



Material Safety Data Sheet

1. IDENTIFICATION

PRODUCT NAME: H2-SBS-40

CHEMICAL NAME/SYNONYMS: sodium bisulfite solution, sodium acid sulfite, sodium hydrogen sulfite,

CHEMICAL FAMILY:

CHEMICAL FORMULA:

For emergencies call Chemtrec at 1-800-424-9300

2. HAZARD(S) IDENTIFICATION

EMERGENCY OVERVIEW: This product is clear to yellow liquid with a slightly sulfurous odor.

This material is an irritant to eyes, skin, and mucous membranes.

POTENTIAL HEALTH EFFECTS:

EYES: Eye contact with solution may cause irritation and/or burns.

SKIN: Prolonged or repeated over exposures can result in contact dermatitis.

INGESTION: Though ingestion is not anticipated to be a significant route of overexposure to this product, this product may cause irritation to the gastrointestinal tract. Large doses may cause diarrhea, depression, colic and death. May also cause severe allergic reaction in some asthmatics and sulfite sensitive individuals.

INHALATION: If mists or sprays of this solution are inhaled, this product may cause irritation to respiratory tract. May cause allergic reaction in sensitive individuals. If mixed with acids, sodium bisulfites will release large amounts of sulfur dioxide gas. This gas can cause severe irritation of the nose and throat. Exposure to high levels of sulfur dioxide gas may result in severe lung damage.

HAZARDOUS MATERIAL INFORMATION SYSTEM

Health: 2 Flammability: 0 Reactivity: 1 Protection: B

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>CAS #</u>	<u>COMPONENT</u>	<u>PERCENT</u>
7631-90-5	Sodium Bisulfite	15-40%
	Water and other ingredients present in less than 1%	balance

4. FIRST-AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Do not attempt to neutralize. Do not use oils or ointments at this time. Get medical attention.

SKIN: Rinse skin immediately with plenty of water for fifteen minutes. Remove contaminated clothing taking care not to contaminate eyes. Seek medical attention.

INGESTION: Do not induce vomiting. Rinse mouth with water. If conscious, give large quantities of water and get immediate medical attention. Do not give baking soda or acid antidotes. Never give anything by mouth to an unconscious person.

INHALATION: Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Remove or cover gross contamination to avoid exposure to rescuers. Get medical attention.

5. FIRE-FIGHTING MEASURES**GENERAL FIRE HAZARDS:****UPPER FLAMMABLE LIMIT (UFL):** N/A**LOWER FLAMMABLE LIMIT (LFL):** N/A**METHOD USED:** N/A**FLASH POINT:** nonflammable**FLAMMABILITY CLASSIFICATION:** N/A**AUTO IGNITION:** N/A**EXTINGUISHING MEDIA:** Use media appropriate for surrounding area.**FIRE FIGHTING EQUIPMENT/INSTRUCTIONS:** incipient fire responder should wear eye protection. Structural firefighters must wear self-contained breathing apparatus and full protective equipment. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas. If necessary, discard or decontaminate fire response equipment used before returning such equipment to service.**UNUSUAL FIRE AND EXPLOSION HAZARDS:** This product is not considered flammable or combustible. This material, when heated, may release sulfur dioxide gas. Runoff from fire control may cause pollution. Keep fire exposed containers cool with water spray to prevent rupture due to excessive heat. High pressure water hose may spread products from broken containers increasing contamination. If involved in a fire, this product may decompose to produce a variety of compounds (i.e. sulfur dioxide, sodium oxide, oxygen).**NFPA CODES: HEALTH: 2 FIRE: 0 REACTIVITY: 1 SPECIAL HAZARD:**
CORROSIVE

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

6. ACCIDENTAL RELEASE MEASURES**SPILL AND LEAK RESPONSE:** uncontrolled releases should be responded to by trained personnel using preplanned procedures. Proper protective equipment should be used. In case of a spill, clear the affected area, protect people, and respond with trained personnel.

The proper personal protective equipment for incidental release (e.g. one liter of the product release to the well-ventilated area) requires impermeable gloves, goggles, face-shield, an appropriate body protection. In the event of a larger release, use impermeable gloves, chemical resistance suit and boots and hard hat. Self-contained breathing apparatus or respirator may be required where engineering controls are not adequate or conditions for potential exposure exist. When respirators are required, select niosh/msha approved based on actual or potential Airborne concentrations in accordance with the latest OSHA or AMSI recommendations

DISPOSAL METHODS: absorb spilled liquid with polypads or other suitable absorbent material. Neutralize residue with sodium bicarbonate and rinse with water. Decontaminate the area. Test area with litmus paper to confirm neutralization. Place all spill residue in a suitable container. Dispose of an accordance with Federal, state, and local hazardous waste disposal regulations.**7. HANDLING AND STORAGE****HANDLING:** All employees who handle this material should be trained to handle it safely. Avoid breathing mists or sprays generated by this product. Use any well-ventilated location.**STORAGE:** store tanks and containers in cool dry location, away from direct sunlight, sources of intense heat and ignition to prevent decomposition and release of SO₂ gas. Container should be kept tightly closed to prevent oxidation. In cold weather, store product at temperatures above 50 degrees to avoid crystallization.

