



SAFETY DATA SHEET

Issue Date 21-Jun-2016

Revision Date 05-Oct-2017

Version 3.1

Page 1 / 18

1. IDENTIFICATION

Product identifier

Product Name Sodium Thiosulfate Standard Solution, Stabilized, 0.0246 N

Other means of identification

Product Code(s) 2409232

Safety data sheet number M00371

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory reagent.

Uses advised against None.

Restrictions on use None.

Details of the supplier of the safety data sheet

Manufacturer Address

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

Emergency telephone number

+1(303) 623-5716 - 24 Hour Service +1(515)232-2533 - 8am - 4pm CST

2. HAZARDS IDENTIFICATION

Classification

Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

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

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Hazard statements

The product contains no substances which at their given concentration, are considered to be hazardous to health

Other Information

Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

ENG / AGHS

Page 1 / 18

Product Code(s) 2409232

Issue Date 21-Jun-2016

Version 3.1

Product Name Sodium Thiosulfate Standard Solution,
Stabilized, 0.0246 N

Revision Date 05-Oct-2017

Page 2 / 18

Substance

Not applicable

Mixture

Percent ranges are used where confidential product information is applicable.

Chemical name	CAS No.	Percent Range	HMRIC #
1,2-Propanediol	57-55-6	20 - 30%	-
Sodium sulfate	7757-82-6	1 - 5%	-
Toluene	108-88-3	<0.1%	-
Disodium carbonate	497-19-8	<0.1%	-

4. FIRST AID MEASURES

Description of first aid measures

General advice	In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist, call a physician.
Skin contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If symptoms persist, call a physician.
Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. If symptoms persist, call a physician.
Ingestion	IF SWALLOWED: Rinse Mouth. If symptoms persist, call a physician.
Self-protection of the first aider	Use personal protective equipment as required. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Most important symptoms and effects, both acute and delayed

Symptoms See Section 11: TOXICOLOGICAL INFORMATION.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

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

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Flammable properties

Substance does not burn.

Specific hazards arising from the chemical

No information available.

Product Code(s) 2409232

Product Name Sodium Thiosulfate Standard Solution, Stabilized, 0.0246 N

Issue Date 21-Jun-2016

Revision Date 05-Oct-2017

Version 3.1

Page 3 / 18

Hazardous combustion products

No information available.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

U.S. Notice

Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance. Outside of the US, only persons properly qualified according to state or local regulations should respond to a spill involving chemicals.

Personal precautions, protective equipment and emergency procedures

Personal precautions

Evacuate personnel to safe areas. Do not touch or walk through spilled material. Ventilate affected area. Use personal protective equipment as required.

For emergency responders

Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions

See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up

Neutralize spill if necessary. Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Dispose of in accordance with local, state and federal regulations or laws.

Emergency Response Guide Number

Not applicable

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions

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

Flammability class

Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Toluene	TWA: 20 ppm	TWA: 200 ppm	IDLH: 500 ppm

<0.1%	(vacated) TWA: 100 ppm (vacated) TWA: 375 mg/m ³ (vacated) STEL: 150 ppm (vacated) STEL: 560 mg/m ³ Ceiling: 300 ppm	TWA: 100 ppm TWA: 375 mg/m ³ STEL: 150 ppm STEL: 560 mg/m ³
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Chemical name	Alberta OEL	British Columbia OEL	Manitoba OEL	New Brunswick OEL	New Foundland & Labrador OEL
Toluene <0.1%	TWA: 50 ppm TWA: 188 mg/m ³ SKN*	TWA: 20 ppm R	TWA: 20 ppm	TWA: 50 ppm TWA: 188 mg/m ³ SKN*	TWA: 20 ppm

Chemical name	Northwest Territories OEL	Nova Scotia OEL	Nunavut OEL	Ontario TWA	Prince Edward Island OEL
1,2-Propanediol 20 - 30%	NDF	NDF	NDF	TWA: 10 mg/m ³ TWA: 50 ppm TWA: 155 mg/m ³	NDF
Toluene <0.1%	TWA: 50 ppm STEL: 60 ppm SKN*	TWA: 20 ppm	TWA: 50 ppm STEL: 60 ppm SKN*	TWA: 20 ppm	TWA: 20 ppm

