

## Safety Data Sheet

## CHEM-CD Part A

ClorDiSys Solutions, Inc.

Safety Data Sheet

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## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Common Name: Chlorine Dioxide Release Material

Chemical Name: Chemical Mixture

Product Use and  
Restrictions on Use: Various ApplicationsSupplier: ClorDiSys Solutions, Inc.  
PO Box 549  
Lebanon, NJ 08833

## For Chemical Emergency Call PERS (24 Hours/Day, 7 Days/Week):

1-800-633-8253 (Domestic/Canada)

1-801-629-0667 (International)

## 2. Hazards Identification

**EMERGENCY OVERVIEW:** This product is a white, flaked, oxidizing solid. This product may have a slight chlorine odor.

<b>Color:</b>	White
<b>Form:</b>	Flakes / Powder
<b>Odor:</b>	Odorless to slight chlorine odor

**MAJOR HEALTH HAZARDS:** CORROSIVE. FATAL IF INHALED. TOXIC IF SWALLOWED. CAUSES SKIN IRRITATION. CAUSES SERIOUS EYE DAMAGE. INGESTION MAY CAUSE DAMAGE TO: BLOOD SYSTEM AND KIDNEY SYSTEM. INHALATION MAY CAUSE DAMAGE TO THE RESPIRATORY SYSTEM. MAY CAUSES DAMAGE TO THE CLOOD AND KIDNEYS THROUGH PROLONGED OR REPEATED EXPOSURES.**Physical Hazards:** STRONG OXIDIZER. Contact with other materials may cause fire or explosion.**Aquatic Toxicity:** HARMFUL TO AQUATIC LIFE.**Precautionary Statements:** Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep/store away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles, acids, chlorine or organic materials. Ear protective gloves, protective clothing, eye and face protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust. Avoid release to the environment.**Additional Hazards:** This material is corrosive and an oxidizer. This material's pH and oxidative action contribute to its health and physical hazards.**GHS Classification:**

GHS: Contact Hazard- Skin	Category 2 - Causes skin irritation
GHS: Contact Hazard- Eye	Category 1 - Causes serious eye damage
GHS: Acute Toxicity- Inhalation	Category 2 – Fatal if inhaled
GHS Acute Toxicity- Oral	Category 3 – toxic if Swallowed
GHS Target Organ Toxicity (Single Exposure)	Category 2 – May Cause Damage to Respiratory System, Blood, Kidneys
GHS Target organ Toxicity (Repeated Exposure)	Category 2 – May Cause Damage to Blood and/or Kidneys
GHS: Carcinogenicity	Not classified as a carcinogen per GHS criteria. This product is not classified as a carcinogen by NTP, IARC, or OSHA
GHS: Hazardous to Aquatic Environment- Acute Hazard	Category 3- Harmful to Aquatic Life

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**Unknown Acute Toxicity:** Not applicable. This product was tested as a whole. This information only pertains to untested mixtures. 100% of this product consists of ingredient(s) of known acute toxicity.

**GHS Symbol:** Oxidizer, Skull and Crossbones, Corrosion, Health Hazard.

**GHS Signal Word:** **DANGER**

**GHS Hazard Statements:****GHS Physical hazard Statement(s)**

May intensify fire; oxidizer

**GHS- Health Hazard Statement(s)**

Fatal if Inhaled

Toxic if Swallowed

Causes Serious Eye Damage

Causes Skin Irritation

May Cause Damage to Organs (Respiratory, Kidney and Blood Systems)

May Cause Damage to Renal System (Kidneys) and Blood System Through Prolonged or Repeated Exposure

**GHS- Precautionary Statement(s)**

Do not breathe Dust, Fume, Gas, Mist, Vapors, or Spray

In Case of Inadequate Ventilation, Wear Respiratory Protection

Wear Protective Gloves, Protective Clothing, Eye and Face Protection

Wash Thoroughly After Handling

Use Only Outdoors or in a Well-Ventilated Area

Do Not Eat, Drink or Smoke When Using This Product

Keep Away From Heat

Keep/Store Away From Clothing and Other Combustible Materials

Take any Precaution to Avoid Mixing with Combustibles

**GHS- Precautionary Statement(s)**

IF INHALED: Remove person to fresh air and keep comfortable for breathing

Specific treatment is urgent (see Section 4 of SDS or First Aid information on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so.  
Continue rinsing

IF SWALLOWED: Immediately call POISON CENTER or doctor/physician. Rinse mouth.

Specific Treatment (see Section 4 of the safety data sheet and/or the First Aid information on the product label)

IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

IN CASE OF FIRE: Use agent suitable for surrounding fire to extinguish

**GHS Precautionary Statement(s)- Storage**

Store locked up

Store in well-ventilated place. Keep container tightly closed

**GHS- Precautionary Statement(s)- Disposal**

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

**Hazards Not Otherwise Classified (HNOC)**

None Identified

**See Section 11: Toxicological Information****NFPA Classification:**

**Health:** 1

**Flammability:** 1

**Instability:** 1

**Special Hazards:** OX

**HMIS Classification:**

**Health:** 1

**Flammability:** 0

**Reactivity:** 0

**Personal Protection:** E

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## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	EINECS#	Weight in Product %	Notes
Sodium Chlorite	7758-19-2	231-836-6	74-88%	None
Sodium Chloride	7647-14-5	231-598-3	2-24%	None
Sodium Sulfate	7757-82-6	231-820-9	0-4.5%	None
Sodium Chlorate	7775-09-9	231-887-4	0-6%	None
Sodium Hydroxide	1310-73-2	215-185-5	0-4.5%	None
Sodium Carbonate	497-19-8	207-838-8	0-3%	None
Water	7732-18-5	231-791-2	1.6-8%	None

**Other Information:** NOTE: The percentage by weight values reported for this product represent approximate formulation values.

## 4. FIRST AID MEASURES

- Inhalation:** If airborne dusts of this product are inhaled, remove victim to fresh air. If inhalation occurs and adverse effects result, remove to contaminated area. Evaluate ABC's (is Airways constricted, is Breathing occurring, is blood Circulating) and treat symptomatically. GET MEDICAL ATTENTION IMMEDIATELY.  
Specific Treatment: There is no specific antidote. Treat symptomatically. Pulse oximetry may not be reliable, see notes to physician.
- Ingestion:** If this product is swallowed, DO NOT INDUCE VOMITING. Give large amounts of water. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. Never give anything by mouth to an unconscious or convulsive person. GET MEDICAL ATTENTION IMMEDIATELY. CALL PHYSICIAN OR CALIFORNIA POISON CONTROL CENTER (1-800-764-7661; 1-800-876-4766) FOR MOST CURRENT INFORMATION.
- Skin Contact:** **Brush off excess chemical.** Begin decontamination with copious amounts of running water. Remove exposed or contaminated clothing, taking care not to contaminate eyes. GET MEDICAL ATTENTION IMMEDIATELY. Thoroughly clean and dry contaminated clothing before reuse. Discard leather goods.
- Eye Contact:** If the product enters the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have the contaminated individual "roll" eyes. The recommended minimum flushing time is 15 minutes. Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to the internal contents of the eye.

**Most Important Symptoms/Effects (Acute and Delayed)**

**Acute Symptoms/Effects:** Listed Below

**Inhalation (Breathing):** Respiratory System Effects: Exposure to airborne material may cause irritation, redness of upper and lower airways, coughing, laryngeal spasm and edema, shortness of breath, bronchio-constriction, and possible pulmonary edema. Severe and permanent scarring may occur. The pulmonary edema may develop several hours after acute exposure.

