



Safety Data Sheet

Section 01 - Identification

Product Identifier	Sodium Hydrosulphite
Other Means of Identification	Sodium dithionite, dithionous acid, disodium salt, sodium sulfoxylate
Product Use and Restrictions on Use	Vat dyeing of fibres and textiles; stripping agent for dyes; bleaching agent; oxygen scavenger for synthetic rubbers.
Initial Supplier Identifier	ClearTech Industries Inc. 1500 Quebec Avenue Saskatoon, SK. Canada S7K 1V7
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Section 02 - Hazard Identification

GHS-Classification

Acute Toxicity-Oral Category 4

Physical Hazards

Self-Heating Substances and Mixtures Category 1

Danger

Hazards Statements

H302 – May be harmful if swallowed.

H251 – Self-heating: may catch fire.

Pictograms



Precautionary Statements

P235 – Keep cool.

P280 – Wear protective gloves, protective clothing, eye protection, and face protection.

P407 – Maintain air gap between stacks and pallets.

P413 – Store bulk masses greater than 1kg/2lbs at temperatures not exceeding 3°C/4°F

P420 – Store away from other materials.

P264 – Wash hands thoroughly after handling.

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

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

P330 – Rinse mouth.

P501 – Dispose of contents/container in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 03 - Composition / Information on Ingredients

Chemical Name	CAS Number	Weight %	Unique Identifiers
Sodium Dithionite	7775-14-6	60-100%	

Section 04 - First Aid Measures

Inhalation	Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek immediate medical attention.
Skin Contact / Absorption	Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists.
Eye Contact	Flush immediately with water for at least 30 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. If irritation persists, seek medical attention.
Ingestion	Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention. Do not give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention.
Additional Information	Not Available

Section 05 - Fire Fighting Measures

Suitable Extinguishing Media	Dithionite fires may require flooding with water in order to eliminate hazardous reaction since the materials generate their own oxygen. Chemical powder, dry concrete and dry sand are effective in stopping the fire but they do not interrupt the decomposition of the product.
Unsuitable Extinguishing Media	Not Available
Specific Hazards Arising From the Chemical	Combustion products include the evolution of sulfur dioxide gas and other metallic oxides.
Special Protective Equipment and Precautions for Fire-Fighters	Wear NIOSH-approved self-contained breathing apparatus and protective clothing.
Further Information	Do not get water inside container. Containers exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure.

Section 06 - Accidental Release Measures

Personal Precautions / Protective Equipment / Emergency Procedures	Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so.
Environmental Precautions	Prevent material from entering sewers.
Methods and Materials for Containment and Cleaning Up	Pick up solids and put in an appropriate sealed container for later disposal. Flush area with water to remove trace residue. Avoid contact with combustible materials.

Section 07 - Handling and Storage

Precautions for Safe Handling	Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. Keep away from water. Keep away from heat, sparks and flame.
Conditions for Safe Storage	Store in a cool, dry location outdoors or in well-ventilated areas of noncombustible materials. Keep containers tightly closed and away from incompatible materials. Store away from sunlight and sources of heat. Protect against moisture, water and physical damage. Isolate from combustible materials.
Incompatibilities	Water, combustible materials, strong oxidizing agents, strong acids and sodium chlorite. An explosion occurred after mixing sodium hydrosulfite, aluminum powder, potassium carbonate and benzaldehyde.

Section 08 - Exposure Controls and Personal Protection

Exposure Limit(s)

Component	Regulation	Type of Listing	Value
Sodium hydrosulphite	Not Available		

Engineering Control(s)

Ventilation Requirements Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems.

Other Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.

Protective Equipment

Eyes/Face Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.

Hand Protection Impervious gloves of chemically resistant material (rubber or PVC) should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.

Skin and Body Protection Body suite, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing and dry thoroughly before reuse.
Impervious boots of chemically resistant material should be worn at all times. No special footwear is required other than what is mandated at place of work.

Respiratory Protection For conditions of use where exposure to the dust or mist is apparent, a half face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.

Thermal Hazards Not Available

Section 09 - Physical and Chemical Properties

Appearance

Physical State Solid crystalline powder

Colour Yellow

Odour	Slight sulfur dioxide odour
Odour Threshold	Not Available
<u>Property</u>	
pH	8-9
Melting Point/Freezing Point	Decomposes
Initial Boiling Point and Boiling Range	Not Available
Flash Point	~100°C
Evaporation Rate	Not Available
Flammability	Flammable solid. Heats spontaneously in contact with moisture and air. May ignite in the presence of combustible materials.
Upper Flammable Limit	Not Available
Lower Flammable Limit	Not Available
Vapour Pressure (mm Hg, 20°C)	Not Available
Vapour Density (Air=1)	Not Available
Relative Density	Not Available
Solubility(ies)	Very soluble in water. Slightly soluble in alcohol. Insoluble in acids.
Partition Coefficient: n-octanol/water	Log K _{ow} = <-4.7
Auto-ignition Temperature	190°C
Decomposition Temperature	>300.01°C
Viscosity	Not Available
Explosive Properties	Not considered to be an explosion hazard. An explosion occurred after mixing sodium hydrosulfite, aluminum powder, potassium carbonate and benzaldehyde.
Specific Gravity (Water=1)	2.2
% Volatiles by Volume	Not Available
Formula	Na ₂ S ₂ O ₄
Molecular Weight	176.11

