

Section 1. Identification**Product identifier****Product Identity** Sodium chlorate solution (R8 & R10) (CHE-8023S)**Other means of identification** Not Applicable**Relevant identified uses of the substance or mixture and uses advised against**

Mainly used in the on-site production of chlorine dioxide for bleaching pulp. Also, used in the manufacture of dyes, explosives & matches, perchlorate manufacturing, ore processing, leather tanning and finishing, production of oxygen in rescue breathing apparatus, as an oxidizing agent, and analytical reagent.

Restrictions on use:

Consult local, regional and national regulations, product may need to be registered when used as an herbicide.

Details of the supplier of the safety data sheet**Company Name**

Chemtrade Logistics Inc. (Canada)
155 Gordon Baker Road Suite 300
Toronto, Ontario M2H 3N5
(416) 496-5856

Chemtrade Logistics Inc. (US)
90 East Halsey Road, Suite 200
Parsippany, NJ 07054
(800) 228- 8558

Emergency**24 hour Emergency Telephone No.**

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

Customer Service:

For SDS Info: (416) 496-5856
www.chemtradelogistics.com

Section 2. Hazard(s) identification

Exposure may cause the blood disorder Methemoglobinemia, and with over exposure in predisposed individuals may cause: renal problems, cardiac abnormalities, other blood disorders. Methemoglobinemia decreases the blood's ability to carry oxygen and results in symptoms such as dizziness, drowsiness, headache, shortness of breath, blue skin and lips, rapid heart rate, unconsciousness, and possibly death. Thermally unstable at elevated temperatures. (>265°C)

Classification of the substance or mixture

Oxidizing liquid, category 2;H272

May intensify fire; oxidizer.

Acute toxicity(oral), category 3;H301

Toxic if swallowed.

Aquatic toxicity (chronic), category 2;H411

Toxic to aquatic life with long lasting effects.

Label elements**Danger**

H272 May intensify fire; oxidizer.

H301 Toxic if swallowed.

H411 Toxic to aquatic life with long lasting effects.

[Prevention]:

P210 Keep away from heat, sparks, open flames, and other ignition sources - No smoking.

P220 Keep away from clothing and other combustible materials.

P264 Wash thoroughly after handling.

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

P273 Avoid release to the environment.

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

[Response]:

P301+310 IF SWALLOWED: Immediately call a POISON CENTER, doctor or physician.

P330 Rinse mouth.

P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

P391 Collect spillage.

[Storage]:

P405 Store locked up.

[Disposal]:

P501 Dispose of contents or container in accordance with local and national regulations.

Other hazards

This product contains no PBT/vPvB/vPvM chemicals.

This product contains no endocrine disrupting chemicals.

Does NOT contain component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS) per the US EPA PFASMASTER combined list of PFAS chemicals.

Section 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the Hazardous Products Regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Chloric acid, sodium salt CAS Number: 7775-09-9 Synonyms: Sodium chlorate	45 - 70	Oxidizing solid, category 1;H271 Aquatic toxicity (chronic), category 2;H411 Acute toxicity(oral), category 3;H301	No data available

The actual concentration or concentration range is withheld as a trade secret.

*PBT/vPvB - PBT, vPvM or vPvB-substance.

The full texts of the phrases are shown in Section 16.

The specific chemical identity and/or exact percentage of composition are withheld as a trade secret within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200].

Section 4. First aid measures

Description of first aid measures

General

In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation

Remove to fresh air, keep patient warm and at rest. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Eyes

Irrigate copiously with clean water for at least 30 minutes, holding the eyelids apart and seek medical attention. Remove contact lenses, if present and easy to do.
Continue rinsing.

Skin

Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser. Drench affected area with water for at least 30 minutes.
Obtain medical attention if irritation develops or persists.

Ingestion

If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting. If swallowed, rinse mouth.

Most important symptoms and effects, both acute and delayed

Overview

Harmful if swallowed. Overexposure to this material may result in methemoglobinemia. Methemoglobinemia decreases the blood's ability to carry oxygen and results in symptoms such as dizziness, drowsiness, headache, shortness of breath, blue skin and lips, rapid heart rate, unconsciousness, and possibly death.

Acute Health Effects: Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

INHALATION: Prolonged exposure may cause irritation. Cyanosis may be noted within several hours following inhalation or ingestion.

SKIN CONTACT: Prolonged exposure may cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

EYE CONTACT: May cause slight irritation to eyes.