Chemical name	Quebec OEL	Saskatchewan OEL	Yukon OEL
Toluene <0.1%	TWA: 50 ppm TWA: 188 mg/m ³ SKN*	TWA: 50 ppm STEL: 60 ppm SKN*	STEL: 150 ppm STEL: 560 mg/m ³ TWA: 100 ppm TWA: 375 mg/m ³ SKN*

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Legend See section 16 for terms and abbreviations

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eyeface protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off all contaminated clothing and wash it before reuse. Wash hands thoroughly after handling. Regular cleaning of equipment, work area and clothing is recommended.

Environmental exposure controls

Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Product Code(s) 2409232

Issue Date 21-Jun-2016

Version 3.1

Product Name Sodium Thiosulfate Standard Solution,
Stabilized, 0.0246 N

Revision Date 05-Oct-2017

Page 6 / 18

Steel Corrosion Rate	No data available
Aluminum Corrosion Rate	No data available
Bulk density	Not applicable
Explosive properties	Not classified according to GHS criteria.
Explosion data	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Flammable properties	Not classified as flammable according to GHS criteria.
Flammability Limit in Air	
Upper flammability limit:	No data available
Lower flammability limit:	No data available
Flash point	No data available
Oxidizing properties	Not classified according to GHS criteria.
Reactivity properties	Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria.

10. STABILITY AND REACTIVITY

Reactivity properties

Not classified as self-reactive, pyrophoric, self-heating or emitting flammable gases in contact with water according to GHS criteria

Chemical stability

Stable under recommended storage conditions.

Special dangers of the product

None reported

Possibility of Hazardous Reactions

None under normal processing.

Hazardous polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Extremes of temperature and direct sunlight. Incompatible materials.

Incompatible materials

Strong oxidizing agents. Strong acids. Strong bases.

Hazardous Decomposition Products

None known based on information supplied.

Product Code(s) 2409232

Product Name Sodium Thiosulfate Standard Solution,
Stabilized, 0.0246 N

Issue Date 21-Jun-2016

Revision Date 05-Oct-2017

Version 3.1

Page 7 / 18

Explosive properties

Not classified according to GHS criteria.

Upper explosion limit No data available

Lower explosion limit No data available

Autoignition temperature

No data available

Sensitivity to Static Discharge

None reported

Sensitivity to Mechanical Impact

None reported

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information	Product does not present an acute toxicity hazard based on known or supplied information.
Inhalation	No known effect based on information supplied.
Eye contact	No known effect based on information supplied.
Skin contact	No known effect based on information supplied.
Ingestion	No known effect based on information supplied.
Aggravated Medical Conditions	None known.
Toxicologically synergistic products	None known.
Toxicokinetics, metabolism and distribution	See ingredients information below.
Chemical name	Toxicokinetics, metabolism and distribution
1,2-Propanediol (20 - 30%) CAS#: 57-55-6	Based on human data (oral child), large doses over prolonged period of time cause behavioral changes.
Toluene (<0.1%) CAS#: 108-88-3	The primary route of toluene metabolism in humans is by hydroxylation to benzyl alcohol by the cytochrome P450.

Product Acute Toxicity Data

Oral Exposure Route No data available
Dermal Exposure Route No data available
Inhalation (Dust/Mist) Exposure Route No data available
Inhalation (Vapor) Exposure Route No data available
Inhalation (Gas) Exposure Route No data available

Acute Toxicity Estimations (ATE)

Ingredient Acute Toxicity Data

Oral Exposure Route

If available, see data below

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 (Registry of Toxic Effects of Chemical Substances)
Toluene (<0.1%) CAS#: 108-88-3	Rat LD ₅₀	636 mg/kg	None reported	None reported	ERMA (New Zealand's Environmental Risk Management Authority)
Disodium carbonate	Rat	4090 mg/kg	None	None reported	IUCLID (The International