**Skin:** Skin irritation. Skin exposure may cause irritation, redness, itching swelling, burning sensation.

**Eye:** Serious eye damage. Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to the internal contents of the eye.

**Ingestion (Swallowing):** Ingesting this material may cause irritation, nausea, and vomiting. Oxidation may cause significant metabolic issues such as methemoglobinemia, hemolysis, and intravascular coagulation and renal failure.

**Delayed Symptoms/Effects:**

Repeated and prolonged skin contact may cause dermatitis.

**Interaction with Other Chemicals Which Enhance Toxicity:** Mixing with ammonia, acids, detergents, or organic matter will release chlorinated compounds, which are irritating to eyes, lungs, and mucus membranes. Chlorine dioxide vapors are emitted when this product contacts acids, chlorine or bleach.

**Medical Conditions Aggravated by Exposure:** May aggravate preexisting conditions such as: Eye disorders that decrease tear production or have reduced integrity. Skin disorders that compromise the integrity of the skin. Respiratory

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conditions including asthma and other breathing disorders. Ingestion may induce G6PD deficiency, hemolysis and renal failure. G6PD deficiency, hemoglobinopathies, renal compromise, and conditions causing hypoxia may be aggravated by ingestion of this material.

**Protection to First-Aiders:** Protect yourself by avoiding contact with this material. Avoid contact with skin and eyes. Do not ingest. Do not breathe dust. Use personal protective equipment. Refer to Section 8 for specific personal protective equipment recommendations. At minimum, treating personnel should utilize PPE sufficient for prevention of blood borne pathogen transmission.

**Notes to Physicians:** Chlorine dioxide vapors are emitted when this product contacts acids or chlorine. If these vapors are inhaled, monitor patient closely for delayed development of pulmonary edema which may occur up to 48-72 hours post inhalation. Following ingestion, neutralization and use of activated charcoal is not indicated. Probable mucosal damage may contraindicate the use of gastric lavage. Treat as a corrosive due to the pH of this material. This is also a strong oxidizer which will react with tissue in the presence of water. For prolonged exposures and significant exposures, considered delayed injury to exposed tissues. There is no specific antidote. Treatment is supportive care. Follow normal parameters for airway, breathing and circulation. Ingestion of even small amounts of solution should be closely monitored for methemoglobinemia, hemolysis, and glutathione depletion, followed by renal failure. This chemical acts similarly to its related compound chlorate, and produces a drug induced G6PD deficiency. Methylene blue has not been reported as effective. Consult the PubMed Case Report PMID 22996135 for the case description and treatment utilized.

## 5. FIRE FIGHTING MEASURES

**Flash Point, C:** Not Applicable

**Auto-ignition Temperature, C:** Not Applicable

**Lower explosive Limit, %:** Not Applicable

**Upper Explosive Limit, %:** Not Applicable

**Extinguishing Media:** Select fire extinguishing media appropriate for the surrounding area.

Water Spray: YES (for cooling)

Carbon Dioxide: YES

Foam: YES

Dry Chemical: YES

Halon: YES

Other: Any "ABC" Class.

**Fire Fighting Procedures:** Prevent the spread of any released product to combustible objects. Structural firefighters must wear Positive-Pressure Self-Contained Breathing Apparatus and fully protective equipment. Chemical resistant clothing may be necessary. Move containers from fire area if it can be done without risk to personnel. Cool fire-exposed containers with water to prevent rupture. Flood with a fine water spray. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas. Rinse contaminated equipment thoroughly before returning such equipment to service.

**Unusual Fire and Explosion Hazards:** This product is irritating and presents a moderate inhalation and contact hazard to firefighters. When involved in a fire, this material may decompose and produce irritating vapors and toxic gases (e.g., sodium oxides, hydrogen chloride). This product may become unstable at elevated temperatures. This product is an oxidizer; it can act to initiate and sustain the combustion of flammable materials.

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: Not sensitive.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Isolate hazard area and deny entry. Keep unnecessary and unprotected personnel from entering the area. Avoid contact with the skin and eyes. Do not breathe dust, fume gas, mist, vapors or spray. Do not ingest. Wear appropriate personal protective equipment recommended in Section 8.

**Methods and Materials for Containment and Cleaning Up:** DO NOT use floor sweeping compounds to clean up spills. Dampen and scoop spilled material into clean, dedicated equipment. Do not dry sweep. Every attempt should be made to avoid mixing with other chemicals or debris when cleaning up. Keep collected material damp and put into drums. Dispose of in accordance with all applicable regulations.

**Environmental Precautions:** This material is harmful to aquatic life. Keep out of water supplies and sewers. Should not be released into the environment. Releases should be reported, if required, to appropriate agencies.

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## 7. HANDLING AND STORAGE

**Precautions for Safe Handling:** Do not taste or swallow. Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or dust when opening container. Avoid creation of dust or fumes. Wear personal protective equipment as described in Section 8. Wash thoroughly after handling. Use clean, dry utensils. Do not add the product to any dispensing device containing residuals of other products. Contamination may start a chemical reaction with generation of heat, liberation of hazardous gasses (chlorine dioxide- a poisonous, explosive gas), and possible fire and explosion. Do not contaminate with acids, reducing agents, combustible materials, oxidizing materials, hypochlorite, organic solvents and compounds, garbage, dirt, organic matter, household products, chemicals, soap products, paint products, vinegar, beverages, oils, pine oil, dirty rags, sulfur-containing rubber, or any other foreign matter, Do not drop, roll or skid drums.

**Storage and Handling Practices:** All employees who handle this material should be trained to handle it safely. Keep container tightly closed when not in use. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Store containers away from incompatible chemicals (see Section 10, Stability and Reactivity). Storage areas should be made of fire-resistant materials. Post warning and "NO SMOKING" signs in storage and use areas, as appropriate. Floors should be sealed to prevent absorption of this material. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Have appropriate extinguishing equipment in the storage area (e.g., sprinkler system, portable fire extinguishers). Refer to NFPA 43A, *Liquid, Solid Oxidizers*, for additional information on storage. Empty containers may contain residual particulates; therefore, empty containers should be handled with care. Never store food, feed, or drinking water in containers that held this product.

**Protective Practices During Maintenance of Contaminated Equipment:** Follow practices indicated in Section 6 (Accidental Release Measures). Make certain that application equipment is locked and tagged-out safely if necessary. Collect all rinsates and dispose of according to applicable U.S. Federal, State, or local procedures and appropriate Canadian standards.

**Incompatibilities/Materials to Avoid:** Acids, reducing agents, combustible materials, oxidizing agents, hypochlorite, organic solvents and compounds, garbage, dirt, organic materials, household products, chemicals, soap products, vinegar, beverages, oils, pine oil, dirty rags, sulfur-containing rubber, or any other foreign matter.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

**Regulatory Exposure Limit(s):** None. This product does not contain any components that have regulatory occupational exposure limits (OEL's) established.

OEL: Occupational Exposure Limit; OSHA: United States Occupational Safety and Health Administration

PEL: Permissible Exposure Limit; TWA: Time Weighted Average; STEL: Short Term Exposure Limit

**Non-Regulatory Exposure Limit(s):** Listed below for the product components that have advisory (non-regulatory) occupational exposure limits (OEL's) established.

-The Non-Regulatory United States Occupational Safety and Health Administration (OSHA) limits, if shown are Vacated 1989 PEL's (vacated by 58 FR 35338, June 30, 1993).

-The American conference of Governmental Industrial Hygienists (ACGIH) is a voluntary organization of professional industrial hygiene personnel in government or educational institutions in the United States. The ACGIH develops and publishes recommended occupational exposure limits each year called the Threshold Limit Values (TLV's) for hundreds of chemicals, physical agents, and biological exposure indices.

