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

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Sodium Thiosulfate Standard Solution, Stabilized, 0.0109 N Catalog Number: 2408932

Hach Company P.O.Box 389 Loveland, CO USA 80539 (970) 669-3050 Emergency Telephone Numbers: (Medical and Transportation) (303) 623-5716 24 Hour Service (515)232-2533 8am - 4pm CST

MSDS Number: M00371 Chemical Name: Not applicable CAS Number: Not applicable Additional CAS No. (for hydrated forms): Not applicable Chemical Formula: Not applicable Chemical Family: Not applicable Intended Use: Laboratory Reagent Titrant Solution

2. HAZARDS IDENTIFICATION

GHS Classification: Hazard categories: Not applicable GHS Label Elements:

Hazard statements: Not applicable Precautionary statements: Not applicable HMIS: Health: 1 Flammability: 0 Reactivity: 0 Protective Equipment: X - See protective equipment, Section 8. NFPA: Health: 1 Flammability: 0 Reactivity: 0 Symbol: Not applicable WHMIS Hazard Classification: Not applicable WHMIS Symbols: Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components according to GHS: Sodium Thiosulfate

CAS Number: 7772-98-7 Chemical Formula: $Na_2S_2O_3$ 5H₂O GHS Classification: Skin Irrit 2, H315; Eye Irrit 2, H319, STOT SE 3, H335 Percent Range: <1.0 Percent Range Units: weight / volume PEL: 15 mg/m³ as total dust; 5 mg/m³ as respirable dust TLV: 10 mg/m³ as inhalable dust MSDS No: M00371

WHMIS Symbols: Not applicable Hazardous Components according to GHS: No Demineralized Water

> CAS Number: 7732-18-5 Chemical Formula: H₂O GHS Classification: Not a dangerous substance according to GHS. Percent Range: 70.0 - 80.0 Percent Range Units: volume / volume PEL: Not established TLV: Not established

WHMIS Symbols: Not applicable **Propylene Glycol**

CAS Number: 57-55-6 Chemical Formula: C₃H₈O₂ GHS Classification: Not applicable Percent Range: 20.0 - 30.0 Percent Range Units: volume / volume PEL: Not established TLV: Not established

WHMIS Symbols: Not applicable Sodium Sulfate

CAS Number: 7757-82-6 Chemical Formula: Na₂SO₄ GHS Classification: Aquatic Acute 3, H402 Percent Range: 1.0 - 5.0 Percent Range Units: weight / volume PEL: 15 mg/m³ as inhalable dust; 5 mg/m³ as respirable dust TLV: 10 mg/m³ as inhalable dust; 3 mg/m³ as respirable dust

WHMIS Symbols: Not applicable

4. FIRST AID MEASURES

General Information: In the event of exposure, show this Material Safety Data Sheet and label (where possible) to a doctor.

Advice to doctor: Treat symptomatically.

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.

Skin Contact (First Aid): Remove contaminated clothing. Wash skin with soap and plenty of water. Call physician immediately.

Inhalation: Remove to fresh air.

Ingestion (First Aid): Give large quantities of water. Never give anything by mouth to an unconscious person. Call physician immediately.

5. FIRE FIGHTING MEASURES

Flammable Properties: During a fire, this product decomposes to form toxic gases.
Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.
Extinguishing Media: Use media appropriate to surrounding fire conditions
Extinguishing Media NOT To Be Used: Not applicable
Fire / Explosion Hazards: None reported
Hazardous Combustion Products: Toxic fumes of: sodium oxides carbon monoxide, carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Spill Response 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.

Containment Technique: Absorb spilled liquid with non-reactive sorbent material. Stop spilled material from being released to the environment.

Clean-up Technique: Absorb spilled liquid with non-reactive sorbent material. Sweep up material. Place material in a plastic bag. Mark bag 'Non-hazardous trash', and dispose of as normal refuse. Decontaminate the area of the spill with a soap solution.

Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

DOT Emergency Response Guide Number: Not applicable

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes skin Do not breathe mist or vapors. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product. *Storage:* Protect from: oxidizers *Flammability Class:* Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Maintain general industrial hygiene practices when using this product.
Personal Protective Equipment:

Eye Protection: safety glasses with top and side shields
Skin Protection: disposable latex gloves lab coat
Inhalation Protection: adequate ventilation

Precautionary Measures: Avoid contact with: eyes skin Do not breathe: mist/vapor Wash thoroughly after handling.
TLV: Not established
PEL: Not established
For Occupational Exposure Limits (OEL) for ingredients, see section 3 - Composition/Information on Ingredients.:

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid Physical State: Liquid Molecular Weight: Not applicable Odor: Sweet Odor Threshold: Not available **pH:** 9.9 Metal Corrosivity: Corrosivity Classification: Not classified as corrosive to metals according to GHS criteria. Steel: 0.006 in/yr Aluminum: 0.003 in/yr Specific Gravity/ Relative Density (water = 1; air =1): 1.05 Viscosity: Solubility: Water: Soluble Acid: Soluble Other: Not determined Partition Coefficient (n-octanol / water): Not applicable Coefficient of Water / Oil: Not applicable Melting Point: -5°C (23°F) **Decomposition Temperature:** Boiling Point: 99°C (210°F) Vapor Pressure: Not determined *Vapor Density (air = 1):* Not determined Evaporation Rate (water = 1): Volatile Organic Compounds Content: Not applicable Flammable Properties:

