

SECTION 1: IDENTIFICATION**1.1. Product Identifier****Product Form:** Mixture**Product Name:** VIRWITE POWDER (SERIES 100)**Product Code:** VIRWITE®; This MSDS applies to Chemtrade's VIRWITE® Powder (SERIES 100) Sodium Hydrosulfite products using a one or two letter prefix (A through Z) followed by a 3 digit numeric code (100 – 199).**Synonyms:** Sodium Dithionite; Hydro; Sodium Hydrosulfite Powder; Hydro Powder; Sodium Hydrosulfite Powders & Blends; Sodium Sulfoxylate; Dithionous Acid; Disodium Salt**1.2. Intended Use of the Product****Use of the Substance/Mixture:** Reducing Agent.**1.3. Name, Address, and Telephone of the Responsible Party****Manufacturer**

CHEMTRADE LOGISTICS INC.

155 Gordon Baker Road

Suite 300

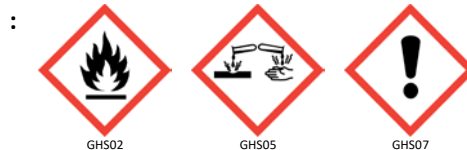
Toronto, Ontario M2H 3N5

For SDS Info: (416) 496-5856

www.chemtradelogistics.com**1.4. Emergency Telephone Number****Emergency Number**: Canada: CANUTEC +1-613-996-6666 / US: CHEMTREC +1-800-424-9300 /
Chemtrade Emergency Contact: (866) 416-4404For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC –
Day or Night**SECTION 2: HAZARDS IDENTIFICATION****2.1. Classification of the Substance or Mixture****GHS**

Self-heat. 1	H251
Acute Tox. 4 (Oral)	H302
Eye Dam. 1	H318
Aquatic Acute 3	H402
Aquatic Chronic 3	H412

Full text of hazard classes and H-statements : see section 16

2.2. Label Elements**GHS****Hazard Pictograms****Signal Word**

: Danger

Hazard Statements: H251 - Self-heating: may catch fire.
H302 - Harmful if swallowed.
H318 - Causes serious eye damage.
H402 - Harmful to aquatic life.
H412 - Harmful to aquatic life with long lasting effects.
: P235+P410 - Keep cool. Protect from sunlight.
P264 - Wash exposed areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.
P280 - Wear eye protection, protective clothing, and protective gloves.
P301+P312 - If swallowed: Call a poison center or doctor if you feel unwell.
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a poison center or doctor.
P330 - Rinse mouth.**Precautionary Statements**

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P407 - Maintain air gap between stacks/pallets.

P413 - Store bulk masses

P420 - Store away from other materials.

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS)

No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixture

Name	Product Identifier	%	GHS-US classification
Sodium dithionite*	(CAS-No.) 7775-14-6	60 - 95	Self-heat. 1, H251 Aquatic Acute 3, H402 Aquatic Chronic 3, H412 Comb. Dust
Sodium sulfur salt 1S*	(CAS-No.) Proprietary	0 - 25	Eye Irrit. 2A, H319
Carbonate salt*	(CAS-No.) Proprietary	0 - 10	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Aquatic Acute 3, H402

* An exemption was claimed under the Canadian Hazardous Materials Information Review Act. The registry number assigned to the claim is 9978. The filing date for the exemption was April 29, 2016 for those ingredients indicated.

The specific chemical identity and/or exact percentage of composition have been withheld as a trade secret [29 CFR 1910.1200]. Full text of H-phrases: see section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

First-aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact: Rinse cautiously with water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

Symptoms/Injuries: Harmful if swallowed. Causes serious eye damage. In contact with water, releases gases which are toxic if inhaled (sulfur dioxide).

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation. In contact with water, releases gases which are toxic if inhaled (sulfur dioxide).

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: Causes permanent damage to the cornea, iris, or conjunctiva.

Symptoms/Injuries After Ingestion: This material is harmful orally and can cause adverse health effects or death in significant amounts.

Chronic Symptoms: None expected under normal conditions of use.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Water spray, dry chemical, foam, carbon dioxide.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Self-heating: may catch fire.

Explosion Hazard: Product is not explosive.

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Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Sulfur oxides, carbon oxides (CO, CO₂). May liberate toxic gases.

Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Do not breathe dust. Do not get in eyes, on skin, or on clothing.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain solid spills with appropriate barriers and prevent migration and entry into sewers or streams. Use only non-sparking tools.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Recover the product by vacuuming, shoveling or sweeping. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Dust may form a combustible dust hazard in air. Liberates toxic sulfur oxides gas when in contact with water. Catches fire spontaneously if exposed to air.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid breathing dust. Keep away from heat, sparks, open flames, and hot surfaces. No smoking. Handle empty containers with care because they may still present a hazard. Do not get in eyes, on skin, or on clothing.

Handling Temperature: Avoid sources of heat above 122 °F (50 °C).

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

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Maintain air gap between stacks/pallets. Proper grounding procedures to avoid static electricity should be followed.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Products: Water, moisture, acids, bases, oxidizers, combustibles, flammable materials.

Storage Temperature: < 50 °C (122 F) Keep material dry.

7.3. Specific End Use(s)

Reducing Agent.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Carbonate salt		
USA ACGIH	ACGIH TWA (mg/m ³)	5 mg/m ³
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³

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Sulfur dioxide (7446-09-5) * Becomes liberated when in contact with water.		
USA ACGIH	ACGIH STEL (ppm)	0.25 ppm
USA ACGIH	ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	2 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	13 mg/m ³
USA NIOSH	NIOSH REL (STEL) (ppm)	5 ppm
USA IDLH	US IDLH (ppm)	100 ppm
USA OSHA	OSHA PEL (TWA) (mg/m ³)	13 mg/m ³
USA OSHA	OSHA PEL (TWA) (ppm)	5 ppm

8.2. Exposure Controls

Appropriate Engineering Controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Proper grounding procedures to avoid static electricity should be followed.

Personal Protective Equipment

: Gloves. Protective clothing. Protective goggles. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing

: Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

Hand Protection

: Wear protective gloves.

Eye Protection

: Chemical safety goggles.

Skin and Body Protection

: Wear suitable protective clothing.

Respiratory Protection

: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information

: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	: Solid
Appearance	: Powder, white, free-flowing
Odor	: Slight sulfur-like odor
Odor Threshold	: No data available
pH	: 6 - 10 [1% by weight solution at 68 °F (20 °C)]
Evaporation Rate	: No data available
Melting Point	: 300 °C (572°F) decomposes before reaching melting point
Freezing Point	: No data available
Boiling Point	: No data available
Flash Point	: No data available
Auto-ignition Temperature	: 250 °C (482°F) for sodium hydrosulfite powder
Decomposition Temperature	: 70 - 151 °C (158 - 304°F) for sodium hydrosulfite powder
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative Vapor Density at 20°C	: No data available
Relative Density	: No data available
Density	: 55 - 65 lb/ft ³
Solubility	: Water: 18 % @ 70 °F (21 °C)
Partition Coefficient: N-Octanol/Water	: < -2.75 - -4.7 Log Pow (estimated) – for sodium hydrosulfite
Viscosity	: No data available

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9.2. Other Information

No additional information available

SECTION 10: STABILITY AND REACTIVITY

- 10.1. Reactivity:** Hazardous reactions will not occur under normal conditions.
- 10.2. Chemical Stability:** Self-heating: may catch fire.
- 10.3. Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, and incompatible materials.
- 10.5. Incompatible Materials:** Water, moisture, acids, bases, oxidizers, combustibles, flammable materials.
- 10.6. Hazardous Decomposition Products:** In contact with water: liberates sulfur oxides. Sulfur oxides are toxic.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity: Oral: Harmful if swallowed.

VIRWITE POWDER (SERIES 100)	
ATE (Oral)	1,932.51 mg/kg body weight
Carbonate salt	
LD50 Oral Rat	1310 mg/kg
Sodium sulfur salt 1S	
LD50 Oral Rat	4090 mg/kg
LC50 Inhalation Rat	2300 mg/m ³ (Exposure time: 2 h)
Sodium dithionite	
LD50 Oral Rat	2500 mg/kg
LD50 Dermal Rat	> 2000
LC50 Inhalation Rat	> 5.5 mg/l/4h
Sulfur dioxide (7446-09-5) * Becomes liberated when in contact with water.	
LC50 Inhalation Rat	2500 ppm/1h
ATE (Gases)	1,250.00 ppmV/4h

Skin Corrosion/Irritation: Not classified

pH: 6 - 10 [1% by weight solution at 68 °F (20 °C)]

Serious Eye Damage/Irritation: Causes serious eye damage.

pH: 6 - 10 [1% by weight solution at 68 °F (20 °C)]

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Carbonate salt	
IARC group	3
Sulfur dioxide (7446-09-5) * Becomes liberated when in contact with water.	
IARC Group	3

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation. In contact with water, releases gases which are toxic if inhaled (sulfur dioxide).