OXY REL 8hr TWA	1mg/m <sup>3</sup> recommended Time Weighted Average- 8 hour (internal Occupational Exposure Limit). This value is based on potential systematic effects from inhalation of sodium chlorite dust
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**Engineering Controls:** Use only in well-ventilated areas. Provide local exhaust ventilation where dust or mist may be generated. Ensure compliance with applicable exposure limits.

**Personal Protective Equipment:**

**Eye Protection:** Safety glasses as authorized in 29 CFR 1910.133, applicable U.S. State regulations, or the appropriate standards of Canada and its Provinces or EC Member States (per European Standard EN 166).

**Hand Protection:** None required when handling chemical in a sealed container. When direct contact with Chlorine Dioxide is possible, use butyl rubber, natural rubber, neoprene, and nitrile rubber gloves for routine use (do not use polyvinyl gloves). Gloves should be changed frequently during use of product. Use triple gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this SDS.

**Body Protection:** None required when handling chemical in a sealed container. When direct contact with Chlorine Dioxide is possible, use body protection appropriate for task (e.g., gown or apron).

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**Respiratory Protection:** None normally required for routine use. If respiratory protection is needed, such as during use of this product with other materials, or during emergency response to uncontrolled releases, use only protection authorized in 29 CFR 1910.134, applicable U.S. State regulations, Canadian CSA Standard Z94.4-93, or EC Member States (per European Standard EN 149). Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998)..

**Ventilation:** Use with adequate ventilation to ensure exposure levels are maintained below the limits provided in Section 2 (Composition and Information on Ingredients), if applicable. If existing ventilation is not adequate, product should be used with a local exhaust hood, or in ductless fume hood/portable ventilation system. All ventilation systems should pull air at or below the open container in order to pull dusts away from the person using the product. Ensure eyewash/safety shower stations are available near areas where this product is used.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Form:</b>	Solid.
<b>Color:</b>	White, flaky.
<b>Odor:</b>	Slight chlorine.
<b>Odor Threshold:</b>	Not established.
<b>Molecular Weight:</b>	90.45
<b>Molecular Formula</b>	<b>NaClO<sub>2</sub></b>
<b>Boiling Point:</b>	Not established.
<b>Melting /Freezing Point:</b>	180-200°C (356-392°F)
<b>Vapor Pressure, mm Hg @ 20°C:</b>	Not established.
<b>Relative Vapor Density (air = 1):</b>	Not established.
<b>Evaporation Rate (n-BuAc = 1):</b>	Similar to water.
<b>Specific Gravity (water = 1):</b>	Not established.
<b>Solubility in Water @ 25°C:</b>	39%.
<b>pH (25% Solution):</b>	> 12
<b>Viscosity:</b>	Not applicable.
<b>Flash Point:</b>	Not applicable.
<b>Coefficient of Oil/Water Distribution (Partition Coefficient):</b>	Not established.
<b>How to Detect this Substance (warning properties):</b>	The odor and appearance may be a distinguishing characteristic for this product if spilled.

## 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	Not reactive under normal temperatures and pressures.
<b>Stability Data:</b>	Stable at normal temperatures and pressures.
<b>Possibility of Hazardous Reactions:</b>	Avoid heat, flames, sparks and other sources of ignition. Avoid contamination with foreign materials. Avoid exposure to sunlight or ultraviolet light.
<b>Incompatibility (Materials to Avoid):</b>	Strong reducers, finely powdered metals, phosphorus, sulfur, zinc, ammonia, organic materials, combustible materials, acids, reducing agents, oxidizing materials, household products, chemicals, soap products, paint products, vinegar, beverages, oils, pine oil, dirty rags, sulfur-containing rubber, or any other foreign matter.
<b>Hazardous Decomposition Products:</b>	Products of thermal decomposition include sodium oxides and hydrogen chloride. Chlorine dioxide is formed on contact with acids.
<b>Polymerization:</b>	Will not occur.
<b>Conditions/Hazards to Avoid:</b>	Avoid exposure to or contact with extreme temperatures, incompatible chemicals. Avoid mechanical shock or impact, if contaminated.

## 11. TOXOLOGICAL INFORMATION

**Toxicity Data:** The specific toxicology data available for the Sodium Chlorite component of this product are as follows. Data for other components are not given on this SDS.

<b>SODIUM CHLORITE:</b>	Sperm Morphology (oral, rat) = 660 mg/kg/66 days/continuous	TDL <sub>0</sub> (oral, rat) = 365 mg/kg/1 year/continuous; Blood: pigmented or nucleated red blood cells, changes in other cell count (unspecified); Nutritional and Gross Metabolic: weight loss or decreased weight gain
Mutation in Microorganisms ( <i>Salmonella typhimurium</i> ) = 300 µg/plate	Micronucleus Test (intraperitoneal, mouse) = 15 mg/kg	
DNA Inhibition (oral, rat) = 84 mg/kg/12 weeks/continuous	Cytogenetic Analysis (fibroblast, hamster) = 20 mg/L	

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TDLo (oral, rat) = 182 g/kg/26 weeks/intermittent; Liver function tests impaired; Changes in serum composition (e.g. TP, bilirubin, cholesterol), Enzyme inhibition, induction, or change in blood or tissue levels: phosphatases

**SODIUM CHLORITE (continued):**

TDLo (oral, rat) = 800 mg/kg/female 8–15 days after conception; Reproductive: Effects on Embryo or Fetus: fetotoxicity (except death, e.g., stunted fetus)

TDLo (oral, rat) = 16 g/kg/female 8–15 days after conception; Reproductive: Fertility: post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants)

TDLo (oral, rat) = 660 mg/kg/male 66 days pre-mating; Reproductive: Paternal Effects: spermatogenesis (incl. genetic material, sperm morphology, motility, and count)

TDLo (oral, rat) = 1130 mg/kg/male 8 weeks pre-mating/female 2 weeks pre-mating; 3 weeks post-birth; Reproductive: Effects on Newborn: biochemical and metabolic

TDLo (intraperitoneal, rat) = 160 mg/kg/female 8–15 days after conception; Reproductive: Fertility: post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants)

**SODIUM CHLORITE (continued):**

TDLo (intraperitoneal, rat) = 80 mg/kg/female 8–15 days after conception; Reproductive: Effects on Embryo or Fetus: fetotoxicity (except death, e.g., stunted fetus)

TDLo (oral, mouse) = 29,750 mg/kg/85 weeks/continuous; Tumorigenic: Carcinogenic by RTECS criteria; Liver: tumors

TDLo (oral, mouse) = 22 g/kg/female 1–21 days after conception/lactating female 28 days post-birth; Reproductive: Effects on Newborn: growth statistics (e.g.%, reduced weight gain)

LD<sub>50</sub> (oral, rat) = 165 mg/kg; jaundice, other or unclassified; Kidney, Ureter, Bladder: interstitial nephritis; Biochemical: Metabolism (Intermediary): other

LC<sub>50</sub> (inhalation, rat) = 230 mg/m<sup>3</sup>/4 hours

LD<sub>50</sub> (oral, mouse) = 350 mg/kg

LD<sub>50</sub> (oral, guinea pig) = 300 mg/kg

**Suspected Cancer Agent:** The components of this product are not found on the following lists: U.S. FEDERAL OSHA Z LIST, NTP, IARC, and CAL/OSHA and therefore are neither considered to be nor suspected to be cancer-causing agents by these agencies.

