SAFETY DATA SHEET

Product Name Sodium Thiosulfate Standard Solution, Stabilized, 0.0246 N

Issue Date 28-Aug-2024 **Revision Date** 10-Apr-2025 **Version** 2

1. Identification

Product identifier

Product Name Sodium Thiosulfate Standard Solution, Stabilized, 0.0246 N

Other names

Product Code(s) 2409232

Synonyms None.

Safety data sheet number M04077

Pure substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Recommended Use Water Analysis.

Uses advised against Consumer use.

Manufacturer, importer or supplier name, address and telephone number

Manufacturer Address
Hach Company, P.O.Box 389, Loveland, CO 80539, USA, +1(970) 669-3050

Emergency telephone number

Taiwan

Emergency Telephone +1(303) 623-5716 - 24 Hour Service

2. Hazard(s) identification

Chemical hazard classification

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Hazard statements
Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

Other hazards

No information available.

3. Composition/information on ingredients

Chemical Family Mixture

Substance
Not applicable.

Mixture

Chemical nature aqueous solution.

The product contains no substances known to be hazardous to health or to the environment in concentrations which need to be taken into account.

Chemical name	English chemical name	Formula	CAS No.	Percent Range
1,2-Propanediol	1,2-Propanediol	$C_3H_8O_2$	57-55-6	20 - 30%
Sodium sulfate	Sodium sulfate	Na_2SO_4	7757-82-6	1 - 5%
Sodium thiosulfate	Sodium thiosulfate	$Na_2S_2O_3$	7772-98-7	<1%
Toluene	Toluene	C_7H_8	108-88-3	<0.1%
Disodium carbonate	Disodium carbonate	Na_2CO_3	497-19-8	<0.1%

4. First-aid measures

Different exposure routes and first aid procedures

Inhalation Remove to fresh air.

Skin contact Wash skin with soap and water.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Ingestion Rinse mouth.

Most important symptoms and effects No information available.

Self-protection of the first aider No information available.

Note to physicians Treat symptomatically.

5. Fire-fighting measures

Extinguishing media
Suitable Extinguishing Media Product itself does not burn.

Small Fire Dry chemical or CO2.
Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the No information available.

chemical

Hazardous combustion products Carbon oxides. Sodium oxides.

Specific/special fire-fighting measures Fires need to be assessed to determine appropriate protocols and safety measures for firefighting, including establishing safe zones, extinguishing media to be used, firefighter protection, and actions to control or extinguish the fire.

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

6. Accidental release measures

Personal precautions Ensure adequate ventilation.

Reference to other sections See section 8 for more information. See section 13 for more information.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions See Section 12 for additional Ecological Information.

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Handling Handle in accordance with good industrial hygiene and safety practice.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials None known based on information supplied.

8. Exposure controls/personal protection

Engineering controls Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Control Parameters

Occupational exposure limits
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Legend
See section 16 for terms and abbreviations

Biological limit value This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Personal protective equipment

Respiratory protection	Ensure adequate ventilation. Wear breathing apparatus if exposed to vapors/dusts/aerosols.
Eye/face protection	No special protective equipment required.
Hand protection	Barrier creams may help to protect the exposed areas of skin. Gloves must be inspected prior to use. The selected protective gloves have to satisfy the specifications of EU Directive 2016/425 and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374-1:2016.
Skin and body protection	Avoid contact with eyes, skin and clothing.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance	aqueous solution		
Physical state	Liquid	**Odor**	sweet
Color	colorless	**Odor threshold**	No data available

Property	**Values**	**Remarks • Method**
Molecular weight	No data available	
pH	9.9	@ 20 °C
Melting point / freezing point	~ -27 °C / -16.6 °F	
Initial boiling point and boiling range	~ 107 °C / 224.6 °F	
Evaporation rate	No data available	
Vapor pressure	21.677 mm Hg / 2.89 kPa at 25 °C / 77 °F	
Relative vapor density	0.62	
Specific gravity - VALUE 1	1.02	
Partition coefficient	Not applicable	
Soil Organic Carbon-Water Partition Coefficient	Not applicable	
Autoignition temperature	No data available	
Decomposition temperature	No data available	
Dynamic viscosity	No data available	
Kinematic viscosity	No data available	