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Material should be stored in secondary containers, or in a diked area, as appropriate. Store containers away from incompatible chemicals. Keep container tightly closed when not in use. Washed thoroughly after using this material. Storage areas should be made of fire resistant materials. If appropriate, post warning signs in storage and use areas. Inspect all the incoming containers before storage, to ensure containers are properly labeled and not damaged. Empty containers may contain residual liquid; therefore, empty containers should be handled with care.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

COMPONENT	EXPOSURE LIMITS, MG/M3					
	OSHA		ACGIH		NIOSH	Other
	PEL	STEL	TWL	STEL	IDLH	Limit
Sodium bisulfite	5 PPM	NE	2 ppm	5 ppm	100 ppm	NE
	as SO ₂		as SO ₂		as SO ₂	

PERSONAL PROTECTION:

VENTILATION: if required using corrosion resistant ventilation system separate from other exhaust ventilation systems to ensure that there is no potential for overexposure to sprays or mists of this product. Ensure eyewash/safety shower stations are available near areas where this product is used.

EYES AND FACE: Wear chemical goggles and full face-shield unless a full face-piece respirator is also worn. Do not wear contacts.

CLOTHING: use body protection appropriate for task. Cover all, rubber aprons or chemical protective clothing made from natural rubber are generally acceptable depending upon the task.

RESPIRATORY: Maintain Airborne contaminate concentrations below exposure limits listed above. If respiratory protection is needed, use only protection authorized in 29 CFR 1910.134, or applicable state regulations. If adequate ventilation is not available or if there is potential for Airborne exposure above the exposure limits a respirator may be worn. Use self-contained breathing apparatus if oxygen levels are below 19.5% or are unknown.

9. PHYSICAL AND CHEMICAL PROPERTIES

	15%	25%	40%
Physical state:	liquid	liquid	liquid
Specific Gravity:	1.11	1.19	1.33 In a
pH:	-----4.8-5.2-----		
Freeze Point in °F:	43	43	43 in
Boiling Point in °F:	214	216	219
Vapor pressure @ 50°C (KPa)	2	4	9 and
Vapor density:	N/A	N/A	N/A
Evaporation Rate:	N/A	N/A	N/A
Water solubility:	Yes		
Color/Appearance:	clear to yellow, liquid, with a slightly sulfurous odor		

10. STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION: Hazardous Polymerization will not occur

STABILITY: stable at room temperature.

CONDITIONS TO AVOID: temperature at or near boiling causes evolution of toxic and corrosive sulfur dioxide gas. (sulfur dioxide is also evolved slowly at ambient temperatures.)

INCOMPATIBILITY: this product reacts with strong acids producing heat and sulfur dioxide gas which is toxic. Oxidizers may cause strong exothermic reactions. Other incompatibles include sodium nitrite and aluminum powder.

HAZARDOUS DECOMPOSITION: thermal decomposition products of this solution can include: sulfur dioxide, sodium oxide and oxygen.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: additional toxicology information for components >1% in concentration is provided below.

Note: mildly toxic (LD [human]=10G) (data derived by Rodia Inc. on 100% sodium meta-bisulfite)

SUSPECTED CANCER AGENT: the major components of this product are not considered to be, nor suspected to be, cancer causing agents.

IRRITANCY OF PRODUCT: this product is irritating to contaminated tissue.

SENSITIZATION TO THE PRODUCT: sodium by sulfite, a component of this product, may also cause severe allergic reaction in some asthmatics and sulfite sensitive individuals.

REPRODUCTIVE TOXICITY INFORMATION: this product is not reported to produce any reproductive effects in humans.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: may also cause severe allergic reaction in some asthmatics and sulfite sensitive individuals.

12. ECOLOGICAL INFORMATION

All work practices must be aimed at eliminating environmental contamination.

13. DISPOSAL CONSIDERATIONS

Dispose of waste materials according to all federal, state and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

EPA waste number: D002 (characteristic, corrosivity), applicable to wastes consisting only of this solution.

14. TRANSPORT INFORMATION

This material is regulated as a DOT Hazardous Material.

US DOT INFORMATION:

UN/NA #	Shipping Name Hazard	Class	Packing Group	ERG	RQ
UN2693,	Bisulfites, aqueous solutions, 8, n.o.s.(sodium bisulfite),	8,	III,	154	5000lbs

15. REGULATORY INFORMATION**16. OTHER INFORMATION**

Do not use ingredient information and/ or ingredient percentages in this MSDS as a product specification. For product specification information refer to a product specification sheet and/or a certificate of analysis. These can be obtained from H2O Technical Services.

DISCLAIMER:

We believe that the information in this MSDS is accurate. The suggested procedures are based on experience as of the date of publication. They are not necessarily either all-inclusive or fully adequate in every circumstance. Also, these suggestions should not be confused with or followed in violation of applicable laws, regulations, rules or insurance requirements.

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