathing difficulties, Cardiac irregularities, loss of consciousness and cardiopulmonary arrest.

Eye contact

- Moderate eye irritation

Skin contact

- slight irritation
- Prolonged skin contact may cause skin irritation.

Ingestion

- Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
- Overexposure may result in death.
- Repeated contact may cause allergic reactions in very susceptible persons.
- Risk of violent reaction.

Other toxicity effects

- See section 11: Toxicological Information

2.3. Environmental Effects:

- See section 12: Ecological Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Sodium sulfite

CAS-No. : 7757-83-7
Concentration : $\geq 1,0 - \leq 3,0$ %

Sodium Bisulfite

CAS-No. : 7631-90-5
Concentration : $\geq 38,0 - \leq 42,0$ %

4. FIRST AID MEASURES

4.1. Inhalation

- Call a doctor immediately if allergic signs, particularly in the respiratory tract, are observed.
- Oxygen or artificial respiration if needed.
- Move to fresh air.

Exposure to decomposition products :

- If inhaled
- Remove to fresh air.
- Immediate medical attention is required.

4.2. Eye contact

- Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- In the case of difficulty of opening the lids, administer an analgesic eye wash (oxybuprocaine).
- Immediate medical attention is required.

4.3. Skin contact

- Wash off with plenty of water.
- Wash contaminated clothing before reuse.
- If skin irritation persists, call a physician.

4.4. Ingestion

If victim is conscious:

- Immediate medical attention is required.

If victim is unconscious but breathing:

- Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

5.1. Suitable extinguishing media

- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2. Extinguishing media which shall not be used for safety reasons

- Water may be ineffective.

5.3. Special exposure hazards in a fire

- Not combustible.
- Thermal decomposition can lead to release of hazardous gases and vapors
- Sulphur dioxide

5.4. Hazardous decomposition products

- Sulphur dioxide
- Sulphur oxides

5.5. Special protective equipment for fire-fighters

- Wear self-contained breathing apparatus and protective suit.
- Use NIOSH approved respiratory protection.

5.6. Other information

- Approach from upwind.
- Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions

- Refer to protective measures listed in sections 7 and 8.

6.2. Environmental precautions

- Should not be released into the environment.
- The product should not be allowed to enter drains, water courses or the soil.
- In case of accidental release or spill, immediately notify the appropriate authorities if required by Federal, State/Provincial and local laws and regulations.

6.3. Methods for cleaning up

- Collect the product with suitable means.
- Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

7.1. Handling

- Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is being used.
- Use only in well-ventilated areas.
- Avoid dust formation.
- Protect from moisture.

- Avoid prolonged or repeated contact with skin.

7.2. Storage

- Keep in a dry place.
- Keep container closed.
- Keep in properly labelled containers.
- Keep away from incompatible products

7.3. Other information

- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- For personal protection see section 8.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Exposure Limit Values

Sodium sulfite

- US. ACGIH Threshold Limit Values
Remarks: none established

Sulphur dioxide

- Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) 04 2004
time weighted average = 2 ppm
time weighted average = 5,2 mg/m³
- Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) 04 2004
Short term exposure limit = 5 ppm
Short term exposure limit = 13 mg/m³
- Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) 07 2006
time weighted average = 2 ppm
- Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) 07 2006
Short term exposure limit = 5 ppm
- Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents) 03 2006
time weighted average = 2 ppm
time weighted average = 5,2 mg/m³
- Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents) 03 2006
Short term exposure limit = 5 ppm
Short term exposure limit = 10,4 mg/m³
- US. ACGIH Threshold Limit Values 2009
Short term exposure limit = 0,25 ppm
- Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) 2006
time weighted average = 2 ppm
time weighted average = 5,2 mg/m³
- Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) 2006
Short term exposure limit = 5 ppm
Short term exposure limit = 13 mg/m³

Sodium Bisulfite

- Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) 2006
time weighted average = 5 mg/m³
- Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) 10 2006
time weighted average = 5 mg/m³

- Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) 07 2007
time weighted average = 5 mg/m³
- Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents) 12 2007
time weighted average = 5 mg/m³
- US. ACGIH Threshold Limit Values 2008
time weighted average = 5 mg/m³

8.2. Engineering controls

- Ensure adequate ventilation.
- Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.

8.3. Personal protective equipment

8.3.1. Respiratory protection

- When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- In the case of vapour formation use a respirator with an approved filter.
- Use NIOSH approved respiratory protection.
- In the case of dust or aerosol formation use respirator with an approved filter.

8.3.2. Hand protection

- Protective gloves

8.3.3. Eye protection

- Chemical resistant goggles must be worn.

8.3.4. Skin and body protection

- Preventive skin protection
- Wear suitable protective clothing.

8.3.5. Hygiene measures

- Wash contaminated clothing before re-use.
- Eye wash bottle with pure water
- Use only in an area equipped with a safety shower.
- Handle in accordance with good industrial hygiene and safety practice.
- When using do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General Information

Appearance	: Cloudy liquid @ 25 °F
Colour	: yellow
Odour	: slight, Odor of sulfur dioxide

9.2. Important health safety and environmental information

pH	: 9,6 - 9,8 <i>Concentration: 10 g/l</i>
Boiling point/boiling range	: <i>Remarks: not applicable</i>
Flash point	: <i>Remarks: not applicable</i>
Flammability	: <i>Remarks: The product is not flammable.</i>

Explosive properties	:	<u>Explosion danger:</u> Remarks: not applicable
Oxidizing properties	:	Remarks: Non oxidizer, oxygen scavenger
Vapour pressure	:	Remarks: no data available
Solubility	:	250 g/l Temperature: 20 °C (68 °F)
Partition coefficient: n-octanol/water	:	<u>log Pow:</u> -4 Temperature: 25 °C (77 °F)

9.3. Other data

Decomposition temperature	:	>= 600 °C (1.112 °F)
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10. STABILITY AND REACTIVITY

10.1. Stability

- Stable under recommended storage conditions.