Solubility(ies)

Water solubility

Water solubility classification	Water solubility	Water Solubility Temperature
No information available	No data available	No information available

Solubility in other solvents

None reported	No information available	No data available	No information available

Other information

Corrosive to metals

Steel Corrosion Rate No data available
Aluminum Corrosion Rate No data available

Volatile Organic Compounds (VOC) Content
See ingredients information below

Chemical name	CAS No.	Volatile organic compounds (VOC) content	CAA (Clean Air Act)
1,2-Propanediol	57-55-6	No data available	X
Toluene	108-88-3	No data available	X

Explosive properties

Upper explosion limit No data available
Lower explosion limit No data available

Flammable properties

Flash point No data available

Flammability Limit in Air
Upper flammability limit: No data available
Lower flammability limit: No data available

Oxidizing properties No data available.

Other information
VOC content 27.46598
Bulk density No information available

10. Stability and reactivity

Stability Stable under normal conditions.

Reactivity No information available.

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Possibility of hazardous reactions None under normal processing.

Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid None known based on information supplied.

Incompatible materials None known based on information supplied.

Hazardous Decomposition Products Sodium oxides. Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Product Information .

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms No information available.

Acute toxicity

Numerical measures of toxicity - Product Information

Ingredient Acute Toxicity Data

Test data reported below.

Oral Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,2-Propanediol (20 - 30%) CAS#: 57-55-6	Rat LD_{50}	20000 mg/kg	None reported	None reported	RTECS
Toluene (<0.1%) CAS#: 108-88-3	Rat LD_{50}	636 mg/kg	None reported	None reported	ERMA

Dermal Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
1,2-Propanediol (20 - 30%) CAS#: 57-55-6	Rabbit LD_{50}	20800 mg/kg	None reported	None reported	IUCLID

Inhalation (Vapor) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Toluene (<0.1%) CAS#: 108-88-3	Rat LC_{50}	12.5 mg/L	4 hours	None reported	NITE

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Mixture

No data available.

Ingredient Skin Corrosion/Irritation Data

Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and

						sources for data
Toluene (<0.1%) CAS#: 108-88-3	Standard Draize Test	Rabbit	20 mg	24 hours	Skin irritant	RTECS

Serious eye damage/eye irritation
Based on available data, the classification criteria are not met.

Mixture
No data available.

Ingredient Eye Damage/Eye Irritation Data
Test data reported below.

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Toluene (<0.1%) CAS#: 108-88-3	Standard Draize Test	Rabbit	2 mg	24 hours	Eye irritant	RTECS

Respiratory or skin sensitization
Based on available data, the classification criteria are not met.

Mixture
No data available.

Ingredient Sensitization Data
No data available.

STOT - single exposure
Based on available data, the classification criteria are not met.

Mixture
No data available.

Substance
Test data reported below.

Inhalation (Vapor) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Toluene (<0.1%) CAS#: 108-88-3	Human TC_{Lo}	100 mg/L	None reported	**Behavioral** Hallucinations, Distorted perceptions Decreased locomotor activity	RTECS

STOT - repeated exposure
Based on available data, the classification criteria are not met.

Mixture
No data available.

Ingredient Specific Target Organ Toxicity Repeat Exposure Data
Test data reported below.

Inhalation (Vapor) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data

1,2-Propanediol (20 - 30%) CAS#: 57-55-6	Rat TC_{Lo}	2.180 mg/L	90 days	**Behavioral** Food intake **Biochemical** Enzyme inhibition, induction, or change in blood or tissue levels (dehydrogenases) **Endocrine** Changes in spleen weight	RTECS
Toluene (<0.1%) CAS#: 108-88-3	Rat TC_{Lo}	300 mg/L	730 days	**Blood** Pigmented or nucleated red blood cells **Nutritional and Gross Metabolic** Weight loss or decreased weight gain	RTECS

Carcinogenicity
Based on available data, the classification criteria are not met.