**Irritancy of Product:** This product may be mildly to moderately irritating to contaminated tissue, especially after prolonged or repeated exposure.

**Sensitization of the Product:** This product is not known to be a skin or respiratory sensitizer.

**Reproductive Toxicity Information:** Listed below is information concerning the effects of this product and its components on animal and human reproductive systems.

**Mutagenicity:** This product is not reported to produce mutagenic effects in humans. Animal mutation data are available for the Sodium Chlorite component of this product; these data were obtained during clinical studies on specific human animal tissues exposed to high doses of these compounds.

**Embryotoxicity:** This product is not reported to produce embryotoxic effects in humans.

**Teratogenicity:** This product is not reported to cause teratogenic effects in humans. Clinical studies on test animals exposed to relatively high doses of the Sodium Chlorite component of this product provided teratogenic data.

**Reproductive Toxicity:** This product is not reported to cause reproductive effects in humans. Clinical studies on test animals exposed to relatively high doses of the Sodium Chlorite component of this product provided reproductive toxicity data. *A mutagen is a chemical that causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical that causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical that causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance that interferes in any way with the reproductive process.*

**ACGIH BIOLOGICAL EXPOSURE INDICES:** Currently, there are no ACGIH Biological Exposure Indices (BEIs) determined for the components of this product.

**Potential Health Effects:**

**Inhalation (Breathing):** Respiratory System Effects: Exposure to airborne material may cause irritation, redness of upper and lower airways, coughing, laryngeal spasm and edema, shortness of breath, bronchio-constriction, and possible pulmonary edema. Severe and permanent scarring may occur. The pulmonary edema may develop several hours after acute exposure.

**Skin:** Skin irritation. Skin exposure may cause irritation, redness, itching swelling, burning sensation.

**Eye:** Serious eye damage. Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to the internal contents of the eye.

**Ingestion (Swallowing):** Ingesting this material may cause irritation, nausea, and vomiting. Oxidation may cause significant metabolic issues such as methemoglobinemia, hemolysis, and intravascular coagulation and renal failure.

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**Signs and Symptoms of Exposure:** Depending on the degree and duration of exposure, possible signs and symptoms from contact of this material with the skin and eyes, breathing this material and swallowing this material may include:

**Inhalation (Breathing):** Respiratory System Effects: Exposure to airborne material may cause irritation, redness of upper and lower airways, coughing, laryngeal spasm and edema, shortness of breath, bronchio-constriction, and possible pulmonary edema. Severe and permanent scarring may occur. The pulmonary edema may develop several hours after acute exposure.

**Skin:** Skin irritation. Skin exposure may cause irritation, redness, itching swelling, burning sensation.

**Eye:** Serious eye damage. Exposure to eyes may cause irritation and burns to the eye lids, conjunctivitis, corneal edema, and corneal burn. Significant and prolonged contact may cause damage to the internal contents of the eye.

**Ingestion (Swallowing):** Ingesting this material may cause irritation, nausea, and vomiting. Oxidation may cause significant metabolic issues such as methemoglobinemia, hemolysis, and intravascular coagulation and renal failure.

**Chronic Toxicity:** Sodium chlorite has produced hemolytic anemia in several animal species at concentrations of 100 mg/L or higher. In a subchronic study using rats, hematological alterations included decreased erythrocyte counts, hemoglobin levels, and hemacrit. Methemoglobin levels decreased in females, but increased in males. There is no evidence of kidney effects in humans; however, in animal studies with sodium chlorite, there is limited evidence of kidney effects.

**Interaction with Other Chemicals Which Enhance Toxicity:** Mixing with ammonia, acids, detergents, or organic matter will release chlorinated compounds, which are irritating to eyes, lungs, and mucus membranes. Chlorine dioxide vapors are emitted when this product contacts acids, chlorine, or bleach.

**GHS Health Hazards:** Listed Below

<b>GHS: Acute Toxicity- Oral:</b>	Category 3- Toxic if Swallowed
<b>GHS: Acute Toxicity- Inhalation:</b>	Category 2- Fatal if Inhaled
<b>GHS: Contact Hazard- Skin:</b>	Category 2- Causes Skin Irritation
<b>GHS: Contact Hazard- Eye:</b>	Category 1- Causes Serious Eye Damage
<b>GHS: Carcinogenicity:</b>	Not classified as a carcinogen per GHS, NTP, IARC, or OSHA criteria
<b>Specific Target Organ Toxicity (Single Exposure):</b>	Category 2- Respiratory System, Blood, Kidneys
<b>Specific Target Organ Toxicity (Repeated/Prolonged Exposure):</b>	Category 2- Blood, Kidneys
<b>Mutagenic Data:</b>	Not classified as a mutagen per GHS criteria. Sodium Chlorite has tested positive in some studies. The significance of these test results for human health is unclear because the oxidizing effects of the chlorite or salting effects of sodium may significantly affect the ability of the tests to accurately detect mutagens.
<b>Reproductive Toxicity:</b>	Not classified as a reproductive toxin per GHS criteria. There is limited evidence of male reproductive effects in animal studies.
<b>Developmental Toxicity:</b>	Not classified as a developmental or reproductive toxin per GHS criteria. Observations in animal studies include decreased serum levels of thyroid hormones in offspring.

## 12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

**Environmental Stability:** The components of this product will slowly decompose into sodium chloride.

**Effect of Material on Plants or Animals:** This product may be harmful to plant and animal-life (especially if large quantities are released).

**Biodegradation:** Chlorite ions are reduced by some bacteria under aerobic conditions

**Bioconcentration:** This material will not bioaccumulate

**Effect of Chemical on Aquatic Life:** This product may be harmful to aquatic plant and animal life.

**Aquatic Toxicity**

LC50 Rainbow Trout = 290 mg/L as 80 NaClO<sub>2</sub> (96 hour)

LC50 Bluegill = 265-310 mg/L as 80% NaClO<sub>2</sub> (96 hour)

LC50 Sheepshead minnow = 62-90 ppm (96 hour)

**Invertebrate Toxicity**

LC50 Daphnia Magna = 0.29 mg/L as 80% NaClO<sub>2</sub> (48 hour)

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**Other Toxicity**

**LC50 Mallard Duck** = 0.49-1.00 g/kg as 80% NaClO<sub>2</sub> (gavage)

**LC50 Bob White Quail** = 0.66 g/kg as 80% NaClO<sub>2</sub> (gavage)

Sodium Chlorite in the diet of birds was not acutely toxic. Eight day dietary LC50's in the Mallard Duck and Bob White Quail were > 10,000 ppm

**German Environmental Listings:**

**Aquatic Hazard Class (WGK):** None of the components of this product have specific WGK classifications assigned. As such, the classification for this product, per the VwVS regulations is WGK 3.

<u>Chemical</u>	<u>Rating</u>
Sodium Chlorite	2

**13. DISPOSAL CONSIDERATIONS**

**Waste from Material:** Dispose in accordance with all applicable regulations. Do not put this product, spilled product, or fully/partially filled containers into the trash or waste compactor. Contact with incompatible materials could cause a reaction and fire. Keep out of water supplies and sewers. May be subject to disposal regulations.

**Container Management:** Do not reuse or refill this container. Offer for recycling iff available. Offer for reconditioning if appropriate. Triple rinse the container promptly after emptying. Triple rinse as follows: empty remaining contents into application equipment or mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Container rinsate must be disposed of in compliance with applicable regulations. Refer to the label for further details.

