Safety Data Sheet

SODIUM BISULFITE SOLUTION 40% F.G.

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Issue date: 8/28/2000
Revision date: 4/9/2024

SECTION 1: Identification

Identification

Product Name	:	SODIUM BISULFITE SOLUTION 40% F.G.
Product code	:	SO0040
CAS-No.	:	MIXTURE
Synonyms	:	Sodium Acid Sulfite, Sodium hydrogen Sulfite
Recommended use	:	No additional information available
Restrictions on use	:	No additional information available

Supplier

Hydrite Chemical Co.
17385 Golf Parkway
Brookfield, WI, 53045
T 262-792-1450

Emergency telephone number

EMERGENCY RESPONSE NUMBERS:
24 Hour Emergency #: (414) 277-1311
CHEMTREC Emergency #: (800) 424-9300

SECTION 2: Hazard(s) identification

Classification of the substance or mixture

GHS US classification

Corrosive to metals Category 1
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2A
Respiratory sensitization, Category 1
Skin sensitization, Category 1

GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger

Hazard statements (GHS US) : May be corrosive to metals
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements (GHS US)

Prevention	:	Keep only in original container. Avoid breathing vapors, mist, dust, fume, gas, spray. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective clothing, eye protection, face protection, protective gloves. [In case of inadequate ventilation] wear Self-contained breathing apparatus.
Response	:	IF ON SKIN: Wash with plenty of soap and water. IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (see supplemental first aid instruction on the SDS). If skin irritation occurs: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. If experiencing respiratory symptoms: Call a POISON CENTER. Take off contaminated clothing and wash it before reuse. Wash contaminated clothing before reuse. Absorb spillage to prevent material-damage.
Storage	:	Store in corrosive resistant container with a resistant inner liner.
Disposal	:	Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Hazards not otherwise classified

Hazards not otherwise classified	:	Sulfur Dioxide given off by this product has been shown to cause breathing difficulties in asthmatics. May cause severe allergic reaction in some asthmatics and sulfite sensitive individuals.

Unknown acute toxicity (GHS US)

Unknown acute toxicity (GHS US)	:	40% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 40% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

SECTION 3: Composition/Information on ingredients

Substances/ Mixtures

Name	Product identifier	%	GHS US classification
SODIUM BISULFITE	CAS-No.: 7631-90-5	~ 40	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Aquatic Acute 3, H402

*Note: Any chemical identity and/or exact percentage not expressly stated is being withheld as a trade secret or is due to batch variation.

SECTION 4: First-aid measures

Description of first aid measures

First-aid measures general	:	Call a poison center/doctor/physician if you feel unwell.

First-aid measures after inhalation	:	If inhaled: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY. If experiencing respiratory symptoms: Call a poison center or a doctor.
First-aid measures after skin contact	:	If on skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Do not reuse clothing and shoes until cleaned. If skin irritation or rash occurs: Get medical advice/attention. Wash skin with plenty of water.
First-aid measures after eye contact	:	If in eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	:	If swallowed: Call a physician immediately. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Give water or milk to dilute. If vomiting occurs spontaneously, keep airway clear and give more water.

Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	:	May cause moderate to severe irritation. May irritate or damage: nose. throat. respiratory tract. irritation of mucous membranes. May cause discomfort. Cough. Shortness of breath. Effects may be delayed. May produce an allergic reaction.
Symptoms/effects after skin contact	:	Causes severe irritation. May cause discomfort. Redness. Swelling. blisters. May cause an allergic skin reaction. Effects may be delayed.
Symptoms/effects after eye contact	:	Causes severe irritation. Liquid or mist may cause: pain. redness, itching, tears. stinging. Blurred vision. If left untreated, may cause: Burns. corneal damage. Can cause blindness.
Symptoms/effects after ingestion	:	May cause mild to severe irritation. Large amounts may cause: CNS depression. vomiting. diarrhea. Abdominal pain, nausea. Death in extreme cases. Effects may be delayed. Estimated fatal dose for Sodium Bisulfite is 10 grams.
Immediate medical attention and special treatment, if necessary	:	Treat symptomatically.