Mixture
No data available.

Ingredient Carcinogenicity Data
No data available.

Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA
1,2-Propanediol	57-55-6	-	-	-	-
Toluene	108-88-3	-	Group 3	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
NTP (National Toxicology Program)	Does not apply
OSHA	Does not apply

Germ cell mutagenicity
Based on available data, the classification criteria are not met.

Mixture *invitro* **Data**
No data available.

Substance *invitro* **Data**
Test data reported below.

Chemical name	Test	Cell Strain	Reported dose	Exposure time	Results	Key literature references and sources for data
1,2-Propanediol (20 - 30%) CAS#: 57-55-6	Cytogenetic analysis	Hamster fibroblast	32000 mg/L	None reported	Positive test result for mutagenicity	RTECS

Mixture *invivo* **Data**
No data available.

Substance *invivo* **Data**
No data available.

Reproductive toxicity
Based on available data, the classification criteria are not met.

Mixture

No data available.

Ingredient Reproductive Toxicity Data
Test data reported below.

Inhalation (Dust/Mist) Exposure Route

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Toluene (<0.1%) CAS#: 108-88-3	Rat TC_{Lo}	0.8 mg/L	6 days	**Effects on Embryo or Fetus** Fetotoxicity (except death e.g. stunted fetus) **Effects on Newborn**	RTECS

Aspiration hazard
Based on available data, the classification criteria are not met.

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Unknown aquatic toxicity 0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Mixture

Aquatic Acute Toxicity
No data available.
Aquatic Chronic Toxicity
No data available.
Substance

Aquatic Acute Toxicity
Test data reported below.
Fish

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
1,2-Propanediol (20 - 30%) CAS#: 57-55-6	96 hours	*Pimephales promelas*	LC_{50}	51400 mg/L	IUCLID
Toluene (<0.1%) CAS#: 108-88-3	96 hours	*Oncorhynchus mykiss*	LC_{50}	5.8 mg/L	ERMA

Crustacea

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
1,2-Propanediol (20 - 30%) CAS#: 57-55-6	48 Hours	*Daphnia magna*	LC_{50}	34400 mg/L	IUCLID
Toluene (<0.1%) CAS#: 108-88-3	48 Hours	*Daphnia magna*	EC_{50}	11.5 mg/L	ERMA

Algae

Chemical name	Exposure time	Species	Endpoint type	Reported dose	Key literature references and sources for data
1,2-Propanediol	96 hours	*Selenastrum capricornutum*	EC_{50}	19000 mg/L	IUCLID

(20 - 30%) CAS#: 57-55-6					
Toluene (<0.1%) CAS#: 108-88-3	72 Hours	*Selenastrum capricornutum*	EC_{50}	12.5 mg/L	ERMA

Aquatic Chronic Toxicity
No data available.
Persistence and degradability

Mixture
No data available.

Bioaccumulation

Mixture
No data available.

Partition coefficient Not applicable

Mobility

Soil Organic Carbon-Water Partition Coefficient Not applicable

Other adverse effects
No information available.

13. Disposal considerations

Disposal methods Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Do not reuse empty containers.

14. Transport information

DOT Not regulated

IMDG Not regulated

IATA Not regulated

China Not regulated

Additional information
There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods.
If the item is not in a reagent set or kit, the classification given above applies.
If the item is part of a reagent set or kit the classification would change to the following:
UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III.
If the item is not regulated, the Chemical Kit classification does not apply.

15. Regulatory information

Regulatory information

National Regulations
See section 8 for national exposure control parameters

Applicable regulations:
Labor Safety and Health Rules

Toxic and Concerned Chemical Substances Control Act

International Inventories

TCSI	Contact supplier for inventory compliance status.
TSCA	Complies.
DSL/NDSL	Complies.
EINECS/ELINCS	Complies.
ENCS	Complies.
IECSC	Complies.
KECI	Complies.
PICCS	Complies.
AICS	Complies.
NZIoC	-.