**U.S. EPA WASTE NUMBER:** D001 (Characteristic/Ignitability), applicable to wastes consisting only of this product

**14. TRANSPORT INFORMATION****Land Transport****U.S. DOT 49 CFR 172.101:**

<b>Proper Shipping Name:</b>	Sodium Chlorite
<b>Hazard Class Number and Description:</b>	5.1 (Oxidizer)
<b>UN Identification Number:</b>	UN 1496
<b>Packing Group:</b>	PG II
<b>DOT Label(s) Required:</b>	5.1 Oxidizer

**Canadian Transportation of Dangerous Goods:**

This material is considered as dangerous goods. Use the above information for the preparation of Canadian Shipments. Additional Canadian information provided below.

<b>UN Identification Number:</b>	UN 1496
<b>Proper Shipping Name:</b>	Sodium Chlorite
<b>Hazard Class Number and Description:</b>	5.1 (Oxidizer)
<b>Packing Group:</b>	PG II
<b>Label(s) Required:</b>	5.1 Oxidizer

**International Air Transport Association (IATA):**

THIS MATERIAL IS CONSIDERED AS DANGEROUS GOODS UNDER IATA RULES. This material is considered as dangerous goods by the International Air Transport Association.

<b><u>Proper Shipping Name:</u></b>	Sodium Chlorite
<b><u>Hazard Class Number and Description:</u></b>	5.1 (Oxidizer)
<b><u>UN Identification Number:</u></b>	1496
<b><u>Packing Group:</u></b>	PG II
<b><u>Hazard Label (S) Required:</u></b>	OXIDIZER
<b><u>ERG Code:</u></b>	5L

## Safety Data Sheet

## CHEM-CD Part A

The following Packaging Information is applicable to this product:

PROPER SHIPPING NAME	PASSENGER AND CARGO AIRCRAFT				CARGO AIRCRAFT ONLY	
	Sodium Chlorite	Limited Quantity		Packing Instruction	Max. Qty per Pkg	Packing Instruction
Packing Instruction		Max. Qty per Pkg				
Y544		2.5 kg	588	5 kg	562	25 kg

**International Maritime Organization (IMO):**

This material is considered as dangerous goods by the International Maritime Organization.

<b>Proper Shipping Name:</b>	Sodium Chlorite
<b>Hazard Class Number and Description:</b>	5.1 (Oxidizer)
<b>UN Identification Number:</b>	1496
<b>Packing Group:</b>	PG II
<b>Labels(S) Required:</b>	OXIDIZER
<b>Marine Pollutant:</b>	This product is not designated by the IMO to be a Marine Pollutant.

**European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR):**

This material is considered by the United Nations Economic Commission for Europe to be dangerous goods.

<b>Substance Identification No.:</b>	1496
<b>Name of Substance:</b>	Sodium Chlorite
<b>Hazard Identification No. (Description):</b>	50
<b>Label:</b>	5.1 (OXIDIZER)
<b>Class and Item Number:</b>	5.1 14° (b)

**15. REGULATORY INFORMATION****U.S. REGULATIONS:**

**OSHA Regulatory Status:** This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

**CERCLA Sections 102a/103 Hazardous Substances (40 CFR 302.4):** If a release is reportable under CERCLA section 103, notify the state emergency response commission and local emergency planning committee. In addition, notify the national Response Center at (800) 424-8802 or (202) 426-2675.

**SARA EHS Chemical (40 CFR 355.30):** Not regulated.

**EPCRA Sections 311/312 Hazard Categories (40 CFR 370.10):** Acute health hazard, chronic health hazard, fire hazard.

**EPCRA Section 313 (40 CFR 372.65):** Not regulated.

**OSHA Processes Safety (PSM) (29 CFR 1910.119):** Not regulated.

**FIFRA Regulations:** Registered pesticide under 40 CFR 152.10, Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), EPA Reg. No. 5382-42 (Technical Sodium Chlorite)

**FIFRA Labeling Requirements:** This chemical is a pesticide product registered by the United States Environmental Protection Agency (EPA) and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace of non-pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

- FIFRA Signal Word- DANGER
- Corrosive
- Causes irreversible eye damage and skin burns
- May be fatal if swallowed
- Irritating to nose and throat
- This product is toxic to fish and aquatic organisms
- Danger: Strong oxidizing agent
- Mix only into water
- Contamination may start a chemical reaction with generation of heat, liberation of hazardous gasses (chlorine dioxide- a poisonous, explosive gas), and a possible fire and explosion
- Do not contaminate with moisture, garbage, dirt, organic matter, household products, chemicals, soap products, paint products, solvents, acids, vinegar, beverages, oils, pine oil, dirty rags, or any other foreign matter
- Do not use moist or damp utensils.

## Safety Data Sheet

## CHEM-CD Part A

**National Inventory Status**

**US Inventory Status: Toxic Substance Control Act (TSCA):** All components are listed or exempt.

**TSCA 12(b):** This product is not subject to export notification.

**Canadian Chemical Inventory:** All components of this product are listed on either the DSL or the NDSL.

**State Regulations**

**California Proposition 65:** This product and its ingredients are not listed, but it may contain impurities/trace elements known to the State of California to cause cancer or reproductive toxicity as listed under Proposition 65 State Drinking Water and Toxic Enforcement Act. For additional information, contact OxyChem Technical Services at 1 (800) 733-1165.

Component	California Proposition 65 Cancer Warning	California Proposition 65 CRT List- Male reproductive toxin	California Proposition 65 CRT List- Female reproductive toxin	Massachusetts Right to Know Hazardous Substance List	New Jersey Right to Know Hazardous Substance List	New Jersey Special Health Hazards Substance List
Sodium Chlorite 7758-19-2	Not Listed	Not Listed	Not Listed	Listed	1689	Corrosive; Reactive- Second Degree

Component	New Jersey- Environmental Hazardous Substance List	Pennsylvania Right to Know Substance List	Pennsylvania Right to Know Special Hazardous Substances	Pennsylvania Right to Know Environmental Hazard List	Rhode Island Right to Know Hazardous Substance List
Sodium Chlorite 7758-19-2	Not Listed	Listed	Not Listed	Not Listed	Not Listed

**CANADIAN REGULATIONS:**

This Product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

**WHMIS Classifications of Substances**

**C-** Oxidizing Materials

**D1A-** Poisonous and infections Material; materials causing immediate and serious toxic effects- Very toxic material

**D1B-** Poisonous and infections Material; materials causing immediate and serious toxic effects- Toxic material

**D2B-** Poisonous and infections Material; materials causing other toxic effects- Toxic material

**E-** Corrosive Material

**PCP Registration:** This product is registered as a pesticide in Canada under PCP Reg No. 25361

**EUROPEAN COMMUNITY INFORMATION:**

**EC LABELING AND CLASSIFICATION:** This product meets the definition of Oxidizing [O] and Toxic [T] as defined by the European Community Council Directive 67/548/EEC.

**EC CLASSIFICATION:** Oxidizing; Toxic [O; T]

**EC RISK PHRASES:** Contact with combustible material may cause fire. Toxic by inhalation, in contact with skin, and if swallowed. Irritating to eyes, respiratory system, and skin. [R: (2)-8-23/24/25-36/37/38]

**EC SAFETY PHRASES:** Keep out of reach of children. (*This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.*) Keep away from combustible material. In case of contact with eyes, rinse immediately with water and seek medical advice. Take off immediately all contaminated clothing. Wear suitable protective clothing, gloves, and eye/face protection. If swallowed, seek medical advice immediately and show this container or label. [S: (2)-17-26-27-36/37/39-46]

**EUROPEAN COMMUNITY ANNEX II HAZARD SYMBOL:**

**EUROPEAN COMMUNITY INFORMATION FOR CONSTITUENTS:** The following information is available for components of this product.

