ESSENTIAL CHEMISTRY. INNOVATIVE SOLUTIONS.

SAFETY DATA SHEET

Print Date: *September 27, 2018*

Section 1: Product & Company Information

Product Identifier: **Sodium Thiosulfate, Pentahydrate**

Other Means of Identification
Product Number: *104020*

Recommended Use and Restrictions on Use
Recommended Use: *Chemical applications and medicine.*
Restrictions on Use: *Not known.*

Manufacturer / Importer / Supplier / Distributor Information
Company Name: *CORECHEM Inc.*
Address: *4320 Greenway Drive*
Knoxville, TN 37918
USA

Information Telephone Number: *1-865-524-4239*
Fax Number: *1-865-524-3375*
Website: *www.corechemInc.com*
Contact Person: *Regulatory Manager*
E-mail: *regulatory@corechemInc.com*

Emergency Phone Number: *Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)*

Section 2: Hazards Identification

GHS Hazard Classification(s)
Not classified as hazardous according to OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Physical Hazard(s)
Not classified.

Health Hazard(s)
Not classified.

Environmental Hazard(s)
Not classified.

Label Elements

Signal Word
No signal word

Hazard Symbol(s)
No symbol

Hazard Statement(s)
Not applicable.

Precautionary Statements

General
Not applicable.

Prevention
Not applicable.

Response
Not applicable.

Storage
Not applicable.

Disposal
Not applicable.

Hazard(s) not otherwise classified (HNOC)
None known.

Section 3: Composition/Information on Ingredients

Substance

Chemical Identity [2]	Common Name / Synonym(s)	CAS # [3]	Weight %	Impurity	Stabilizing Additive	Su
Sodium Thiosulfate Pentahydrate	*Sodium Borate, Sodium TetraBorate*	*1303-96-4 / 7772-98-7*	*99-100% / 99-100%*	*No*	*No*	

1. Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.

2. Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.

3. "—"Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

Section 4: First-Aid Measures

General Information

Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

Inhalation

Remove to fresh air. Get medical attention for any breathing difficulty.

Skin Contact

Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing.

Eye Contact

Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

Most important symptoms/effects, acute and delayed

Symptoms

May be irritating to eyes, respiratory system and skin.

Indication of immediate medical attention and special treatment needed

Hazards

No data available.

Treatment

Treat symptomatically. Symptoms may be delayed.

Section 5: Fire-Fighting Measures

General Fire Hazards

Not considered a fire hazard.

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Chemical

During fire, gases hazardous to health may be formed.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out. Do not release runoff into sewers and waterways.

Special Protective Equipment for Fire-Fighters

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

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in sect. 8.

Methods and Materials for Containment and Clean-Up

Small spills: Sweep up and containerize for reclamation or disposal.
Large Spills: for large spills dike far ahead of spill for later disposal.

Notification Procedures

Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.

Environmental Precautions

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

Section 7: Handling and Storage

Precautions for Safe Handling

Containers of this material may be hazardous when empty since they retain product residues. (dusts and solids.)

Conditions for Safe Storage, including any Incompatibilities

Keep containers tightly closed. Store in cool, dry place. Store in a well-ventilated place. Protect against physical damage. Isolate from incompatible substances.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational Exposure Limits

The product does not contain any relevant quantities of hazardous materials with critical values that have to be monitored in the workplace.

Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

Appropriate Engineering Controls

Provide general or local ventilation systems to maintain airborne concentrations below OSHA PELs. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Eye/Face Protection

Use tight fitting goggles if dust is generated.

Skin Protection

Hand Protection

Wear appropriate chemical resistant gloves.

Other

Wear chemically protective gloves, boots, aprons and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or safety goggles per OSHA eye and face protection regulations (29 CFR 1910.133) Contact lenses are not eye protection devices. Appropriate eye protection must be worn instead of or in conjunction with contact lenses.

Respiratory Protection

Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and if necessary, wear a NIOSH approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions., level of airborne contamination, and presence of sufficient oxygen. For emergency or non-routine operations (cleaning spills, reactor vessels, or storage tanks) wear an SCBA. WARNING! Air purifying respirators do not protect workers in oxygen-deficient atmospheres. If respirators are used, OSHA requires a written respiratory protection program that includes at least, medical certification, training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Hygiene Measures

Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet or applying cosmetics.

Section 9: Physical and Chemical Properties

Appearance:	
Physical State:	*Solid*
Color:	*Colorless*
Odor:	*Odorless*
Odor Threshold:	*No data available.*
pH:	*6.5 -8.0 (Solution)*
Specific Gravity /density	*1.74 g/cm^3*
Melting Point/Freezing Point:	*48 °C (118 °F) Loses water @ 100 °C*
Initial Boiling Point and Boiling Range:	*>100 °C (> 212 °F) (Decomposes)*
Flash Point:	*No data available.*
Evaporation Rate *(butyl acetate=1)*:	*No data available.*
Flammability (solid, gas):	*No data available.*
Upper/Lower Limit on Flammability or Explosive Limits	
Flammability Limit – Upper:	*No data available.*
Flammability Limit – Lower:	*No data available.*
Explosive Limit – Upper:	*No data available.*
Explosive Limit – Lower:	*No data available.*
Vapor Pressure:	*No data available.*
Vapor Density *(air =1)*:	*No data available.*
Relative Density *(water=1)*:	*1.75 (20 °C)*
Solubility(ies):	
Solubility in water:	*79g/100 ml water @ 4°C (39°F)*
Solubility (other):	*No data available.*
Partition coefficient (n-octanol/water):	*-4.53 at 25°C (77 °F)*
Auto-Ignition Temperature:	*No data available.*
Decomposition Temperature:	*No data available.*
Viscosity:	*No data available.*

