



CHEMICAL INDUSTRIES (FAR EAST) LIMITED.
化学工业(远东)有限公司

Title SDS – Sodium Bisulfite Solution	Doc. No.	TDC-SDS-Lab-S020
	Revision	C
	Date of issue	15 February 2023
Superseded Revision B dated 6 September 2018	Page	1 of 6

SAFETY DATA SHEET (SDS)

SODIUM BISULFITE SOLUTION

Preface

Sodium bisulfite solution is a colorless to pale yellow liquid and is classified as a corrosive liquid.

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1	CHEMICAL PRODUCT & COMPANY IDENTIFICATION
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Product name : Sodium Bisulfite solution

Chemical name : Sodium Bisulfite solution

Chemical formula : NaHSO₃

Other names : Sodium Bisulphite solution, Sodium Hydrogen Sulphite

Company's name & address : Chemical industries (Far East) Limited

(head office) : 3, Jalan Samulun, Jurong Town, Singapore 629127

Tel: 6265 0411 Fax: 6265 6690 Email: chemical.ind@cil.com.sg

(manufacturing plant) : 91, Sakra Avenue, Jurong Island, Singapore 627882

Tel: 6867 6977 Fax: 6867 6972 Email: sakraplant@cil.com.sg

Emergency telephone number : 6265 0411 or 6867 7433 (Manufacturing plant's control room)

2	HAZARD IDENTIFICATION
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GHS CLASSIFICATION :

Acute Toxicity :

Oral : Category 4

Dermal: Category 1A

Inhalation : Not classified

Skin corrosion/irritation: Category 1A

Serious eye damage/irritation : Category 1A

Skin sensitization: Not classified

Carcinogenicity Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) Not classified

Specific target organ toxicity (repeated exposure) Not classified

GHS label elements

Pictograms:



Corrosive

Danger

Signal word:

Hazard Statement(s):

H302: Harmful if swallowed

H318: Causes serious eye damage

Precautionary Statement(s):

Prevention:

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

P264: Wash hands thoroughly afterhandling.

Response:

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

P305 + P351 + P339: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P330: Rinse mouth.

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3	COMPOSITION / INFORMATION ON INGREDIENTS
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Ingredients		CAS No. ¹	EC-No. ²	EC-Index-No. ³	Symbol / R-phrase	Content
Sodium Bisulfite (NaHSO ₃)	:	7631-90-5	231-548-0	016-64-00-8	C, R22	25 - 45 %
						C = Corrosive R 22 = Harmful if swallowed

4	FIRST-AID MEASURES
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Types of contact...	First aid measures
Eye contact	Wash eyes thoroughly with water for at least 15 minutes with eyelids held widely open. Immediately summon for eye doctor / specialist.
Skin contact	Immediately wash off with plenty of water. Any clothing contaminated with sodium bisulfite should be removed immediately and washed before re-use. Summon medical attention for serious exposure.
Inhalation	Remove to fresh air and give oxygen if necessary. Summon medical attention.
Ingestion	Don't induce vomiting. If victim is conscious give plenty of water then milk of magnesia. Spontaneous vomiting may occur. Never give anything to an unconscious victim. Immediately summon medical attention.

Note: Speed in removing victim from contaminated area and removing Sodium sulfite from eyes / skin are of primary importance.

5	FIRE-FIGHTING MEASURES
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- Fire-fighting media : Suitable fire-fighting media for surrounding fire should be provided as there is no fire or explosion hazards exist directly from Sodium bisulfite.
- Protective equipment for fire-fighting : Fire fighters should use full protective clothing and full-face positive pressure self-contained breathing apparatus.
- Special risks : Non-combustible. Hazardous combustion gases or vaporous will be developed in the event of fire; carbon monoxide, carbon dioxide, oxides of sulphur. Prevent fire-fighting water contaminated with the substance to enter drains or sewerage systems.

6	ACCIDENTAL RELEASE MEASURES
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- Personal protective equipment : Avoid contact with skin / eye. Use full protective clothing, rubber gloves, rubber boots, and eye goggles.
- Procedure to stop / minimize :
 1. Prevent further leakage if it is safe to do so.
 2. For minor spill / leak, contain spills and soak up with suitable absorbent and forward to licensed waste disposal contractors for disposal.
 3. For the contained spill / leak, render harmless by careful neutralization with dilute hydrochloric acid / sulfuric acid. Assistance can be obtained from licensed waste disposal contractors / supplier.
 4. If major spill / leak is not under control, inform SCDF / fire brigade / police / supplier
 5. Clean up affected area.
- Method to clean up : Absorb in vermiculite, dry sand or earth and place into containers. Collect spillage in containers, seal securely and deliver for disposal. Flush the affected area with plenty of water.
Dispose in accordance to current local disposal regulations.
(In Singapore, The Environmental Public Health (Toxic industrial waste) Regulations.)

¹ CAS – Chemical Abstract Service

² EC no. – No. given by EC Commission

³ EC Index No. – as per appendix 1 of the regulation 67/548/EC

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Environmental precautions : Prevent liquid from entering sewer, surface water, ground water and soil. Advise authorities if substance has entered a watercourse / drain / soil.

7	HANDLING & STORAGE
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Usual shipping containers : Steel (stainless steel / carbon steel) tankers, polyethylene drums / carboys.

Handling : Keep containers closed tightly. Handle containers with care. Container remains hazardous when empty. Continue to observe all precautions until it had been properly washed.