10.2. Conditions to avoid

- Heat.
- Exposure to moisture.
- Keep at temperature not exceeding: 600 °C (1.112 °F)

10.3. Materials to avoid

- Acids
- Oxidizing agents

10.4. Hazardous decomposition products

- Sulphur dioxide, Sulphur oxides

11. TOXICOLOGICAL INFORMATION

Toxicological data

Acute oral toxicity

- LD50, mouse, 820 mg/kg
- LD50, rat, > 2.000 mg/kg

Skin irritation

- rabbit, No skin irritation

Eye irritation

- rabbit, Eye irritation

Sensitisation

- Human experience, Respiratory sensitization

Genetic toxicity in vitro

- In vitro tests showed mutagenic effects

Remarks

- Harmful if swallowed.
- Moderate eye irritation
- May cause sensitization of susceptible persons by inhalation of aerosol or dust.

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity effects

Acute toxicity

- Carassius auratus (goldfish), LD 50, 96 h, 100 mg/l

12.2. Mobility

- Remarks: no data available

12.3. Persistence and degradability

Abiotic degradation

- Result: no data available

Biodegradation

- Biochemical Oxygen Demand (BOD)
Remarks: instantaneous reaction

12.4. Bioaccumulative potential

- Result: Bioaccumulative potential

12.5. Other adverse effects

- no data available

12.6. Remarks

- oxygen scavenger
- Ecological injuries are not known or expected under normal use.

13. DISPOSAL CONSIDERATIONS

13.1. Waste from residues / unused products

- In accordance with local and national regulations.
- Refer to manufacturer/supplier for information on recovery/recycling.

13.2. Packaging treatment

- To avoid treatments, as far as possible, use dedicated containers.
- Containers that cannot be cleaned must be treated as waste.
- In accordance with local and national regulations.
- Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.

13.3. RCRA Hazardous Waste

- Listed RCRA Hazardous Waste (40 CFR 302) - No
- Unlisted RCRA Hazardous Waste (40 CFR 302) - Yes

14. TRANSPORT INFORMATION

UN-Number	2693
IATA-DGR	
Class	8
Packing group	III
ICAO-Labels	Corrosive
Proper shipping name: BISULFITES, AQUEOUS Solution, N.O.S.	

IMDG

Class 8
Packing group III
Proper shipping name: BISULFITES, AQUEOUS Solution, N.O.S.

U.S. Dept of Transportation

Class (Subsidiary) 8
Packing group III
Label (Subsidiary) Corrosive
Marine pollutant: no
Emergency info: ERG: 154
Proper shipping name: BISULFITES, AQUEOUS Solution, N.O.S.

Canada (TDG)

Class (Subsidiary) 8
Packing group III
Label (Subsidiary) Corrosive
Emergency info: ERG: 154
Proper shipping name: BISULFITES, AQUEOUS Solution, N.O.S.

15. REGULATORY INFORMATION

15.1. Inventory Information

Toxic Substance Control Act list (TSCA)	: -	In compliance with inventory.
Australian Inventory of Chemical Substances (AICS)	: -	In compliance with inventory.
Canadian Domestic Substances List (DSL)	: -	In compliance with inventory.
Inventory of Existing Chemical Substances (China) (IECS)	: -	In compliance with inventory.
Korean Existing Chemicals List (ECL)	: -	In compliance with inventory.
EU list of existing chemical substances (EINECS)	: -	In compliance with inventory.
Japanese Existing and New Chemical Substances (MITI List) (ENCS)	: -	In compliance with inventory.
Philippine Inventory of Chemicals and Chemical Substances (PICCS)	: -	In compliance with inventory.
New Zealand Inventory of Chemicals (NZIOC)	: -	In compliance with inventory.

15.2. Other regulations

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)

- not regulated.

SARA Hazard Designation (SARA 311/312)

- Acute Health Hazard: Yes.
- Chronic Health Hazard: Yes.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

- not regulated.

US. EPA CERCLA Hazardous Substances (40 CFR 302)

- not regulated.

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

- yes.

US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

- yes.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

- not regulated.

15.3. Classification and labelling

Canada. Canadian Environmental Protection Act (CEPA). WHMIS Ingredient Disclosure List (Can. Gaz., Part II, Vol. 122, No. 2)

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

16. OTHER INFORMATION

Ratings :

NFPA (National Fire Protection Association)

Health = 2 Flammability = 0 Instability = 1 Special =None

HMIS (Hazardous Material Information System)

Health = 2 Fire = 0 Reactivity = 1 PPE : Supplied by User; dependent on local conditions

Further information

- New (MSDS)
- Distribute new edition to clients

Material Safety Data Sheets contain country specific regulatory information; therefore, the MSDS's provided are for use only by customers of the company mentioned in section 1 in North America. If you are located in a country other than Canada, Mexico or the United States, please contact the Solvay Group company in your country for MSDS information applicable to your location. The previous information is based upon our current knowledge and experience of our product and is not exhaustive. It applies to the product as defined by the specifications. In case of combinations or mixtures, one must confirm that no new hazards are likely to exist. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and integrity of the work environment. (Unless noted to the contrary, the technical information applies only to pure product). To our actual knowledge, the information contained herein is accurate as of the date of this document. However, neither the company

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

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