Section 10 - Stability and Reactivity

Reactivity	Heats spontaneously in contact with moisture and air. Loses all of its water of crystallization at 110°C. Decomposes in hot water and acid.
Stability	Stable when stored in closed containers at room temperature.

Possibility of Hazardous Reactions	Polymerization will not occur.
Conditions to Avoid	Ignition sources, dust generation, exposure to air, excess heat, moisture, high humidity.
Incompatible Materials	Water, combustible materials, strong oxidizing agents, strong acids and sodium chlorite. An explosion occurred after mixing sodium hydrosulfite, aluminum powder, potassium carbonate and benzaldehyde.
Hazardous Decomposition Products	Burning may produce sulfur oxides.

Section 11 - Toxicological Information

Acute Toxicity

Component	Oral LD₅₀	Dermal LD₅₀	Inhalation LC₅₀
Sodium Hydrosulphite	2018 mg/kg	Not Available	7195 mg/L

Chronic Toxicity – Carcinogenicity

Component	IARC
Sodium Hydrosulphite	None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

Skin Corrosion/Irritation	Moderate irritant to skin.
Ingestion	May cause abdominal pain, nausea, vomiting, colic and diarrhea, circulatory disturbances, central nervous system depression, irritability, restlessness, convulsions, cyanosis, respiratory and cardiovascular collapse, and death. Estimated lethal dose 30 grams.
Inhalation	Inhalation can cause severe irritation of mucous membranes and upper respiratory tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. High concentrations may cause lung damage. Higher exposures can cause a build-up of fluid in the lungs (pulmonary edema), a medical emergency.
Serious Eye Damage/Irritation	Causes irritation, redness, and pain. May cause burns and possible damage to vision.
Respiratory or Skin Sensitization	Exposure may induce allergic reaction.
Germ Cell Mutagenicity	Sodium dithionite was not mutagenic in standard bacterial tests with and without metabolic activation.
Reproductive Toxicity	Based on the physic-chemical behavior of sodium dithionite and its rapid conversion in the body, it is not expected for the molecule to reach reproductive organs or have any direct effect on reproduction and development.
STOT-Single Exposure	Inhalation can cause severe irritation of mucous membranes and upper respiratory tract. High concentrations may cause lung damage.
STOT-Repeated Exposure	Not Available
Aspiration Hazard	Higher exposures can cause a build-up of fluid in the lungs (pulmonary edema).
Synergistic Materials	Not Available

Section 12 – Ecological Information

Ecotoxicity

Component	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and Other Aquatic Invertebrates
Sodium dithionite	Not Available	LC ₅₀ (Leuciscus idus, 96hr): 63.2mg/L	EC ₅₀ (Daphnia magna, 48hr): 98.3mg/L
Biodegradability	Biodegrades easily water.		
Bioaccumulation	Not Expected to bioaccumulate.		
Mobility	Not Available		
Other Adverse Effects	Not Available		

Section 13 – Disposal Considerations

Waste From Residues/Unused Products	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.
Contaminated Packaging	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 14 – Transport Information

UN Number	UN1384	
UN Proper Shipping Name	SODIUM HYDROSULPHITE	
Transport Hazard Class(es)	4.2	
Packaging Group	II	
Environmental Hazards	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.	
Special Precautions	Not Available	
Transport in Bulk	Not Available	
Additional Information	<u>Packing Group</u> I	<u>Limited Quantity Index</u> 0

TDG

Other Secure containers (full and/or empty) with suitable hold down devices during shipment and ensure all caps, valves, or closures are secured in the closed position.

TDG PRODUCT CLASSIFICATION: This product has been classified on the preparation date specified at section 14 of this MSDS / SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and/or published test data regarding the classification of this product are listed in the references at section 16 of this MSDS / SDS.

Section 15 – Regulatory Information

NOTE: THE PRODUCT LISTED ON THIS SDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS SDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.

Section 16 – Other Information

Preparation Date September 2, 2015

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of

our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

Attention: Receiver of the chemical goods / SDS coordinator

As part of our commitment to the Canadian Association of Chemical Distributors (CACD) Responsible Distribution[®] initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Safety Data Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

If you have any questions or concerns please call our customer service center.

References:

- 1) CHEMINFO
- 2) eChemPortal
- 3) TOXNET
- 4) Transportation of Dangerous Goods Canada
- 5) HSDB
- 6) ECHA

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