TCSI - Taiwan Chemical Substance Inventory
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

16. Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
ATSDR	ATSDR (Agency for Toxic Substances and Disease Registry)
CCRIS	CCRIS (Chemical Carcinogenesis Research Information System)
CDC	CDC (Center for Disease Control)
CEPA	CEPA (Canadian Environmental Protection Agency)
CICAD	CICAD (Concise International Chemical Assessment Documents)
ECHA	ECHA (The European Chemicals Agency)
EEA	EEA (European Environment Agency)
EPA	Environmental Protection Agency
ERMA	ERMA (New Zealands Environmental Risk Management Authority)
ECOSARS	Estimation through ECOSARS v1.11 part of the Estimation Programs Interface (EPI) Suite™
FDA	FDA (Food & Drug Administration)
GESTIS	GESTIS (Information System on Hazardous Substances of the German Social Accident Insurance)
HSDB	HSDB (Hazardous Substances Data Bank)
INERIS	INERIS (The National Industrial Environment and Risks Institute)

IPCS INCHEM	IPCS INCHEM (International Programme on Chemical Safety)
IUCLID	IUCLID (The International Uniform Chemical Information Database)
NITE	Japan National Institute of Technology and Evaluation (NITE)
NIH	NIH (National Institutes of Health)
NIOSH	NIOSH (National Institute for Occupational Safety and Health)
LOLI	LOLI (List of Lists - An International Chemical Regulatory Database)
NDF	no data
NICNAS	Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH IDLH	Immediately Dangerous to Life or Health
OSHA	Occupational Safety and Health Administration of the US Department of Labor
PEEN	PEEN (Pan European Ecological Network)
RTECS	RTECS (Registry of Toxic Effects of Chemical Substances)
SIDS	SIDS (Screening Information Dataset) for High Volume Chemicals
SYKE	The Finnish Environment Institute (SYKE)
USDA	USDA (United States Department of Agriculture)
USDC	USDC (United States Department of Commerce)
WHO	WHO (World Health Organization)

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Ceiling Limit Value	MAC	Maximum Allowable Concentration
X	Listed	Vacated	These values have no official status. The only binding levels of contaminants are those listed in the final OSHA PEL. These lists are for reference purposes only. Please note that some reference state regulations of these "liberated" exposure limits in their state regulations.
SKN*	Skin designation	SKN+	Skin sensitization
RSP+	Respiratory sensitization	**	Hazard Designation
C	Carcinogen	R	Reproductive toxicant
M	mutagen		

Prepared By	Hach Product Compliance Department
Issue Date	28-Aug-2024
Revision Date	10-Apr-2025
Revision Note	None
Reference Sources for Section 11	See Section 11: TOXICOLOGICAL INFORMATION

Disclaimer

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

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End of Safety Data Sheet

Company Logo

Product Code(s)	2409232
Product Name	Sodium Thiosulfate Standard Solution, Stabilized, 0.0246 N
Conglomerate ID	2901
Conglomerate ID	Hach
Safety data sheet number	M04077
Fill Volume Values	100
Fill Volume Unit Phrases	ml
Storage Temperature	10° ... 25° C

PRODUCT QUANTITY DATA

Product (Bulk) Quantity	0.105 L
Specific gravity - VALUE 1	
Specific gravity - VALUE 1	1.02
Specific gravity - VALUE 1	1.02

Kit Quantities

Kit Parent Item Number	Kit Component Quantity
6857000K	1
2444400-LM	1
2510600	1
6857000	1
2437700	1
2597200-LM	1
2444400-CN	1
2597200-CA	1
2444400-CA	1
2597200-KR	1
2444400-AR	1
2444400-BR	1
2444400	1
2437700-CA	1
2597200-MY	1
2437700-LM	1
2597200	1
2444400-MY	1

2444400RGT	1

Obsolete

Fill Volume	100 mL
Patent Information	None
TNP Pre Check Completion Date	Jun 25 2019 12:34:25 PM