Sodium Chlorate Crystal

Safety Data Sheet

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Revision Date: 05/05/15 Date of issue: 05/05/15 Version: 1.0

SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Substance

Product Name: Sodium Chlorate Crystal

CAS No: 7775-09-9

Formula: NaClO3

Synonyms: Chlorate of soda; Chloric acid, sodium salt

Intended Use of the Product

Production of Chlorine dioxide for bleaching pulp; Herbicide

Name, Address, and Telephone of the Responsible Party

Manufacturer

CHEMTRADE LOGISTICS INC.
155 Gordon Baker Road
Suite 300
Toronto, Ontario M2H 3N5
For MSDS Info: (416) 496-5856
www.chemtradelogistics.com

Emergency Telephone Number

Emergency number : Canada: CANUTEC +1-613-996-6666 / US: CHEMTREC +1-800-424-9300
Chemtrade Emergency Contact: (866) 416-4404
For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Ox. Sol. 1	H271
Acute Tox. 4 (Oral)	H302
Aquatic Chronic 2	H411

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :

GHS03 GHS07 GHS09

Signal Word (GHS-US) : Danger

Hazard Statements (GHS-US) : H271 - May cause fire or explosion; strong oxidizer
H302 - Harmful if swallowed
H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements (GHS-US) : P210 - Keep away from heat, open flames, sparks. - No smoking
P220 - Keep/Store away from combustible materials, combustibles, clothing
P221 - Take any precaution to avoid mixing with combustible materials, clothing, combustibles
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 protective gloves/protective clothing/eye protection/face protection
P283 - Wear fire/flame resistant/retardant clothing
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P306+P360 - If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes
P330 - If swallowed, rinse mouth

P370+P378 - In case of fire: Use exposed areas. to extinguish
P371+P380+P375 - In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion
P391 - Collect spillage
P501 - Dispose of contents/container according to local, regional, national, and international regulations

Other Hazards

Other Hazards Not Contributing to the Classification: Not available

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Name	Product identifier	% (w/w)	Classification (GHS-US)
Sodium chlorate	(CAS No) 7775-09-9	> 99.6	Ox. Sol. 1, H271 Acute Tox. 4 (Oral), H302 Aquatic Chronic 2, H411

Mixture

Not applicable

SECTION 4: FIRST AID MEASURES

Description of 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). IF exposed or concerned: Get medical advice/attention.

Inhalation: When symptoms occur: go into open air and ventilate suspected area.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor/physician if you feel unwell.

Most Important Symptoms and Effects Both Acute and Delayed

General: Harmful if swallowed. Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

Inhalation: Inhalation of vapors may cause respiratory irritation.

Skin Contact: May cause skin irritation.

Eye Contact: Direct contact with the eyes is likely irritating.

Ingestion: Swallowing a small quantity of this material will result in serious health hazard.

Chronic Symptoms: None known.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

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

Special Hazards Arising From the Substance or Mixture

Fire Hazard: May cause fire or explosion; strong oxidizer. Will burn if exposed to heat, and in addition, will accelerate the burning of other combustibles, resulting in more rapid spread of fire.

Explosion Hazard: Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

Reactivity: 'Oxidizing': substances and preparations which exhibit highly exothermic reactions when in contact with other substances, particularly flammable substances. Oxidizing activity increases with decreasing pH.

Advice for Firefighters

Precautionary Measures Fire: Not available

Firefighting Instructions: Exercise caution when fighting any chemical fire. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

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

Other information: Use water spray or fog for cooling exposed containers.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: No naked lights. No smoking. Do not allow product to spread into the environment.

For Non-Emergency Personnel

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

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area.

Environmental Precautions

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

Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid. Use only non-sparking tools.

Methods for Cleaning Up: Collect spillage. Clear up spills immediately and dispose of waste safely.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: Hazardous waste due to potential risk of explosion.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do no eat, drink or smoke when using this product. Always wash your hands immediately after handling this product, and once again before leaving the workplace.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Proper grounding procedures to avoid static electricity should be followed.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep in fireproof place.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

Specific End Use(s) Production of Chlorine dioxide for bleaching pulp; Herbicide

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

No Occupational Exposure Limits (OELs) have been established for this product or its chemical components.

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. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment.

Personal Protective Equipment: Gloves. Protective goggles. Dust formation: dust mask.

Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Wear chemical goggles with a vapor-tight seal.