Product Code(s) 2409232

Product Name Sodium Thiosulfate Standard Solution,
Stabilized, 0.0246 N
Revision Date 05-Oct-2017
Page 8 / 18

Issue Date 21-Jun-2016

Version 3.1

(<0.1%) CAS#: 497-19-8	LD ₅₀		reported		Uniform Chemical Information Database)
Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium sulfate (1 - 5%) CAS#: 7757-82-6	Mouse LD ₅₀	5989 mg/kg	None reported	None reported	IUCLID (The International Uniform Chemical Information Database)

Dermal Exposure Route If available, see data below

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 (The International Uniform Chemical Information Database)
Toluene (<0.1%) CAS#: 108-88-3	Rabbit LD ₅₀	8390 mg/kg	None reported	None reported	IUCLID (The International Uniform Chemical Information Database)
Disodium carbonate (<0.1%) CAS#: 497-19-8	Mouse LD ₅₀	2210 mg/kg	None reported	None reported	No information available
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 LD ₅₀	12124 mg/kg	None reported	None reported	RTECS (Registry of Toxic Effects of Chemical Substances)

Inhalation (Dust/Mist) Exposure Route If available, see data below

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	RTECS (Registry of Toxic Effects of Chemical Substances)
Disodium carbonate (<0.1%) CAS#: 497-19-8	Rat LC ₅₀	1.15 mg/L	4 hours	None reported	IUCLID (The International Uniform Chemical Information Database)

Inhalation (Vapor) Exposure Route

Inhalation (Gas) Exposure Route

If available, see data below
If available, see data below

Product Specific Target Organ Toxicity Single Exposure

Data

Oral Exposure Route

No data available

Dermal Exposure Route

No data available

Inhalation (Dust/Mist) Exposure Route

No data available

Inhalation (Vapor) Exposure Route

No data available

Inhalation (Gas) Exposure Route

No data available

Ingredient Specific Target Organ Toxicity Single Exposure Data

Oral Exposure Route

If available, see data below

Dermal Exposure Route

If available, see data below

Inhalation (Dust/Mist) Exposure Route

If available, see data below

Inhalation (Vapor) Exposure Route

If available, see data below

Inhalation (Gas) Exposure Route

If available, see data below

Aspiration toxicity

No data available

Product Skin Corrosion/Irritation Data

No data available.

Ingredient Skin Corrosion/Irritation Data

If available, see data below

Product Code(s) 2409232

Product Name Sodium Thiosulfate Standard Solution,
Stabilized, 0.0246 N

Issue Date 21-Jun-2016

Revision Date 05-Oct-2017

Version 3.1

Page 9 / 18

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium sulfate (1 - 5%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	500 mg	4 hours	Not corrosive or irritating to skin	ECHA (The European Chemicals Agency)
Toluene (<0.1%) CAS#: 108-88-3	Standard Draize Test	Rabbit	20 mg	24 hours	Skin irritant	RTECS (Registry of Toxic Effects of Chemical Substances)
Disodium carbonate (<0.1%) CAS#: 497-19-8	Standard Draize Test	Rabbit	500 mg	24 hours	Mild skin irritant	ECHA (The European Chemicals Agency) HSDB (Hazardous Substances Data Bank)

Product Serious Eye Damage/Eye Irritation Data

No data available.

Ingredient Eye Damage/Eye Irritation Data

If available, see data below

Chemical name	Test method	Species	Reported dose	Exposure time	Results	Key literature references and sources for data
Sodium sulfate (1 - 5%) CAS#: 7757-82-6	Standard Draize Test	Rabbit	90 mg	24 hours	Not corrosive or irritating to eyes	ECHA (The European Chemicals Agency)
Toluene (<0.1%) CAS#: 108-88-3	Standard Draize Test	Rabbit	2 mg	24 hours	Eye irritant	RTECS (Registry of Toxic Effects of Chemical Substances)
Disodium carbonate (<0.1%) CAS#: 497-19-8	Standard Draize Test	Rabbit	100 mg	24 hours	Eye irritant	HSDB (Hazardous Substances Data Bank)

Sensitization Information

Product Sensitization Data

Skin Sensitization Exposure Route

No data available.