SECTION 5: Fire-fighting measures

Extinguishing media

Suitable extinguishing media	:	Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	:	Do not use a heavy water stream.

Specific hazards arising from the chemical

Fire hazard	:	None known.
Explosion hazard	:	Sodium sulfide may be formed after dried solution residues are heated. This is an explosive hazard and strongly alkaline in contact with water.
Hazardous decomposition products	:	Toxic fumes may be released. Sulfur dioxide. Sulfur oxides (SOx). metal oxides.
Firefighting instructions	:	Evacuate personnel to a safe area. Do not enter fire area without proper protective equipment, including respiratory protection. Stay upwind/keep distance from source. Move containers from fire area if it can be done without personal risk. Use water spray or fog for cooling exposed containers.
Protection during firefighting	:	Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

General measures	:	CORROSIVE MATERIAL. Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-Approved self-contained breathing apparatus. Do not exceed the occupational exposure limits (OEL). Eliminate every possible source of ignition.

Protective equipment	:	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	:	Evacuate unnecessary personnel. Stop leak if safe to do so. Ventilate spillage area.

Environmental precautions

Environmental precautions	:	Avoid release to the environment. Notify authorities if product enters sewers or public waters.

Methods and material for containment and cleaning up

For containment	:	Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up	:	Soak up residue with inert absorbent material. Place in non-leaking containers for immediate disposal.
Other information	:	Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

Precautions for safe handling

Additional hazards when processed	:	Handle in accordance with good industrial hygiene and safety practice.
Precautions for safe handling	:	Ensure good ventilation of the work station. Do not eat, drink or smoke when using this product. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes and clothing. Do NOT taste or swallow. Wash hands thoroughly after handling. Empty containers retain product residue and can be hazardous. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Hygiene measures	:	Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

Conditions for safe storage, including any incompatibilities

Technical measures	:	Keep in a cool, well-ventilated place away from heat.
Storage conditions	:	CORROSIVE MATERIAL. Store in corrosive resistant container with a resistant inner liner. Store in a cool, well ventilated area, out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Store away from all sources of heat and ignition to prevent decomposition and release of sulfur dioxide gas. Keep only in original container. DO NOT FREEZE. Store above 50 F to avoid crystallization. Tanks should be vented into an alkaline fume recovery system or scrubber. Storage tanks should be protected from water ingress, and maintained structurally in a safe and reliable condition.
Incompatible materials	:	Metals. Keep away from incompatibles. Refer to Section 10 on Incompatible Materials.
Heat-ignition	:	Keep away from all sources of ignition.
Packaging materials	:	Do not store in unlabeled or mislabeled containers. Keep container tightly closed.

SECTION 8: Exposure controls/personal protection

Control parameters

Component	ACGIH	OSHA
SODIUM BISULFITE	5 mg/m³ TWA	No data available

Section 8 Notes : Sulfur Dioxide gas may be released. The Exposure Limits for Sulfur Dioxide are: 5 ppm-TWA (OSHA); 2 ppm-TWA, 5 ppm-STEL (ACGIH)(Vacated 1989 OSHA PELs).

Appropriate engineering controls

Appropriate engineering controls	:	Maintain adequate ventilation. Do not use in closed or confined spaces. Avoid creating dust or mist. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly. Local exhaust or other engineering controls are needed to minimize exposures. Ensure good ventilation of the work station. Avoid creating dust or mist. Do not use in closed or confined spaces. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly.
Environmental exposure controls	:	Avoid release to the environment.