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: Causes permanent damage to the cornea, iris, or conjunctiva.

Symptoms/Injuries After Ingestion: This material is harmful orally and can cause adverse health effects or death in significant amounts.

Chronic Symptoms: None expected under normal conditions of use.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General : Harmful to aquatic life with long lasting effects. Harmful to aquatic life.

Carbonate salt	
LC50 Fish 1	32 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

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EC50 Daphnia 1	88.76 mg/l
Sodium sulfur salt 1S	
LC50 Fish 1	300 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	265 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 Fish 2	310 - 1220 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
Sodium dithionite	
LC50 Fish 1	62.3 mg/l (Species :Leuciscus idus)
EC50 Daphnia 1	98 mg/l (Exposure time: 48 h - Species: Daphnia magna Straus)

12.2. Persistence and Degradability

VIRWITE POWDER (SERIES 100)	
Persistence and Degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative Potential

VIRWITE POWDER (SERIES 100)	
Bioaccumulative Potential	Not established.
Carbonate salt	
Log Pow	-3.7 (at 25 °C)
Sodium sulfur salt 1S	
BCF Fish 1	(no bioaccumulation)

12.4. Mobility in Soil

No additional information available

12.5. Other Adverse Effects

Other Information : Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, and international regulations.

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions.

Ecology - Waste Materials: Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT

Proper Shipping Name : SODIUM HYDROSULFITE
Hazard Class : 4.2
Identification Number : UN1384
Label Codes : 4.2
Packing Group : II
ERG Number : 135



14.2. In Accordance with IMDG

Proper Shipping Name : SODIUM DITHIONITE (SODIUM HYDROSULPHITE)
Hazard Class : 4.2
Identification Number : UN1384
Packing Group : II
Label Codes : 4.2
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-J



14.3. In Accordance with IATA

Proper Shipping Name : SODIUM HYDROSULPHITE
Packing Group : II
Identification Number : UN1384
Hazard Class : 4
Label Codes : 4.2
Division : 4.2
ERG Code (IATA) : 4L



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14.4 In Accordance with TDG

Proper Shipping Name	: SODIUM HYDROSULPHITE
Packing Group	: II
Hazard Class	: 4.2
Identification Number	: UN1384
Label Codes	: 4.2

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

VIRWITE POWDER (SERIES 100)	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard
Carbonate salt	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Sodium sulfur salt 1S	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Sodium dithionite	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. US State Regulations

Carbonate salt
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
Sodium dithionite
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List

Canadian Regulations

VIRWITE POWDER (SERIES 100)
Sodium Dithionite
Listed on the Canadian DSL (Domestic Substances List)
Sodium Sulfur Salt 1S
Listed on the Canadian DSL (Domestic Substances List)
Carbonate Salt
Listed on the Canadian DSL (Domestic Substances List)

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision	: 05/31/2017
Revisions	: Sections 3 and 16
Other Information	: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and according to the Hazardous Products Regulation (February 11, 2015).

GHS Full Text Phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3
Comb. Dust	Combustible Dust
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Self-heat. 1	Self-heating substances and mixtures Category 1
H251	Self-heating: may catch fire
H302	Harmful if swallowed

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H318	Causes serious eye damage
H319	Causes serious eye irritation
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects

NFPA Health Hazard

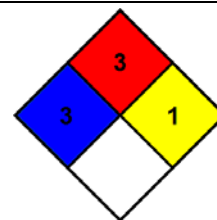
: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA Fire Hazard

: 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA Reactivity Hazard

: 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



Hazard Rating

Health

: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability

: 3 Serious Hazard

Physical

: 1 Slight Hazard

Handle product with due care and avoid unnecessary contact. This information is supplied under U.S. OSHA'S "Right to Know" (29 CFR 1910.1200) regulations and Canada's WHMIS regulations. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist. The information contained herein is based on data available to us and is believed to be true and accurate but it is not offered as a product specification. No warranty, expressed or implied, regarding the accuracy of this data, the hazards connected with the use of the product, or the results to be obtained from the use thereof, is made and Chemtrade and its affiliates assume no responsibility. Chemtrade is a member of the CIAC (Chemistry Industry Association of Canada) and adheres to the codes and principles of Responsible Care™.

SDS (GHS HazCom)