## Safety Data Sheet

## CHEM-CD Part A

**Sodium Chlorite:**

EC EINECS/ELINCS NUMBER: 231-836-6.

EC CLASSIFICATION: Oxidizing; Toxic [O; T]EC RISK PHRASES: Contact with combustible material may cause fire. Toxic by inhalation, in contact with skin, and if swallowed. Irritating to eyes, respiratory system, and skin. [R: 8-23/24/25-36/37/38]EC SAFETY PHRASES: Keep out of reach of children. (*This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.*) Keep away from combustible material. In case of contact with eyes, rinse immediately with water and seek medical advice. Take off immediately all contaminated clothing. Wear suitable protective clothing, gloves, and eye/face protection. [S: (2)-17-26-27-36/37/39]**16. OTHER INFORMATION****Revision Number:** 1/19**Section(s) Revised** Emergency Contact information**Prepared By:** ClorDiSys Solutions, Inc.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. ClorDiSys Solutions, Inc. assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, ClorDiSys Solutions, Inc. assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

# Safety Data Sheet      CHEM-CD Part B

ClorDiSys Solutions, Inc.

Safety Data Sheet

Revision Date: 01/02/2019

Date Printed: 01/02/2019

Date Reviewed: 01/02/2019

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Common Name:** Chlorine Dioxide Release Material  
**Chemical Name:** Chemical Mixture  
**Product Use:** Various Applications.  
**Supplier:** ClorDiSys Solutions, Inc  
 PO Box 549  
 Lebanon, NJ 08833

### For Chemical Emergency Call PERS (24 Hours/Day, 7 Days/Week):

1-800-633-8253 (Domestic/Canada)

1-801-629-0667 (International)

## 2. HAZARDS IDENTIFICATION

### Classification of the Substance or Mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):** Combustible Dust

For the full text of the H-Statements mentioned in this Section, see Section 16.

### GHS Label Elements, Including Precautionary Statements

Pictogram	None
Signal Word	Warning
Hazard Statement(s)	May form combustible dust concentrations in air
Precautionary Statement(s)	None

**Hazards Not Otherwise Classified (HNOC) or Not Covered by GHS:** Combustible Dust

### NFPA Classification:

**Health:** 0  
**Flammability:** 0  
**Instability:** 0  
**Special Hazards:** No OSHA Hazards

### HMIS Classification:

**Health:** 0  
**Flammability:** 0  
**Reactivity:** 0

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

### Substances

**Synonyms:** Vitamin C Sodium Salt  
 L(+) – Ascorbic Acid Sodium Salt  
**Formula:** C<sub>6</sub>H<sub>7</sub>NaO<sub>6</sub>  
**Molecular Weight:** 198.11 g/mol  
**CAS-No.** 134-03-2  
**EC-No** 205-126-1

Ingredient	CAS #	EINECS#	Weight in Product %	Notes
(+)-Sodium L-ascorbate	134-03-2	205-126-1	97-100%	None
Proprietary Ingredient 1			<1%	None
Proprietary Ingredient 2			<1%	None
Proprietary Ingredient 3			<1%	None
Proprietary Ingredient 4			<1%	None

**Other Information:** The percentage by weight values reported for this product represent approximate formulation values

## 4. FIRST AID MEASURES

**Inhalation:** Move person to fresh air. Aid in breathing, if necessary, and get immediate medical attention.

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**Ingestion:** Never give anything by mouth to an unconscious person. Rinse mouth with water.  
**Skin Contact:** Wash with soap and water. Get medical attention if irritation persists.  
**Eye Contact:** Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

**Most important symptoms and effects, both acute and delayed:** The most important known symptoms and effects are described in Section 11

**Indication of any immediate medical attention and special treatment needed:** No data available

## 5. FIRE FIGHTING MEASURES

**Flash Point, C:** Not Applicable  
**Autoignition Temperature, C:** Not Applicable  
**Lower explosive Limit, %:** Not Applicable  
**Upper Explosive Limit, %:** Not Applicable  
**Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  
**Fire Fighting Procedures:** Self-contained breathing apparatus for fire fighting if necessary.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment, and emergency procedures:**

Avoid dust formation. Avoid breathing vapors, mist or gas.

For personal protection see Section 8.

**Environmental precautions:** Do not let product enter drains.

**Methods for cleaning up:** Sweep up and shovel. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

**Precautions for safe handling:** Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed in a dry and well-ventilated place. Light sensitive.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

**Control Parameters:** Contains no substances with occupational exposure limit values.

**Exposure Controls:**

**Appropriate Engineering Controls:** General industrial hygiene practice.

**Personal Protective Equipment:**

**Eye/Face Protection:** Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166 (EU).

**Skin Protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

<u>Full Contact:</u>	Material:	Nitrile Rubber
	Minimum Layer Thickness:	0.11 mm
	Break Through Time:	480 min
<u>Splash Contact:</u>	Material Tested:	Dermatril ® (KCL 740 Aldrich Z677272)
	Material:	Nitrile Rubber
	Minimum Layer Thickness:	0.11 mm
	Break Through Time:	480 min
	Material Tested:	Dermatril ® (KCL 740 Aldrich Z677272)

Data Source: KCL GmbH, D-36124 Eichenzell; phone: +49 (0)6659 87300; email:

[sales@kcl.de](mailto:sales@kcl.de); test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by our customers. It should not be construed as offering an approval for any specific scenario.

**Body Protection:** Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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**Respiratory Protection:** Respiratory protection is not required. Wear protection from nuisance levels of dusts are desired, use type N95 (US) or P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of Environmental Exposure:** Do not let product enter drains.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Form:</b>	Solid (solid crystalline powder).
<b>Color:</b>	No Data Available
<b>Odor:</b>	Odorless
<b>Boiling Point, C:</b>	No Data Available
<b>Melting point:</b>	220 °C (428 °F)
<b>Solubility (in water)</b>	No Data Available
<b>pH:</b>	No Data Available
<b>Flash point:</b>	No Data Available
Evaporation Rate:	No Data Available
<b>Ignition temperature:</b>	No Data Available
Flammability:	May form combustible dust concentrations in air
Vapor Pressure:	No Data Available
Vapor Density:	No Data Available
Relative Density:	No Data Available
Partition coefficient:	No Data Available
n-octanol/water	
Decomposition :	No Data Available
Temperature:	
Viscosity:	No Data Available
Explosive properties:	No Data Available
Oxidizing properties:	No Data Available
<b>Lower explosion limit:</b>	No Data Available
<b>Upper explosion limit:</b>	No Data Available

### 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	No data available
<b>Stability Data:</b>	Stable under recommended storage conditions.
<b>Conditions/Hazards to Avoid:</b>	Exposure to light.
<b>Incompatibility (Materials to Avoid):</b>	Strong oxidizing agents, Strong bases.
<b>Hazardous Reactions:</b>	Upon exposure to water vapor, chlorine dioxide gas is released.
<b>Hazardous Decomposition Products:</b>	<b>Hazardous decomposition products formed under fire conditions.</b> Carbon oxides, Sodium/sodium oxides.

### 11. TOXOLOGICAL INFORMATION

<b>Acute toxicity:</b>	no data available
<b>Irritation and corrosion:</b>	no data available
<b>Sensitization:</b>	no data available
<b>Chronic exposure:</b>	no data available
<b>Signs and Symptoms of Exposure:</b>	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
<b>Carcinogenicity:</b>	
IARC:	No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC
ACGIH:	No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH
NTP:	No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
OSHA:	No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA
<b>Potential Health Effects</b>	
<b>Inhalation:</b>	May be harmful if inhaled. May cause respiratory tract irritation.