Individual protection measures/Personal protective equipment

Personal protective equipment	:	Wear recommended personal protective equipment. Provide readily accessible eye wash stations and safety showers.
Hand protection	:	Protective gloves
Eye protection	:	Do not wear contact lenses. Wear chemical safety goggles and a full face shield while handling this product. Safety glasses
Skin and body protection	:	Protective gloves: Impervious. Neoprene. Rubber. Polyvinyl chloride. Prevent contact with this product. Wear gloves and protective clothing depending on condition of use.
Respiratory protection	:	If exposure limits are exceeded, wear: NIOSH-Approved respirator for dusts, mists, and/or SO2 vapors as conditions indicate. NIOSH-Approved air-purifying respirator with: Acid gas cartridge. NIOSH-Approved self-contained breathing apparatus. NIOSH-Approved positive pressure supplied air respirator. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use. Respiratory protection must be worn when handling this product. [In case of inadequate ventilation] wear respiratory protection.
Other information	:	Wash with soap and water before meal times and at the end of each work shift. Good manufacturing practices require gross amounts of any chemical be removed from skin as soon as practical, especially before eating or smoking. Eye-wash station. Safety shower. Rubber apron. Chemical safety shoes. Rubber boots. Full chemical suit. Protective clothing.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Liquid.
Color	:	Clear. Yellow-green.
Odor	:	Sulfur dioxide odor.
Odor threshold	:	No data available
pH	:	4 (AS IS)
Melting point	:	Not applicable
Freezing point	:	45 °F
Boiling point	:	~ 220 °F
Flash point	:	Not combustible
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	Not applicable.
Vapor pressure	:	~ 9 °C (SO2)
Relative vapor density at 20°C	:	No data available
Relative density	:	1.33 @ 25C
Solubility	:	Complete.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	~ 3 mm²/s @ 30 C; ~ 4.5 cP @ 15.6 C
Viscosity, dynamic	:	~ 3 cP @ 30 C; ~ 4.5 cP @ 15.6 C
Explosion limits	:	No data available
Explosive properties	:	No data available

Oxidizing properties : No data available

SECTION 10: Stability and reactivity

Information on stability and reactivity

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : No dangerous reactions known under normal conditions of use. Exothermic reaction on contact with : oxidizing agents. Both acidification and heating accelerate the release of Sulfur dioxide fumes.
Conditions to avoid : Keep away from heat, sparks and flame. Avoid ignition sources. Avoid excessive heat. Temperatures at or near boiling point causes evolution of Sulfur dioxide. Avoid excess exposure to air. On exposure to air, the product will lose some Sulfur dioxide and gradually oxidize to sulfate.
Incompatible materials : acids. oxidizing agents. corrosive to some metals. mineral acids. metals.
Hazardous decomposition products : Toxic vapors. Sulfur dioxide. Sulfur oxide. Metal oxides.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity (oral) : Not classified.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Numerical measures of toxicity

Component	Oral LD50	Dermal LD50	Inhalation LC50
SODIUM BISULFITE	Rat: 1310 mg/kg	Rat:> 2000 mg/kg Source: ECHA	Rat: > 5.5 mg/l air Rat (Dust/Mist): > 5.5 mg/l

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitization : May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : ~ 3 mm²/s @ 30 C; ~ 4.5 cP @ 15.6 C
Likely routes of exposure : Skin and eye contact. Ingestion. Inhalation.
Symptoms/effects : No additional information available
Symptoms/effects after inhalation : May cause moderate to severe irritation. May irritate or damage: nose. throat. respiratory tract. irritation of mucous membranes. May cause discomfort. Cough. Shortness of breath. Effects may be delayed. May produce an allergic reaction.
Symptoms/effects after skin contact : Causes severe irritation. May cause discomfort. Redness. Swelling. blisters. May cause an allergic skin reaction. Effects may be delayed.
Symptoms/effects after eye contact : Causes severe irritation. Liquid or mist may cause: pain. redness, itching, tears. stinging. Blurred vision. If left untreated, may cause: Burns. corneal damage. Can cause blindness.
Symptoms/effects after ingestion : May cause mild to severe irritation. Large amounts may cause: CNS depression. vomiting. diarrhea. Abdominal pain, nausea. Death in extreme cases. Effects may be delayed. Estimated fatal dose for Sodium Bisulfite is 10 grams.