INGESTION: Ingestion is likely to be harmful or have adverse effects. Oxidation may cause significant metabolic issues such as: methemoglobinemia, hemolysis, and intravascular coagulation and renal failure. Methemoglobinemia decreases the blood's ability to carry oxygen and results in symptoms such as dizziness, drowsiness, headache, shortness of breath, blue skin and lips, rapid heart rate, unconsciousness, and possibly death.

Indication of Any Immediate Medical Attention and Special Treatment Needed: If exposed or concerned, get medical advice and attention.
See section 2 for further details.

Ingestion	Toxic if swallowed.
Chronic effects	None expected under normal conditions of use. Overexposure to this material may result in methemoglobinemia.

Section 5. Fire-fighting measures

Extinguishing media

Recommended extinguishing media: Water. Use water spray or fog.

Unsuitable Extinguishing Media: Do not use dry extinguishing powder. Foam. Carbon dioxide (CO₂). Do not use fire blanket.

Special hazards arising from the substance or mixture

Hazardous decomposition: None expected under normal conditions of use. Decomposes at 265o C into oxygen and salt. Reacts with acids to produce chlorine, chlorine dioxide and perchloric acid.

Keep away from heat, sparks, open flames, and other ignition sources - No smoking.

Keep away from clothing and other combustible materials.

Advice for fire-fighters

As with all fires, wear positive pressure, self-contained breathing apparatus, (SCBA) with a full-face piece and protective clothing. Persons without respiratory protection should leave area. Wear SCBA during clean up immediately after fire. No smoking.

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

Oxidizer:increases the burning rate of combustible materials.

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

Firefighting Instructions: Do not enter fire area without proper protective equipment, including respiratory protection. Use water spray or fog for cooling exposed containers. **In case of major fire and large quantities:** Evacuate area. Fight fire remotely due to the risk of explosion. Exercise caution when fighting any chemical fire.

Hazardous Combustion Products: Irritating or toxic vapors. Oxygen. Hydrogen chloride. Sodium oxides.

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

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Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

General Measures: Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking, flames, hot surfaces, sparks, or other ignition sources in the area. Avoid prolonged contact with eyes, skin and clothing. Keep away from combustible material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Use good personal hygiene practices. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid contact with eyes, skin and clothing. Avoid breathing mist or vapors. **Promptly remove soiled clothing and wash thoroughly before reuse.**

Dried chlorate on clothing is a fire hazard any may be ignited through sparks. Keep away from heat, sparks, open flames, hot surfaces, combustible materials, incompatible materials. - No smoking

Environmental precautions

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

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

Methods and material for containment and cleaning up

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.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container for disposal. Do not take up in combustible material such as: saw dust or cellulosic material. Contact competent authorities after a spill.

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools.

Equip cleanup crew with proper protection.

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

Section 7. Handling and storage

Precautions for safe handling

Handle containers carefully to prevent damage and spillage.

Store locked up.

Additional Hazards When Processed: May cause fire or explosion; strong oxidizer.

See section 2 for further details. - [Prevention]:

Conditions for safe storage, including any incompatibilities

Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from extremely high or low temperatures, incompatible materials, food and drink. Keep in fireproof place. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Comply with applicable regulations.

Incompatible materials: Strong acids. Reducing agents. Organic materials. Reacts with many organic materials to form shock-sensitive mixtures, causing explosion hazard.

Use good personal hygiene practices. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid contact with eyes, skin and clothing. Avoid breathing mist or vapors. **Promptly remove soiled clothing and wash thoroughly before reuse.**

Dried chlorate on clothing is a fire hazard any may be ignited through sparks. Keep away from heat, sparks, open flames, hot surfaces, combustible materials, incompatible materials. - No smoking

See section 2 for further details. - [Storage]:

Specific end use(s)

Mainly used in the on-site production of chlorine dioxide for bleaching pulp. Also, used in the manufacture of dyes, explosives & matches, perchlorate manufacturing, ore processing, leather tanning and finishing, production of oxygen in rescue breathing apparatus, as an oxidizing agent, and analytical reagent.

Restrictions on use:

Consult local, regional and national regulations, product may need to registered when used as an herbicide.