# Safety Data Sheet      CHEM-CD Part B

**Skin:** May be harmful if absorbed through skin. May cause skin irritation.  
**Eyes:** May cause eye irritation.  
**Ingestion:** May be harmful if swallowed.

## 12. ECOLOGICAL INFORMATION

<b>Toxicity</b>	No data available.
<b>Persistence and Degradability:</b>	No data available.
<b>Bioaccumulative Potential:</b>	No data available.
<b>Mobility in Soil:</b>	No data available.
<b>Results of PBT and vPvB Assessment</b>	No data available.
<b>Other Adverse Effects</b>	No data available.

## 13. DISPOSAL CONSIDERATIONS

**Disposal of Waste Method:** Federal, state and local disposal laws and regulations will determine the proper waste disposal/recycling/reclamation procedure. All waste materials should be reviewed to determine the applicable hazards (testing may be necessary).

## 14. TRANSPORT INFORMATION

<b>US Department of Transportation (US-DOT):</b>	Not dangerous goods
<b>International Maritime Organization (IMO):</b>	Not dangerous goods
<b>International Air Transport Association (IATA):</b>	Not dangerous goods

## 15. REGULATORY INFORMATION

<b>OSHA Hazards:</b>	No OSHA Hazards
<b>TSCA Status:</b>	On TSCA Inventory
<b>DSL Status:</b>	All components of this product are on the Canadian DSL list.
<b>SARA 302 Components:</b>	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
<b>SARA 313 Components:</b>	SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
<b>SARA 311/312 Hazards:</b>	No SARA Hazards.
<b>Massachusetts Right To Know Components:</b>	No Components Listed.
<b>Pennsylvania Right To Know Components:</b>	Sodium ascorbate, CAS-No.134-03-2.
<b>New Jersey Right To Know Components:</b>	Sodium ascorbate CAS-No.134-03-2.
<b>California Prop. 65 Components:</b>	This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

## 16. OTHER INFORMATION

<b>Revision Number:</b>	1/19
<b>Section(s) Revised</b>	Emergency Contact Number
<b>Prepared By:</b>	ClorDiSys Solutions, Inc

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. ClorDiSys Solutions, Inc. assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, ClorDiSys Solutions, Inc. assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

### HMIS Rating

Health hazard:	0
Chronic health hazard:	0
Flammability:	0
Physical hazard:	0

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NFPA Rating

Health hazard:            0

Fire hazard:                0

Reactivity hazard:        0

## Safety Data Sheet

## CHEM-CD Part N

ClorDiSys Solutions, Inc

Material Safety Data Sheet

Revision Date: 01/02/2019

Date Printed: 01/02/2019

Date Reviewed: 01/02/2019

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Common Name:** Sodium Sulfite**Chemical Name:** Chemical Mixture**Product Use And Restrictions On Use:** Paper manufacture, food additive, water treatment, waste treatment, other industrial processes.**Supplier:** ClorDiSys Solutions, Inc  
PO Box 549  
Lebanon, NJ 08833**For Chemical Emergency Call PERS (24 Hours/Day, 7 Days/Week):**

1-800-633-8253 (Domestic/Canada)

1-801-629-0667 (International)

## 2. HAZARDS IDENTIFICATION

**GHS Classification** Not Classified as Hazardous**Label Elements** None Required**NFPA Classification:****Health:** 1**Flammability:** 0**Instability:** 0**HMIS Classification:****Health:** 1**Flammability:** 0**Reactivity:** 0**Personal Protection:** E**Special Hazards:** No OSHA Hazards

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	EINECS#	Weight in Product %	Notes
Sodium Sulfite	7757-83-7	231-821-4	97 %	None
Sodium Sulfate	7757-82-6		< 3%	None

**Other Information:** **Toxicological Data on Ingredients:** Sodium sulfite: ORAL (LD50): Acute: 820 mg/kg [Mouse.]. 3650 mg/kg [Rat].

Trace impurities and additional material names not listed above may appear in Section 15 of this SDS. These materials may be listed for local "Right-to-Know" compliance and for other reasons. The exact concentrations are trade secret.

## 4. FIRST AID MEASURES

**Inhalation:** Move person to fresh air. Aid in breathing, if necessary. Get immediate medical attention if signs of suffocation, irritation or other symptoms develop.**Ingestion:** If conscious, immediately rinse mouth with water and give 1 glass of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get immediate medical attention.**Skin Contact:** Flush skin with plenty of soap and water. Remove contaminated clothing and shoes and launder before reuse. Get medical attention if irritation persists.

**Safety Data Sheet****CHEM-CD Part N**

<b>Eye Contact:</b>	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Check for and remove any contact lenses within 5 minutes if you can do so easily, and continue rinsing. Get medical attention if irritation persists.
<b>Most Important Symptoms/Effects Acute and Delayed:</b>	May irritate the skin May cause irritation to the eyes. Harmful if swallowed or ingaled. May cause severe and possibly fatal allergic reactions if inhaled or swallowed by some asthmatics and over 'sulfite-sensitive' individuals. Reacts with acids to form toxic and irritating sulfur dioxide gas.
<b>Indication of Immediate Medical Attention and Special Treatment, If Needed:</b>	Treat symptomatically. Note potential for anaphylactic shock with allergic individuals.

**5. FIRE FIGHTING MEASURES****Suitable (and Unsuitable) Extinguishing Media:**

Material is not flammable. Use extinguishing media appropriate for material in surrounding fire.

**Specific Hazards Arising From the Chemical:**

Releases toxic and irritating sulfur dioxide at fire temperatures.

**Special Protective Equipment and Precautions for Fire-Fighting:**

Wear special NIOSH-approved self-contained breathing apparatus. Use water spray to keep conditions cool and to knock down vapors or gasses.

**6. ACCIDENTAL RELEASE MEASURES****Personal Precautions, Protective Equipment, and Emergency Procedures:**

Provide ventilation to clear sulfur dioxide fumes which may be generated by contact with water. Wear appropriate personal protective equipment.

**Environmental precautions:**

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

**Methods and Materials for Containment and Cleaning Up:**

Promptly sweep up material with minimum dusting and shovel into an empty container with a cover. Rinse spill area with plenty of water.

**7. HANDLING AND STORAGE****Precautions for Safe Handling:**

(see section 8 for recommended personal protective equipment). Avoid contact with skin, eyes and clothing. Do not breathe dust. Do not eat or drink in the work area. Use normal personal hygiene and housekeeping. Keep away from acid and oxidizing agents.

**Conditions for Safe Storage, Including any Incompatibilities:**

Store in a cool, dry, well-ventilated place away from acids and oxidizing

**8. EXPOSURE CONTROL / PERSONAL PROTECTION****Exposure Guidelines:**

Ingredient Name	ACGIG TLV	OSHA PEL	Other Limit
Sodium Sulfite	None	None	None
Sodium Sulfate	None	None	None

**Other Exposure Limits for Potential Decomposition Products:**

Sulfur Dioxide: OSHA TWA = 5 ppm

ACGIH STEL = 0.25

**Appropriate Engineering Controls:**

Local exhaust if dusty conditions exist or if there is a release of sulfur dioxide gas. Do not use in unventilated spaces, e.g. holds of fishing boats, walk-in coolers or confined spaces.