Respiratory Sensitization Exposure Route

No data available.

Ingredient Sensitization Data

Skin Sensitization Exposure Route

If available, see data below.

Chemical name	Test method	Species	Results	Key literature references and sources for data
Sodium sulfate (1 - 5%) CAS#: 7757-82-6	OECD Test No. 406: Skin Sensitization	Guinea pig	Not confirmed to be a skin sensitizer	HSDB (Hazardous Substances Data Bank)

Respiratory Sensitization Exposure Route

If available, see data below.

Chronic Toxicity Information

Product Specific Target Organ Toxicity Repeat Dose Data

Oral Exposure Route

No data available.

Dermal Exposure Route

No data available.

Inhalation (Dust/Mist) Exposure Route

No data available.

Inhalation (Vapor) Exposure Route

No data available.

Inhalation (Gas) Exposure Route

No data available.

Ingredient Specific Target Organ Toxicity Repeat Exposure Data

Oral Exposure Route

If available, see data below

Product Code(s) 2409232

Issue Date 21-Jun-2016

Version 3.1

Product Name Sodium Thiosulfate Standard Solution, Stabilized, 0.0246 N

Revision Date 05-Oct-2017

Page 10 / 18

Dermal Exposure Route

If available, see data below

Inhalation (Dust/Mist) Exposure Route

If available, see data below

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}	2500 mg/L	15 weeks	Cardiac Kidney, Ureter, or Bladder Liver	RTECS (Registry of Toxic Effects of Chemical Substances)

Inhalation (Vapor) Exposure Route

If available, see data below

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 (Registry of Toxic Effects of Chemical Substances)
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 (Registry of Toxic Effects of Chemical Substances)

Inhalation (Gas) Exposure Route

If available, see data below

Product Carcinogenicity Data

Oral Exposure Route

No data available

Dermal Exposure Route

No data available

Inhalation (Dust/Mist) Exposure Route

No data available

Inhalation (Vapor) Exposure Route

No data available

Inhalation (Gas) Exposure Route

No data available

Ingredient Carcinogenicity Data

Chemical name	CAS No.	ACGIH	IARC	NTP	OSHA
1,2-Propanediol	57-55-6	-	-	-	-
Sodium sulfate	7757-82-6	-	-	-	-
Toluene	108-88-3	-	Group 3	-	-
Disodium carbonate	497-19-8	-	-	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)	Does not apply
IARC (International Agency for Research on Cancer)	Does not apply
NTP (National Toxicology Program)	Does not apply
OSHA (Occupational Safety and Health Administration of the US Department of Labor)	Does not apply

Oral Exposure Route

If available, see data below

Dermal Exposure Route

If available, see data below

Inhalation (Dust/Mist) Exposure Route

If available, see data below

Inhalation (Vapor) Exposure Route

If available, see data below

Inhalation (Gas) Exposure Route

If available, see data below

Product Germ Cell Mutagenicity *in vitro* Data

No data available.

Product Code(s) 2409232

Product Name Sodium Thiosulfate Standard Solution,
Stabilized, 0.0246 N
Revision Date 05-Oct-2017
Page 11 / 18

Issue Date 21-Jun-2016

Version 3.1

Ingredient Germ Cell Mutagenicity *invitro* Data

If available, see data 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 (Registry of Toxic Effects of Chemical Substances)