Skin and Body Protection: Clothing contaminated with sodium chlorate may become dangerously flammable and should not be allowed to dry (keep wet). Remove contaminated clothing and wash immediately immediately. Clothing and gloves worn in areas where chlorate is stored or used should be washed at the end of each work shift. Leather materials should be kept out of chlorate areas. Change clothing at end of each work shift or when contaminated.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	:	Solid
Appearance	:	Colorless or white crystals
Odor	:	Odorless
Odor Threshold	:	Not available
pH	:	7 - 9 (Neutral as solution in water) Oxidizing activity increases with decreasing pH.
Relative Evaporation Rate (butylacetate=1)	:	Not available
Melting Point	:	248 °C (478.4°F)
Freezing Point	:	Not available
Boiling Point	:	265 °C (509°F) decomposes
Flash Point	:	Not available
Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available
Lower Flammable Limit	:	Not available
Upper Flammable Limit	:	Not available
Vapor Pressure	:	0 mm Hg. Does not form a vapor
Relative Vapor Density at 20 °C	:	Not applicable
Relative Density	:	Not available
Specific Gravity	:	2.49 g/cm³
Solubility	:	Soluble. Water: 96 - 100 g/100ml @ 20°C
Partition coefficient: n-octanol/water	:	Log Pow -7.18 (estimated)
Viscosity	:	Not applicable
Explosion Data – Sensitivity to Mechanical Impact	:	On contact with combustible materials: Sensitive to mechanical impact
Explosion Data – Sensitivity to Static Discharge	:	On contact with combustible materials: Static discharge could act as an ignition source.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: 'Oxidizing': substances and preparations which exhibit highly exothermic reactions when in contact with other substances, particularly flammable substances. Oxidizing activity increases with decreasing pH.

Chemical Stability: May undergo violent chemical changes at elevated temperature and pressure. Thermal decomposition occurs at temperatures above 482°F (250°C).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight. Extremely high or low temperatures. Heat. Sparks. Overheating. Open flame.

Incompatible Materials: Strong acids. Strong bases. Strong oxidizers.

Hazardous Decomposition Products: Carbon oxides (CO, CO2).

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Harmful if swallowed.

LD50 and LC50 Data:

Sodium Chlorate Crystal (\f)7775-09-9	
ATE US (oral)	500.00000000 mg/kg body weight

Skin Corrosion/Irritation: Not classified

pH: 7 - 9 (Neutral as solution in water) Oxidizing activity increases with decreasing pH.

Serious Eye Damage/Irritation: Not classified

pH: 7 - 9 (Neutral as solution in water) Oxidizing activity increases with decreasing pH.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not available

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: Not classified

Potential Adverse Human Health Effects and Symptoms: Harmful if swallowed.

Symptoms/Injuries After Inhalation: Inhalation of vapors may cause respiratory irritation.

Symptoms/Injuries After Skin Contact: May cause skin irritation.

Symptoms/Injuries After Eye Contact: Direct contact with the eyes is likely irritating.

Symptoms/Injuries After Ingestion: Swallowing a small quantity of this material will result in serious health hazard.

Chronic Symptoms: None known.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Sodium chlorate (7775-09-9)	
LD50 Oral Rat	1200 mg/kg
LC50 Inhalation Rat (mg/l)	> 28 g/m³ (Exposure time: 1 h)

Sodium chlorate (7775-09-9)	
National Toxicity Program (NTP) Status	Evidence of Carcinogenicity.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

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

Sodium chlorate (7775-09-9)	
LC50 Fish 1	13500 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
LC 50 Fish 2	1750 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)

Persistence and Degradability

Sodium Chlorate Crystal (7775-09-9)	
Persistence and Degradability	Not established. May cause long-term adverse effects in the environment.

Bioaccumulative Potential

Sodium Chlorate Crystal (7775-09-9)	
Bio-accumulative Potential	Not established.

Mobility in Soil Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Additional Information: Hazardous waste due to potential risk of explosion.

Ecology – Waste Materials: 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 CHLORATE

Hazard Class : 5.1

Identification Number : UN1495

Label Codes : 5.1

Packing Group : II

ERG Number : 140

14.2 In Accordance with IMDG

Proper Shipping Name	:	SODIUM CHLORATE
Hazard Class	:	5.1
Identification Number	:	UN1495
Packing Group	:	II
Label Codes	:	5.1
EmS-No. (Fire)	:	F-H
EmS-No. (Spillage)	:	S-Q

14.3 In Accordance with IATA

Proper Shipping Name	:	SODIUM CHLORATE
Packing Group	:	II
Identification Number	:	UN1495
Hazard Class	:	5
Label Codes	:	5.1
ERG Code (IATA)	:	5L

14.4 In Accordance with TDG

Proper Shipping Name	:	SODIUM CHLORATE
Packing Group	:	II
Hazard Class	:	5.1
Identification Number	:	UN1495
Label Codes	:	5.1

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Sodium chlorate (7775-09-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations

Sodium chlorate (7775-09-9)
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

Sodium Chlorate Crystal (7775-09-9)	
WHMIS Classification	Class C - Oxidizing Material Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects

Sodium chlorate (7775-09-9)	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
WHMIS Classification	Class C - Oxidizing Material Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects

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

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

Revision date	:	05/05/2015
Other Information	:	This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Ox. Sol. 1	Oxidizing solids Category 1
H271	May cause fire or explosion; strong oxidizer
H302	Harmful if swallowed
H411	Toxic to aquatic life with long lasting effects

Party Responsible for the Preparation of This Document

CHEMTRADE LOGISTICS, INC.

For SDS Info: (416) 496-5856

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) 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™.

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