Flash Point: > 100°C (212°F) Method: Open cup
Flammability Limits: Lower Explosion Limits: Not determined Upper Explosion Limits: Not determined
Autoignition Temperature: Not determined
Explosive Properties: Not classified according to GHS criteria.
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.
Gas under Pressure: Not classified according to GHS criteria.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable when stored under proper conditions.
 Mechanical Impact: None reported
 Static Discharge: None reported.
 Reactivity / Incompatibility: Incompatible with: oxidizers
 Hazardous Decomposition: Toxic fumes of: sodium oxides carbon monoxide carbon dioxide
 Conditions to Avoid: Heat Evaporation

11. TOXICOLOGICAL INFORMATION

Toxicokinetics, Metabolism and Distribution: No information available for mixture. Toxicologically Synergistic Products: None reported Acute Toxicity: Based on classification principles, the classification criteria are not met. Specific Target Organ Toxicity - Single Exposure (STOT-SE): Based on classification principles, the classification criteria are not met. Specific Target Organ Toxicity - Repeat Exposure (STOT-RE): Based on classification principles, the classification criteria are not met. Skin Corrosion/Irritation: Based on classification principles, the classification criteria are not met. *Eye Damage:* Based on classification principles, the classification criteria are not met. Sensitization: Based on classification principles, the classification criteria are not met. CMR Effects/Properties (carcinogenic, mutagenic or toxic to reproduction): No germ cell mutagenicity, carcinogenicity or reproductive toxicity data found. This product does NOT contain any IARC listed chemicals. This product does NOT contain any NTP listed chemicals. This product does NOT contain any OSHA listed carcinogens. Symptoms/Effects: Ingestion: Very large doses may cause: central nervous system depression kidney damage rapid pulse and respirations Inhalation: No effects anticipated Skin Absorption: No effects anticipated Chronic Effects: None reported Medical Conditions Aggravated: None reported

12. ECOLOGICAL INFORMATION

Product Ecological Information: --

No ecological data available for this product. Mobility in soil: No data available *Ingredient Ecological Information:* --No ecological data available for the ingredients of this product.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: Not applicable

Special Instructions (Disposal): Dilute to 3 to 5 times the volume with cold water. Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. Open cold water tap completely, slowly pour the reacted material to the drain. Allow cold water to run for 5 minutes to completely flush the system.

Empty Containers: Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.

NOTICE (*Disposal*): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information. In Europe: Chemical and analysis solutions must be disposed of in compliance with the respective national regulations. Product packaging must be disposed of in compliance with the country-specific regulations or must be passed to a packaging return system.

14. TRANSPORT INFORMATION

D.O.T.: D.O.T. Proper Shipping Name: Not Currently Regulated Hazard Class: NA Subsidiary Risk: NA ID Number: NA Packing Group: NA T.D.G.: Proper Shipping Name: Not Currently Regulated Hazard Class: NA Subsidiary Risk: NA UN Number/PIN: NA Packing Group: NA I.C.A.O.: I.C.A.O. Proper Shipping Name: Not Currently Regulated Hazard Class: NA Subsidiary Risk: NA ID Number: NA Packing Group: NA I.M.O.: Proper Shipping Name: Not Currently Regulated Hazard Class: NA Subsidiary Risk: NA ID Number: NA

Packing Group: NA **dditional Information:** There is a

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 set or kit, the classification given above applies. If the item IS part of a set or kit, the classification would change to the following: UN3316 Chemical Kit, Class 9, PG II or III. If the item is not regulated, the Chemical Kit classification does not apply.

15. REGULATORY INFORMATION

U.S. Federal Regulations:

O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

E.P.A.:

S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Immediate (Acute) Health Hazard S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

302 (EHS) TPQ (40 CFR 355): Not applicable 304 CERCLA RQ (40 CFR 302.4): Not applicable 304 EHS RQ (40 CFR 355): Not applicable Clean Water Act (40 CFR 116.4): Not applicable RCRA: Contains no RCRA regulated substances.

State Regulations:

California Prop. 65: No Prop. 65 listed chemicals are present in this product.

Identification of Prop. 65 Ingredient(s): None

California Perchlorate Rule CCR Title 22 Chap 33: Not applicable

Trade Secret Registry: Not applicable

National Inventories:

U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710). CAS Number: Not applicable

Canadian Inventory Status: All ingredients of this product are DSL/NDSL Listed.

EEC Inventory Status: All ingredients used to make this product are listed on EINECS / ELINCS.

Australian Inventory (AICS) Status: All ingredients are listed.

New Zealand Inventory (NZIoC) Status: All components either listed or exempt.

Korean Inventory (KECI) Status: All components of this product are either listed, listed as the anhydrous compound or exempt.

Japan (ENCS) Inventory Status: All components either listed or exempt.

China (PRC) Inventory (MEP) Status: All components either listed or exempt.

16. OTHER INFORMATION

References: 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992. Technical Judgment. In-house information. Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection Fire Protection Guide on Hazardous Materials, 10th Ed. Quincy, MA: National Fire Protection, 1991. *Complete Text of H phrases referred to in Section 3:* Not applicable

Revision Summary: Substantial revision to comply with EU Reg 1272/2008, Reg 1907/2006 and UN GHS (ST/SG/AC.10/36/Add.3).

Date of MSDS Preparation:

Day: 09 Month: March

Year: 2014

MSDS Prepared: MSDS prepared by Product Compliance Department extension 3350

CCOHS Evaluation Note: It is offered under exemption from WHMIS labeling as specified in the Controlled Products Regulation (CPR) Section 17. It is offered under the interim policy that was established by Health Canada permitting use of GHS-formatted safety data sheets in Canada prior to revision of CPR to GHS. This product has been classified and labeled in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3). This SDS has been prepared in accordance with the requirements of GHS (ST/SG/AC.10/36/Add.3).

Legend:

NA - Not Applicable	w/w - weight/weight
ND - Not Determined	w/v - weight/volume
NV - Not Available	v/v - volume/volume

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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