Product Germ Cell Mutagenicity *invivo* Data

Oral Exposure Route

No data available

Dermal Exposure Route

No data available

Inhalation (Dust/Mist) Exposure Route

No data available

Inhalation (Vapor) Exposure Route

No data available

Inhalation (Gas) Exposure Route

No data available

Ingredient Germ Cell Mutagenicity *invivo* Data

Oral Exposure Route

If available, see data below

Dermal Exposure Route

If available, see data below

Inhalation (Dust/Mist) Exposure Route

If available, see data below

Inhalation (Vapor) Exposure Route

If available, see data below

Inhalation (Gas) Exposure Route

If available, see data below

Product Reproductive Toxicity Data

Oral Exposure Route

No data available

Dermal Exposure Route

No data available

Inhalation (Dust/Mist) Exposure Route

No data available

Inhalation (Vapor) Exposure Route

No data available

Inhalation (Gas) Exposure Route

No data available

Ingredient Reproductive Toxicity Data

Oral Exposure Route

If available, see data below

Chemical name	Endpoint type	Reported dose	Exposure time	Toxicological effects	Key literature references and sources for data
Sodium sulfate (1 - 5%) CAS#: 7757-82-6	Mouse TD _{Lo}	14000 mg/kg	4 days	Effects on Newborn Other neonatal measures or effects	RTECS (Registry of Toxic Effects of Chemical Substances)

Inhalation (Dust/Mist) Exposure Route

If available, see data below

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 (Registry of Toxic Effects of Chemical Substances)

Inhalation (Vapor) Exposure Route

If available, see data below

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}	1500 mg/L	13 days	Effects on Embryo or Fetus Fetotoxicity (except death e.g. stunted fetus) Effects on Newborn Growth statistics (e.g. % reduced weight gain) Specific Developmental Abnormalities	RTECS (Registry of Toxic Effects of Chemical Substances)

Product Code(s) 2409232

Issue Date 21-Jun-2016

Version 3.1

Product Name Sodium Thiosulfate Standard Solution, Stabilized, 0.0246 N

Revision Date 05-Oct-2017

Page 12 / 18

				Endocrine System	
Inhalation (Gas) Exposure Route				If available, see data below	

12. ECOLOGICAL INFORMATION

Ecotoxicity

Based on the classification principles, not classified as hazardous to the environment.

Product Ecological Data

Aquatic toxicity

Fish

No data available

Crustacea

No data available

Algae

No data available

Ingredient Ecological Data

Aquatic toxicity

Fish

If available, see ingredient data below

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	<i>Pimephales promelas</i>	LC ₅₀	51400 mg/L	IUCLID (The International Uniform Chemical Information Database)
Sodium sulfate (1 - 5%) CAS#: 7757-82-6	96 hours	None reported	LC ₅₀	56 mg/L	IUCLID (The International Uniform Chemical Information Database)
Toluene (<0.1%) CAS#: 108-88-3	96 hours	<i>Oncorhynchus mykiss</i>	LC ₅₀	5.8 mg/L	ERMA (New Zealand's Environmental Risk Management Authority)
Disodium carbonate (<0.1%) CAS#: 497-19-8	96 hours	<i>Lepomis macrochirus</i>	LC ₅₀	300 mg/L	IUCLID (The International Uniform Chemical Information Database)

Crustacea

If available, see ingredient data below

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	<i>Daphnia magna</i>	LC ₅₀	34400 mg/L	IUCLID (The International Uniform Chemical Information Database)
Sodium sulfate (1 - 5%) CAS#: 7757-82-6	48 Hours	<i>Daphnia magna</i>	EC ₅₀	3150 mg/L	IUCLID (The International Uniform Chemical Information Database)
Toluene (<0.1%) CAS#: 108-88-3	48 Hours	<i>Daphnia magna</i>	EC ₅₀	11.5 mg/L	ERMA (New Zealand's Environmental Risk Management Authority)
Disodium carbonate (<0.1%) CAS#: 497-19-8	48 Hours	<i>Daphnia magna</i>	EC ₅₀	265 mg/L	IUCLID (The International Uniform Chemical Information Database)

Algae

If available, see ingredient data below

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	<i>Selenastrum capricornutum</i>	EC ₅₀	19000 mg/L	IUCLID (The International Uniform Chemical Information Database)
Toluene (<0.1%) CAS#: 108-88-3	72 Hours	<i>Selenastrum capricornutum</i>	EC ₅₀	12.5 mg/L	ERMA (New Zealand's Environmental Risk Management Authority)