Storage : Store in a cool, dry, ventilated area away from heat, sparks and flames. Store away from acids, alkalis, oxidizing materials. Store in temperatures between 5°C and 30°C.

8	EXPOSURE CONTROLS / PERSONAL PROTECTION
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Engineering controls : Provide adequate general and/or local ventilation in areas of storage and use where sodium bisulfite is present to meet PEL (personal exposure limit) requirements. Provide water supply / emergency eyewash / shower near area of handling.

Safe work practices / industrial hygiene : Wash hands and face after working with the substance, and before eating / drinking. Immediately remove contaminated clothing. Wash before re-using.

Personal protection

1. Eye protection : Use safety goggle / face shield.
2. Skin protection : Use rubber gloves, protective clothing and rubber boots. Chemical resistance of materials should be ascertained with the vendor.
3. Respiratory protection : Use approved half-face filter respirator suitable for the substance to be worn when dust / mist is present above permissible limits.
4. Other protective equipment : Uniform, apron, long-sleeved lab coat

Occupational exposure standards : TWA 8 hours = 5 ppm
 STEL = 5 ppm (Singapore permissible exposure limit)
 (TWA – time weighted average, STEL – Short term exposure limit)

9	PHYSICAL & CHEMICAL PROPERTIES
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Appearance : Clear, colorless to pale yellow liquid

Boiling point : About 104°C

Melting point : 6°C

Vapor pressure (at 20°C) : 78 mm Hg

Specific gravity (at 20°C) : < 1.33

Solubility in water (at 20°C) : Completely soluble

Corrosiveness : Solution is slowly corrosive to iron and copper. It may pick up some of these and other metals harmful for some uses. It will react with aluminium, tin, zinc and alloys containing these metals.

Evaporation rate : Not applicable

Vapor density : Not applicable

Odor : Pungent odor with sulfur dioxide

pH (at 100 g/l, 20°C) : 3.0 – 5.5

Flash point : Not applicable

Explosive limits : Not applicable

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upper : Not applicable

Auto-ignition temperature : Not applicable

Flammability : Not applicable

Molecular weight : 60.86

10	STABILITY & REACTIVITY
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Reactivity : Contact with acids liberates toxic gas.

Stability : Stable

Possibility of hazardous reactions : No information available

Conditions to avoid instability : Avoid exposure to excessive heat.

Incompatible materials : Strong acids. Strong oxidizing agents.

Hazardous decomposition products : Sulfur dioxide.

11	TOXICOLOGICAL INFORMATION
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Ingestion : Harmful if swallowed.

Eye contact : Severe eye irritant. Contamination of eye can result in permanent injury.

Skin contact : Irritation to skin. May cause sensitization in sensitive individuals.

Inhalation : Breathing in of vapor or fumes may aggravate existing pulmonary disease such as asthma, emphysema and bronchitis.

Animal Toxicity Data : LD50 (oral, rat): 2000 mg/kg.

12	ECOLOGICAL INFORMATION
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Fish toxicity : LC50 (96 hrs, mosquito fish): 240ppm

Biodegradability : No data available

Environmental Effects : Harmful to aquatic life in low concentrations

13	DISPOSAL CONSIDERATIONS
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Considerations : Do not dispose substance directly to sewerage, ground-water and surface-water system. Consult approved waste collectors for disposal.

Singapore regulations : Dispose in accordance to current local disposal regulations.
(In Singapore, The Environmental Public Health (Toxic industrial waste) Regulations.)

14	TRANSPORT INFORMATION
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Proper shipping name (for land / sea / air) : Bisulfites, aqueous solutions (contains Sodium Bisulfite)

	UN No. ⁴	Hazard class	PSA Group ⁵
<u>Land</u> [The Environmental Pollution Control (Hazardous substances) Regulations]	2693	8	III
<u>Sea</u> (IMDG ⁶ / IMO ⁷)	2693	8	III

⁴ UN No. – No. Issued by United Nations Subcommittee of Experts

⁵ PSA Group – Grouping of dangerous goods by Port Of Singapore Authority

⁶ IMDG – International Maritime Dangerous Goods

⁷ IMO – International Maritime Organisation

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Air (ICAO⁸ /IATA⁹)

2693

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III

15	REGULATORY INFORMATION
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In Singapore:

Import & sale of hazardous substances : Environmental Protection and Management (Hazardous Substances) Regulations
Disposal of obsolete / expired chemicals / waste : Environmental Public Health (Toxic Industrial Waste) Regulations

Symbol : C Corrosive

R-phases : R 22 Harmful if swallowed.
R31 Contact with acids liberates toxic gases.

S-phases : S7 Keep container tightly closed.
S14 Keep away from acids, bases, reducing substances and heavy metals.
S23 Do not breathe vapour/spray.
S60 This material and its container must be disposed of as hazardous waste.

	Hazard type	Hazard class.	UN No.	Hazchem code
Sodium Bisulfite	Corrosive	8	2693	2R

NFPA rating ¹⁰	Health	Reactivity	Flammability	Other
	2	0	0	None

16	OTHER INFORMATION
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Revision No.	Date of issue	Description of changes
C	February 2023	Overall Review
B	September 2018	Change Section 3 of the composition & information of ingredients to 25-45%
A	January 2015	Initial release

⁸ ICAO – International Civil Aviation Organisation

⁹ IATA – International Air Transport Association

¹⁰ NFPA rating – rating according to National Fire Protection Agency