Section 8. Exposure controls / personal protection
Control parameters
Exposure Limits

CAS No.	Ingredient	Source	Value
7775-09-9	Chloric acid, sodium salt	ACGIH	No Established Limit
		OSHA	No Established Limit
		NIOSH	No Established Limit
		Alberta	No Established Limit
		British Columbia	No Established Limit
		Manitoba	No Established Limit
		New Brunswick	No Established Limit
		Newfoundland and Labrador	No Established Limit
		Nova Scotia	No Established Limit
		Northwest Territories	No Established Limit
		Nunavut	No Established Limit
		Ontario	No Established Limit
		Prince Edward Island	No Established Limit

		Quebec	No Established Limit
		Saskatchewan	No Established Limit
		Yukon	No Established Limit

When using, do not eat, drink or smoke

Exposure controls

Respiratory

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.

Eyes

Chemical safety goggles or safety glasses.

Skin

Avoid skin contact. Wear protective gloves. Wear suitable protective clothing.

Materials for Protective Clothing: Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.

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. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed.

Other Work Practices

Clothing contaminated with sodium chlorate may become dangerously flammable and should not be allowed to dry (keep wet). Remove contaminated clothing and wash 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. Use good personal hygiene practices. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid contact with eyes, skin and clothing. Avoid breathing mist or vapors. **Promptly remove soiled clothing and wash thoroughly before reuse. Dried chlorate on clothing is a fire hazard any may be ignited through sparks.** Keep away from heat, sparks, open flames, hot surfaces, combustible materials, incompatible materials. - No smoking

See section 2 for further details.

Section 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical State

Liquid

Color

Colorless to Pale Yellow

Odor

Odorless

Odor threshold

No available information

Melting point / freezing point

3 °C (37.4 °F)

Initial boiling point and boiling range	265 °C (509 °F) decomposes
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: Not applicable Upper Explosive Limit: Not applicable
Flash Point	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	265 °C (509 °F) decomposes
pH	10
Viscosity (cSt)	No available information
Solubility in Water	Fully miscible
Partition coefficient n-octanol/water (Log Kow)	No available information
Vapour pressure (Pa)	Not applicable
Relative Density	Not applicable
Vapour Density	Not applicable
Evaporation rate (Ether = 1)	Not applicable
Other information	
No other relevant information.	

Section 10. Stability and reactivity

Reactivity

Oxidizer - increases the burning rate of combustible materials. '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 intensify fire; oxidizer. 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

Extremely high or low temperatures, ignition sources, combustible materials, incompatible materials.

Incompatible materials

Strong acids. Reducing agents. Organic materials. Reacts with many organic materials to form shock-sensitive mixtures, causing explosion hazard.

Hazardous decomposition products

None expected under normal conditions of use. Decomposes at 265o C into oxygen and salt. Reacts with acids to produce chlorine, chlorine dioxide and perchloric acid.

Section 11. Toxicological information

Acute toxicity

Reported fatal dose: A dose of 5 – 10 g can prove fatal in adults as can a dose of 2 grams in small children (REF – Hartley, D. and H. Kidd (eds). The agrochemicals Handbook. 2nd ed. Lechworth, Herts, England.: The Royal Society of Chemistry 1987.

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Product Acute Toxicity Estimates	167	NA	NA	NA	NA

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Chloric acid, sodium salt - (7775-09-9)	100.00, Rat - Category: 3	>2,000.00, Rabbit - Category: 5	No data available.	No data available.	No data available.

Carcinogen Data

CAS No.	Ingredient	Source	Value
7775-09-9	Chloric acid, sodium salt	IARC	No
		ACGIH	No Established Limit

Classification	Category	Hazard Description
Acute toxicity (oral)	3	Toxic if swallowed.
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	---	Not Applicable
Serious eye damage/irritation	---	Not Applicable
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable

STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

Possible routes of entry:

Inhalation, ingestion, skin contact, and skin absorption.

Symptoms and effects, both acute and delayed:

Harmful if swallowed. Overexposure to this material may result in methemoglobinemia.

Methemoglobinemia decreases the blood's ability to carry oxygen and results in symptoms such as dizziness, drowsiness, headache, shortness of breath, blue skin and lips, rapid heart rate, unconsciousness, and possibly death.

Acute Health Effects: Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

INHALATION: Prolonged exposure may cause irritation. Cyanosis may be noted within several hours following inhalation or ingestion.

SKIN CONTACT: Prolonged exposure may cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

EYE CONTACT: May cause slight irritation to eyes.