Other Information:

Molecular Weight:	*248.21 g/mol*
Formula:	*$H_2O_3S_2{\cdot}5H_2O{\cdot}2Na$*

Section 10: Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical Stability

Sodium Thiosulfate, Pentahydrate is stable at room temperature in closed containers under normal storage and handling conditions.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

Incompatibilities and excessive heat.

Incompatible Materials

Reacts violently with sodium nitrile. Incompatible with strong oxidizers, acids.

Hazardous Decomposition Products

Thermal oxidative decomposition of sodium thiosulfate, pentahydrate can produce hydrogen Sulfide and Sodium Oxide.

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: *Low level of toxicity by ingestion. Diarrhea may occur by ingestion of large quantities.*
Inhalation: *May cause irritation to the respiratory tract Symptoms may include coughing and shortness of breath.*
Skin Contact: *Irritation may occur from prolonged skin contact.*
Eye Contact: *Contact may cause mechanical irritation.*

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

Sodium Thiosulfate Pentahydrate: LD50 (Mouse) 2700 mg/kg

Dermal

No data available.

Inhalation

No data available.

Repeated Dose Toxicity

No data available.

Skin Corrosion/Irritation

May cause skin irritation.

Serious Eye Damage/Eye Irritation

May irritate eyes.

Respiratory/Skin Sensitization

Not a skin sensitizer.

Carcinogenicity

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

US. National Toxicology Program (NTP) Report on Carcinogens

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Germ Cell Mutagenicity

In Vitro

No mutagenic components identified.

In Vivo

No mutagenic components identified.

Reproductive Toxicity

None known.

Specific Target Organ Toxicity – Single Exposure

None known.

Specific Target Organ Toxicity – Repeated Exposure
None known.

Aspiration Hazard
Not classified.

Other Effects
None known.

Section 12: Ecological Information

Ecotoxicity

Acute Hazards to the Aquatic Environment

Fish
No data available.

Aquatic Invertebrates
No data available.

Toxicity to Aquatic Plants
No data available.

Chronic Hazards to the Aquatic Environment

Fish
No data available.

Aquatic Invertebrates
No data available.

Toxicity to Aquatic Plants
No data available.

Persistence and Degradability

Biodegradation
This product does not biodegrade.

BOD/COD Ratio
No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)
No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)
No data available.

Mobility in Soil
The product is water soluble and may spread in water systems.

Other Adverse Effects
The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Section 13: Disposal Considerations

Disposal Instructions
Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, State and local regulations.

Contaminated Packaging
Since emptied containers retain product residue, follow label warnings even after container is emptied.

Section 14: Transportation Information

US Department of Transportation (DOT)
This material is not regulated as a hazardous material for transport by the U.S. Department of Transportation in accordance with 49 CFR 172.101.

Section 15: Regulatory Information

US Federal Regulations

Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)
This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)
No chemical(s) in this material are subject to the reporting requirements of CERCLA.

Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: No
Sudden Release of Pressure: No
Reactive: No
Acute (Immediate) Health Hazard: No
Chronic (Delayed) Health Hazard: No

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

This material does not contain any chemical(s) with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

Section 16: Other Information

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 1
Chronic Health Hazard: /
Flammability: 0
Physical Hazard: 0
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 1
Fire Hazard: 0
Reactivity Hazard: 0
Special: N/A
(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

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Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate
BCF - Bioconcentration Factor
EC50 - Effective concentration, 50%
IDHL – Immediately Dangerous to Life and Health
Kg – Kilogram
l – Liter
lb – Pound
LC50 - Lethal Concentration, 50%
LD50 - Lethal Dose, 50%
mg - milligram
ml – milliliter
N/A – Not Applicable
N/D – Not Determined
PEL – Permissible Exposure Limit
REL – Recommended Exposure Limit
STEL – Short-term Exposure Limit
TWA - Time weighted average
ACGIH - American Conference of Industrial Hygienists
AIHA – American Industrial Hygiene Association
BEI - Biological Exposure Indices
CAS – Chemical Abstracts Service
DOT – US Department of Transportation
EPA – US Environmental Protection Agency
GHS - Globally Harmonized System of Classification and Labelling of Chemicals
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IBC - Intermediate Bulk Container
IMDG - International Maritime Dangerous Goods
NIOSH – National Institute for Occupational Safety and Health
NTP – National Toxicology Program
OSHA – US Occupational Health and Safety Administration
SARA – US EPA Superfund Amendments and Reauthorization Act
TSCA – US EPA Toxic Substances Control Act
UN - United Nations

References

HSDB® - Hazardous Substances Data Bank

Disclaimer

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