SECTION 1: IDENTIFICATION

Product Identifier

Product Form: Mixture

Product Name: Sodium chlorate solution (R3)

Intended Use of the Product

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, analytical reagent and herbicide.

Name, Address, and Telephone of the Responsible Party

Manufacturer

CHEMTRADE LOGISTICS INC.

155 Gordon Baker Road

Suite 300

Toronto, Ontario M2H 3N5

For SDS Info: (416) 496-5856

www.chemtradelogistics.com

Emergency Telephone Number

Emergency Number : Canada: CANUTEC +1-613-996-6666 / US: CHEMTREC +1-800-424-9300

INTERNATIONAL: +1-703-741-5970

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

GHS Classification

Ox. Liq. 2 H272

Aquatic Chronic 2 H411

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

Label Elements

GHS Labeling

Hazard Pictograms :

Signal Word : Danger

Hazard Statements :

H272 - May intensify fire; oxidizer.

H411 - Toxic to aquatic life with long lasting effects.

Precautionary Statements :

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

P220 - Keep away from clothing and other combustible materials.

P221 – Tank any precaution to avoid mixing with combustibles and other incompatible materials.

P273 - Avoid release to the environment.

P280 - Wear protective gloves, protective clothing, and eye protection.

P370+P378 - In case of fire: Use appropriate media (see section 5) to extinguish.

P391 - Collect spillage.

P420 Store away from incompatible materials

P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.
**Sodium chlorate solution (R3)**

*Safety Data Sheet*


---

**Other Hazards**

Exposure may aggravate pre-existing eye, skin, or respiratory conditions. Overexposure may cause methemoglobinemia. Initial manifestation of methemoglobinemia is cyanosis, characterized by navy lips, tongue and mucous membranes, with skin color being slate grey. Further manifestation is characterized by headache, weakness, dyspnea, dizziness, stupor, respiratory distress and death due to anoxia.

**Unknown acute toxicity**

No data available

---

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

<table>
<thead>
<tr>
<th>Mixture</th>
<th>Product Identifier</th>
<th>%*</th>
<th>GHS Ingredient Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>(CAS-No.) 7732-18-5</td>
<td>60 - 85</td>
<td>Not classified</td>
</tr>
<tr>
<td>Sodium chlorate</td>
<td>(CAS-No.) 7775-09-9</td>
<td>15 - 40*</td>
<td>Ox. Sol. 2, H272 Acute Tox. 4 (Oral), H302 Aquatic Chronic 2, H411</td>
</tr>
</tbody>
</table>

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

*The actual concentration of the ingredient(s) is withheld as a trade secret in accordance with Regulations Amending the Hazardous Products Regulations (HPR) SOR/2018-68 and 29 CFR 1910.1200.

---

**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).

**Inhalation:** When symptoms occur: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if adverse health effects persist or are severe.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Get medical advice/attention. Wash clothing before storing or reuse. Clean shoes thoroughly before reuse.

**Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Obtain medical advice/attention.

**Most Important Symptoms and Effects Both Acute and Delayed**

**General:** Not expected to present a significant hazard under anticipated conditions of normal use. 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.

**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.

**Eye Contact:** May cause slight irritation to eyes.

**Ingestion:** Ingesting large quantities can cause abdominal pain, nausea, and diarrhea, possibly with dark blood, cyanosis, possibly progressing to headache, difficulty breathing, dizziness, seizures, or coma. Symptoms may include redness and edema.

**Chronic Symptoms:** None expected under normal conditions of use.

---

**Indication of Any Immediate Medical Attention and Special Treatment Needed**

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

---

**SECTION 5: FIRE-FIGHTING MEASURES**

**Extinguishing Media**

**Suitable 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.
Sodium chlorate solution (R3)

Safety Data Sheet


Special Hazards Arising From the Substance or Mixture

Fire Hazard: May intensify fire; oxidizer.

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

Reactivity: Oxidizer: increases the burning rate of combustible materials.

Advice for Firefighters

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

Firefighting Instructions: 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.

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


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

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: 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. Avoid breathing dust. Keep away from combustible material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For Non-Emergency Personnel

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


For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

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

Environmental Precautions

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

Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Use only non-sparking tools.

Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material, then place in suitable container. Do not take up in combustible material such as: saw dust or cellulosic material. It may lead to a fire risk when it dries out. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Reference to Other Sections

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

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapors, mist, and spray. Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking.