INGESTION: Ingestion is likely to be harmful or have adverse effects. Oxidation may cause significant metabolic issues such as: methemoglobinemia, hemolysis, and intravascular coagulation and renal failure. Methemoglobinemia decreases the blood's ability to carry oxygen and results in symptoms such as dizziness, drowsiness, headache, shortness of breath, blue skin and lips, rapid heart rate, unconsciousness, and possibly death.

Indication of Any Immediate Medical Attention and Special Treatment Needed: If exposed or concerned, get medical advice and attention.

Ingestion Toxic if swallowed.

Chronic effects None expected under normal conditions of use. Overexposure to this material may result in methemoglobinemia.

Section 12. Ecological information
Toxicity

Toxic to aquatic life with long lasting effects.

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Chloric acid, sodium salt - (7775-09-9)	> 1,000, Fish	> 1,000, Daphnia magna	> 1,000, Algae

Persistence and degradability

May cause long-term adverse effects in the environment. Remains in soil for 0.5 – 5 years depending on rate of application, soil type, fertility, organic matter content, moisture, and weather conditions .

Bioaccumulative potential

No available information

Mobility in soil

No available information

Results of PBT and vPvB assessment

This product contains no PBT/vPvB/vPvM chemicals.

Other adverse effects

No available information

Section 13. Disposal considerations
Waste treatment methods

Dispose of contents/container in accordance with local, regional, national, territorial, provincial, 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


Classification Method: Classified as per Part 2, Sections 2.1-2.8 of the Transportation of Dangerous Goods Regulations.

DOT (Domestic Surface Transportation)

UN number	UN2428
UN proper shipping name	UN2428,Sodium chlorate, aqueous solution,5.1,II
Transport hazard class(es)	5.1
Sub Class	Not Applicable
Packing group	II

TDG (Domestic Surface Transportation)

UN number	UN2428
UN proper shipping name	Sodium chlorate, aqueous solution
Transport hazard class(es)	5.1
Sub Class	Not Applicable
Packing group	II

IMO / IMDG (Ocean Transportation)

UN number	UN2428
UN proper shipping name	Sodium chlorate, aqueous solution
Transport hazard class(es)	5.1
Sub Class	Not Applicable
Packing group	II

ICAO/IATA

UN number	UN2428
UN proper shipping name	Sodium chlorate, aqueous solution
Transport hazard class(es)	5.1
Sub Class	Not Applicable
Packing group	II

Environmental hazards

IMDG Marine Pollutant: Yes; (Chloric acid, sodium salt)

Special precautions for user

No available information

Section 15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA) All components of this material are either listed or exempt from listing on the TSCA Inventory.

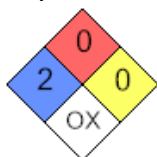
NFPA Ranking

Health (blue) :2

Fire (red) :0

Reactivity (yellow) :0

Special (white) :OX


Toxic Substance Control Act (TSCA)



Chloric acid, sodium salt

Water

CERCLA Chemicals and RQs:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 302 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Toxic Chemicals:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Canadian Domestic Substance List (DSL):

Chloric acid, sodium salt

Water

Canadian Non-Domestic Substance List (NDSL):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

New Jersey RTK Substances (>1%):

Chloric acid, sodium salt

Pennsylvania RTK Substances (>1%):

Chloric acid, sodium salt

Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.



Proposition 65 Label Warning:

This product contains no chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Chemical Name (CAS Number)	US TSCA	Australia AICS	Korea ECL	EU EINECS	EU ELINCS	EU SVHC	EN NLP	Mexico INSQ
Chloric acid, sodium salt (7775-09-9)	Yes	Yes	Yes	Yes	No	No	No	Yes

Chemical Name (CAS Number)	China IECSC	Japan ENCS	Japan ISHL	Japan PDSC	Japan PRTR 1	Japan PRTR 2	Philippines PICCS	New Zealand NZIOC
Chloric acid, sodium salt (7775-09-9)	Yes	Yes	No	Yes	No	No	Yes	Yes

Section 16. Other information

Revision Date 11/03/2025

Revision Number 2

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H271 May cause fire or explosion; strong oxidizer.

H301 Toxic if swallowed.

H411 Toxic to aquatic life with long lasting effects.

Disclaimer: The information presented herein is supplied as a guide to those who handle or use this product. Safe work practices must be employed when working with any materials. It is important that the end user makes a determination regarding the adequacy of the safety procedures employed during the use of this product.

End of Document