Product Code(s) 2409232

Product Name Sodium Thiosulfate Standard Solution,
Stabilized, 0.0246 N
Revision Date 05-Oct-2017
Page 13 / 18

Issue Date 21-Jun-2016

Version 3.1

Other Information

Canadian Environmental Protection Act (CEPA) - Domestic Substances List (DSL): Environmentally Hazardous Substances Categorizations				
Chemical name	Category	Persistent	Bioaccumulation	Inherently Toxic to Aquatic Organisms
Toluene (<0.1%) CAS#: 108-88-3	Organics	Yes	No	Yes

Persistence and degradability

Product Biodegradability Data
If available, see ingredient data below.

Ingredient Biodegradability Data
Test data reported below

Bioaccumulation

Product Bioaccumulation Data If available, see ingredient data below.

Partition Coefficient (n-octanol/water) Not applicable

Ingredient Bioaccumulation Data No data available

Chemical name	Test method	Exposure time	Species	Bioconcentration factor (BCF)	Results
Toluene (<0.1%) CAS#: 108-88-3	None reported	None reported	None reported	BCF = 8.3	Does not have the potential to bioaccumulate
Disodium carbonate (<0.1%) CAS#: 497-19-8	None reported	None reported	None reported	None reported	Does not have the potential to bioaccumulate

Chemical name	Partition Coefficient (n-octanol/water)	Method
1,2-Propanediol (20 - 30%) CAS#: 57-55-6	log K _{ow} = -0.92	No information available
Sodium sulfate (1 - 5%) CAS#: 7757-82-6	log K _{ow} = -3	No information available
Toluene (<0.1%) CAS#: 108-88-3	log K _{ow} = 2.73	No information available

Mobility

Product Information

Soil Organic Carbon-Water Partition Coefficient Not applicable

Water solubility

Product Code(s) 2409232

Issue Date 21-Jun-2016

Version 3.1

Product Name Sodium Thiosulfate Standard Solution,
Stabilized, 0.0246 N

Revision Date 05-Oct-2017

Page 14 / 18

<u>Water solubility classification</u>	<u>Water solubility</u>	<u>Water Solubility Temperature</u>
No information available	No data available	No information available

Ingredient Information

Chemical name	Soil Organic Carbon-Water Partition Coefficient	Method
1,2-Propanediol (20 - 30%) CAS#: 57-55-6	log K _{oc} = -0.41	No information available
Sodium sulfate (1 - 5%) CAS#: 7757-82-6	log K _{oc} = -1.4	Estimation through KOCWIN v2.00 part of the Estimation Programs Interface (EPI) Suite™
Toluene (<0.1%) CAS#: 108-88-3	log K _{oc} = 2.39	Estimation through KOCWIN v2.00 part of the Estimation Programs Interface (EPI) Suite™

Chemical name	Water solubility classification	Water solubility	Water solubility temperature °C	Water solubility temperature °F
1,2-Propanediol CAS#: 57-55-6	Completely soluble	100000 mg/L	20 °C	68 °F
Sodium sulfate CAS#: 7757-82-6	Completely soluble	160000 mg/L	20 °C	68 °F
Toluene CAS#: 108-88-3	Completely soluble	526000000 mg/L	20 °C	68 °F
Disodium carbonate CAS#: 497-19-8	Completely soluble	220000 mg/L	20 °C	68 °F

Other adverse effects

Contains a substance with an endocrine-disrupting potential.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

Disposal should be in accordance with applicable regional, national, and local laws and regulations.

Contaminated packaging

Working in a well-ventilated area. Rinse three times with an appropriate solvent. Collect rinsate and dispose of according to local, state, or federal regulations. Dispose of empty container as normal trash. In the US, rinsate from empty containers is classified as hazardous waste and should be disposed of at an E.P.A. approved facility. Rinsate from empty containers may contain sufficient product to require disposal as hazardous waste in countries other than the US. Improper disposal or reuse of this container may be dangerous and illegal. Disposal should be in accordance with applicable regional, national, and local laws and regulations.