Medical Conditions Aggravated by Exposure : Lung disorders. asthma. Some individuals are said to be dangerously sensitive to minute amounts of sulfites in foods. Symptoms may include broncho constriction, shock, gastrointestinal disturbances, angio edema, flushing, and tingling sensations. Once allergy develops, future exposures can cause asthma attacks with shortness of breath, wheezing, and cough.

Other information : May cause severe allergic reaction in some asthmatics and sulfite sensitive individuals. The potential for exposure to sulfur dioxide must always be considered as well, particularly when the solution may become overheated. SULFUR DIOXIDE GIVEN OFF BY THIS PRODUCT HAS BEEN SHOWN TO CAUSE BREATHING DIFFICULTIES IN ASTHMATICS.

SECTION 12: Ecological information

Toxicity

SODIUM BISULFITE SOLUTION 40% F.G. (MIXTURE)	
LC50 - Fish [1]	240 mg/l Mosquito fish
EC50 - Crustacea [1]	119 mg/l Daphnia magna
LC50 - Fish [2]	707 mg/l Fathead minnow

Persistence and degradability

No additional information available

SECTION 13: Disposal considerations

Disposal methods

Waste treatment methods : Dispose of in accordance with all local, state and federal regulations.

Additional information : Do not re-use empty containers. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition. Since emptied containers retain product residue, follow label warnings even after container is emptied.

SECTION 14: Transport information

Modes of transport

DOT (Department of Transportation):

Identification Number (DOT) : UN2693

Proper Shipping Name (DOT) : Bisulfites, aqueous solutions, n.o.s. (SODIUM BISULFITE)

Hazard Class (DOT) : 8

Packing group (DOT) : III

Labels Required (DOT) : Corrosive

IMDG (International Maritime Dangerous Goods Code):

Identification Number (IMDG) : UN2693

Proper Shipping Name (IMDG) : BISULPHITES, AQUEOUS SOLUTION, N.O.S. (SODIUM BISULFITE)

Hazard Class (IMDG) : 8

Packing group (IMDG) : III

Labels Required (IMDG) : Corrosive substances

IATA (International Air Transport Association):

Identification Number (IATA)	:	UN2693
Proper Shipping Name (IATA)	:	Bisulphites, aqueous solution, n.o.s. (SODIUM BISULFITE)
Hazard Classes (IATA)	:	8
Packing group (IATA)	:	III
Labels Required (IATA)	:	Corrosive

Environmental hazards

No additional information available

Other transport information

The transportation classifications provided on this SDS are for informational purposes only and based upon the properties of the product as described in this document. The listed transportation classifications may not address variations due to changes in package size, mode of shipment, regional or country regulations, or other regulatory descriptors.

DOT RQ Table

Name	DOT RQ
SODIUM BISULFITE	5000 lbs RQ

SECTION 15: Regulatory information

US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

SODIUM BISULFITE (7631-90-5)

CERCLA RQ	5000 lb

International Regulations

No additional information available

US State regulations

Component	CAS No.	State or local regulations
SODIUM BISULFITE	7631-90-5	Wisconsin HAP

SECTION 16: Other information

Hazard Rating System

Health:	2 *
Flammability:	0
Physical:	0

NFPA Rating System

NFPA health hazard: 2
NFPA fire hazard: 0
NFPA reactivity: 0

Abbreviations and acronyms	
HAP	Hazardous Air Pollutant
VOC	Volatile Organic Compound
STEL	Short Term Exposure Limit
TWA	Total Average Weight
RQ	Reportable Quantity

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SDS Prepared by: CV

The data in this Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as warranty or representation for which HYDRITE CHEMICAL CO. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.

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