**Personal protective equipment**

**Respiratory Protection:** Where required use a NIOSH-approved respirator for dust, mist and/or sulfur dioxide gas, as conditions indicate. Some exposures may require a NIOSH-approved self-contained breathing

## Safety Data Sheet

## CHEM-CD Part N

apparatus or supplied-air respirator. Equipment selection depends on containment type and concentration. Select in accordance with 29 CFR 1910.134 and good industrial hygiene practice

**Skin Protection:** For handling dry material, wear rubber gloves and full work clothing, including long sleeved shirt and trousers. When handling solutions and there is prolonged or repeated contact, wear impervious gloves, clothing and boots.

**Eye protection:** Wear chemical safety glasses

**Additional Recommendations:** Eyewash and safety shower are recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Form:</b>	Solid (solid crystals or powder).
<b>Color:</b>	White to pale yellow.
<b>Odor:</b>	Odorless.
<b>Odor Threshold:</b>	Not determined.
<b>Molecular Weight:</b>	126.04
<b>Chemical Formula:</b>	$\text{Na}_2\text{SO}_3$
<b>Relative Density (<math>\text{H}_2\text{O} = 0</math>)</b>	2.63
<b>Solubility in Water (weight %):</b>	<b>17% at 10°C; 28% at 33.3°C</b>
<b>Boiling Point, C:</b>	Not applicable.
<b>Melting/Freezing point:</b>	Decomposition temperature: >900°C.
<b>pH:</b>	5% solution- 9.8.
<b>Vapor Pressure:</b>	Not Applicable.
<b>Vapor Density (air = 1.0):</b>	Not Applicable.
<b>Evaporation Rate:</b>	Not Applicable.
<b>% Volatiles:</b>	Not Applicable.
<b>Partition Coefficient:</b>	Not Applicable.
<b>Viscosity:</b>	Not Applicable.
<b>Flash Point:</b>	Not Flammable.
<b>Flash Point Method:</b>	Not Applicable.
<b>Autoignition Temperature:</b>	Not Applicable.
<b>Upper Flame Limit:</b>	Not Applicable.
<b>Lower Flame Limit:</b>	Not Applicable.
<b>Decomposition Temperature:</b>	Not Determined.
<b>Flammability (solid, gas):</b>	Not Flammable.
<b>OSHA Flammability Class:</b>	Not Applicable.

## 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	Not normally reactive.
<b>Chemical Stability:</b>	Normally stable.
<b>Possibility of Hazardous Reactions:</b>	Reacts with acids to form toxic and irritating sulfur dioxide gas.
<b>Incompatibility (Materials to Avoid):</b>	Reactive with oxidizing agents, combustible materials, organic materials, acids.
<b>Conditions of Instability:</b>	Avoid elevated temperatures. Temperatures above 900°C cause the rapid evolution of toxic and corrosive sulfur dioxide gas and hazardous residue.
<b>Hazardous Decomposition Products:</b>	Sulphur Dioxide and Sodium Sulfide Residue. Sodium Sulfide is flammable, a dangerous fire risk, a strong irritant to skin and tissue, and is incompatible with acids.

## 11. TOXOLOGICAL INFORMATION

**Potential Health Hazards****Acute Effects of Exposure:**

<b>Skin:</b>	Repeated or prolonged contact with dust may cause irritation. Contact with solutions will cause skin irritation.
<b>Eyes:</b>	Dust or mist may irritate the eyes. Solutions will irritate or burn.
<b>Inhalation:</b>	Inhalation of dust or mist can irritate the respiratory tract. May cause severe or deadly allergic reactions in some asthmatic and sulfite sensitive individuals. Possible signs and symptoms of allergic reactions include bronchoconstriction, sweating, flushing, hives, rapid heart rate,

**Safety Data Sheet****CHEM-CD Part N**

decreased blood pressure, and anaphylaxis. Contact with acids releases sulfur dioxide gas which may be harmful or deadly if inhaled.

**Ingestion:** May irritate the gastrointestinal tract. May cause severe or deadly allergic reactions in some asthmatics and sulfite sensitive individuals. Large doses may cause violent colic and diarrhea, circulatory disturbances, central nervous system depression, and even death.

**Chronic Effects:** None known.

**Ingredients found on one of the three OSHA designated carcinogen lists are listed below.**

Ingredient Name	NTP Status	IARC Status	OSHA List
No ingredients listed in this section.	-----	-----	-----

**Numerical Measures of Toxicity:****Immediate (Acute) Effects:**

Sodium Sulfite- LD<sub>50</sub> (oral, rat) = 2610-6400 mg/k; LC<sub>50</sub> (inhalation, rat) > 5.5 mg/L/4 hr.; LC<sub>50</sub> (inhalation, rat) >22 mg/L./1 hr.

Sodium Sulfate- LD<sub>50</sub> (oral, rat) > 10,000 mg/kg

**Delayed (Subchronic and Chronic) Effects:**

Sodium sulfite has been demonstrated to be mutagenic in microbial systems; however, it is not mutagenic in studies involving insects and is not considered to present a mutagenic threat to multi-cell organisms.

**Other Data:**

None

**12. ECOLOGICAL INFORMATION****Ecotoxicity:**

The following ecotoxicity data is available for Sodium Sulfite:

Daphnia magna LC <sub>50</sub> 48 hr	440 mg/L
Western Mosquitofish LC <sub>50</sub> 96 hr	460 mg/L
Biological Oxygen Demand (BOD)	0.12 lb/lb, instantaneous

The following ecotoxicity data is available for Sodium Sulfate:

Daphnia magna LC <sub>50</sub> 48 hr	2,564 mg/L
Western Mosquitofish LC <sub>50</sub> 96 hr	3,710 mg/L

**Persistence and Degradability:**

No data available.

**Bioaccumulative Potential:**

No data available.

**Mobility in Soil:**

No data available.

**Other Adverse Effects:**

No data available.

**13. DISPOSAL CONSIDERATIONS****RCRA**

**Is the unused product a RCRA hazardous waste if discarded?** No

**If yes, the RCRA ID Number is:** N/A

**Other Disposal Considerations:** Dispose of in accordance with applicable Federal, State and Local regulations.

The information offered in Section 13 is for the product as shipped. Use and/or alterations to the product such as mixing it with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

**Safety Data Sheet****CHEM-CD Part N****14. TRANSPORT INFORMATION**

**US Department of Transportation (US-DOT):** Not regulated.  
**US-DOT ID Number:** Not applicable.  
**Proper Shipping Name:** Not applicable.

For additional information on shipping regulations affecting this material, contact the info number found in Section 1.

**15. REGULATORY INFORMATION****Toxic Substances Control Act (TSCA)**

**TSCA Inventory Status:** All components are listed on TSCA Inventory of Chemical Substances

**Other TSCA Issues:** None.

**SARA Title III/CERCLA**

“Reportable Quantities” (RQs) and/or “Threshold Planning Quantities”

Ingredient Name	SARA/CLERCLA RQ (lb)	SARA EHS TPQ (lb)
No ingredients listed in this section.	-----	-----

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee. Many states have more stringent regulations. Report all spills in accordance with local, state and federal regulations.

**SECTION 311 HAZARD CLASS:** Not hazardous.

**SARA 303 TOXIC CHEMICALS:** Not available

**State Right-To-Know** Not available.

**California Proposition 65:** This product does not contain any ingredients known to the State of California to cause cancer and/or reproductive harm

**Additional Regulatory Information:** None

**WHMIS Classification (Canada):** D2B

**Foreign Chemical Control Inventory Status:** Listed on Canadian DS:, Australian AICS, Philippines PICCS, Chinese IECSC, Japanese MITI, Korean KECL, and EU EINECS.

**16. OTHER INFORMATION**

**Revision Number:** 1/19

**Section(s) Revised:** Emergency Contact Number

**Prepared By:** ClorDiSys Solutions, Inc

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