US EPA Waste Number

U220

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Toluene 108-88-3	U220	Included in waste streams: F005, F024, F025, F039, K015, K036, K037, K149, K151	-	U220

Product Code(s) 2409232

Issue Date 21-Jun-2016

Version 3.1

Product Name Sodium Thiosulfate Standard Solution,
Stabilized, 0.0246 N

Revision Date 05-Oct-2017

Page 15 / 18

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Toluene 108-88-3	-	-	Toxic waste waste number F025 Waste description: Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	-

14. TRANSPORT INFORMATION

<u>U.S. DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG</u>	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

National Inventories

TSCA	Complies
DSL/NDSL	Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

International Inventories

EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
TCSI	Complies
AICS	Complies
NZIoC	Complies

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

Product Code(s) 2409232

Product Name Sodium Thiosulfate Standard Solution, Stabilized, 0.0246 N

Issue Date 21-Jun-2016

Revision Date 05-Oct-2017

Version 3.1

Page 16 / 18

- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- TCSI - Taiwan Chemical Substances Inventory
- AICS - Australian Inventory of Chemical Substances
- NZIoC - New Zealand Inventory of Chemicals

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Toluene (CAS #: 108-88-3)	1.0

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Toluene 108-88-3	1000 lb	X	X	X

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Toluene 108-88-3	1000 lb 1 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ RQ 1 lb final RQ RQ 0.454 kg final RQ

U.S. - DEA (Drug Enforcement Administration) List I & List II

Chemical name	U.S. - DEA (Drug Enforcement Administration) - List I or Precursor Chemicals	U.S. - DEA (Drug Enforcement Administration) - List II or Essential Chemicals
Toluene (<0.1%) CAS#: 108-88-3	Not Listed	500 gallon Import/Export Volume; 1591 kg Import/Export Weight; 50 gallon Domestic Sales Volume; 159 kg Domestic Sales Weight

US State Regulations

California Proposition 65

Product Code(s) 2409232

Product Name Sodium Thiosulfate Standard Solution,
Stabilized, 0.0246 N
Revision Date 05-Oct-2017
Page 17 / 18

Issue Date 21-Jun-2016
Version 3.1

This product contains the following Proposition 65 chemicals

Chemical name	California Proposition 65
Toluene (CAS #: 108-88-3)	Developmental

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
1,2-Propanediol 57-55-6	X	-	X
Sodium sulfate 7757-82-6	-	X	X
Toluene 108-88-3	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Special Comments

None

Additional information

Global Automotive Declarable Substance List (GADSL)

Chemical name	Global Automotive Declarable Substance List Classifications	Global Automotive Declarable Substance List Thresholds
Toluene 108-88-3	Declarable Substance (Fl)	0.1 %

NFPA and HMIS Classifications

NFPA	Health hazards - 0	Flammability - 0	Instability - 0	Physical and Chemical Properties -
HMIS	Health hazards - 0	Flammability - 0	Physical Hazards - 0	Personal protection - X - See section 8 for more information

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

NIOSH IDLH	Immediately Dangerous to Life or Health
ACGIH	ACGIH (American Conference of Governmental Industrial Hygienists)
NDF	no data

Legend - Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
MAC	Maximum Allowable Concentration	Ceiling	Ceiling Limit Value
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

Product Code(s) 2409232

Issue Date 21-Jun-2016

Version 3.1

Product Name Sodium Thiosulfate Standard Solution,
Stabilized, 0.0246 N

Revision Date 05-Oct-2017

Page 18 / 18

"liberated" exposure limits in their state regulations.

SKN*
RSP+
C
M

Skin designation
Respiratory sensitization
Carcinogen
mutagen

SKN+
**
R

Skin sensitization
Hazard Designation
Reproductive toxicant

Prepared By Hach Product Compliance Department

Issue Date 21-Jun-2016

Revision Date 05-Oct-2017

Revision Note None

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