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

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

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed.
Sodium chlorate solution (R3)

Safety Data Sheet

Storage Conditions: 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.


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, analytical reagent and herbicide.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

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

Personal Protective Equipment: Gloves. Protective clothing. Protective goggles or safety glasses.

Materials for Protective Clothing: Chemically resistant materials and fabrics. Wear fire/flame resistant/retardant clothing.
Hand Protection: Wear protective gloves.
Eye Protection: Chemical safety goggles or safety glasses.
Skin and Body Protection: Wear suitable protective clothing. Fire retardant coveralls and other protective clothing is recommended.
Note*** Sodium Chlorate Solution contamination on protective clothing, gloves, and shoes present a flammable hazard! When dry, the contaminated protective clothing, gloves or shoes may ignite due to friction, heat or source of ignition. Contaminated clothing should be laundered immediately. Do not wear leather shoes, leather gloves or leather belts. Wear easily washable chemical resistant clothing.
Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.
Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Colorless to pale yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Salty</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>7</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>0 °C (32 °F)</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
Sodium chlorate solution (R3)
Safety Data Sheet

Auto-ignition Temperature: Not applicable
Decomposition Temperature: 265 °C (509 °F)
Flammability (solid, gas): Not applicable
Lower Flammable Limit: Not applicable
Upper Flammable Limit: Not applicable
Vapor Pressure: Not available
Relative Vapor Density at 20°C: Not available
Relative Density: Not available
Specific Gravity: Not available
Solubility: Easily soluble in the following materials: cold water and hot water.
Partition Coefficient: N-Octanol/Water: Not available
Viscosity: Not available

SECTION 10: STABILITY AND REACTIVITY
Reactivity: Oxidizer: increases the burning rate of combustible materials.
Chemical Stability: May intensify fire; oxidizer.
Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
Conditions to Avoid: Extremely high or low temperatures and incompatible materials. Sparks, heat, open flame, combustible materials, organic material and other sources of ignition.
Incompatible Materials: Strong acids. Reducing agents. Combustible materials. Ammonia. Organic materials. Reactive metals (Aluminum, Potassium and Zinc). Mixture with flammable or combustible materials may ignite readily or explode and be sensitive to shock, heat, or friction. Mixtures of dry sodium chlorate with organic materials such as cloth, paper, leather, oils, greases, paints, and solvents may be readily ignited by heat or friction. Reacts violently with combustibles, sulfuric acid, and reducing materials. Explosions may be caused by contact with ammonia salts, ammonium thiocyanate, antimony sulfide, arsenic, carbon, charcoal, organic matter, organic acids, thiocyanates, chemically active metals, oils, metal sulfides, nitrobenzene, powder metals, and sugar. Reacts with many organic materials to form shock-sensitive mixtures, causing explosion hazard.


SECTION 11: TOXICOLOGICAL INFORMATION
Information on Toxicological Effects - Product
Acute Toxicity (Oral): Not classified
Acute Toxicity (Dermal): Not classified
Acute Toxicity (Inhalation): Not classified
LD50 and LC50 Data: Not available
Skin Corrosion/Irritation: Not classified
pH: 7
Eye Damage/Irritation: Not classified
pH: 7
Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified
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
Symptoms/Effects After Inhalation: Prolonged exposure may cause irritation. Cyanosis may be noted within several hours following inhalation or ingestion.
Symptoms/Effects After Skin Contact: Prolonged exposure may cause skin irritation.
Sodium chlorate solution (R3)

Safety Data Sheet

Symptoms/Effects After Eye Contact: May cause slight irritation to eyes.
Symptoms/Effects After Ingestion: Ingestion may cause adverse effects. Ingesting large quantities can cause abdominal pain, nausea, and diarrhea, possibly with dark blood, cyanosis, possibly progressing to headache, difficulty breathing, dizziness, seizures, or coma. Symptoms may include redness and edema.
Chronic Symptoms: None expected under normal conditions of use.

Information on Toxicological Effects - Ingredient(s)

<table>
<thead>
<tr>
<th>LD50 and LC50 Data:</th>
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</thead>
<tbody>
<tr>
<td>Sodium chlorate (7775-09-9)</td>
</tr>
<tr>
<td><strong>LD50 Oral Rat</strong></td>
</tr>
<tr>
<td><strong>LD50 Dermal Rabbit</strong></td>
</tr>
<tr>
<td><strong>LC50 Inhalation Rat</strong></td>
</tr>
</tbody>
</table>

**SECTION 12: ECOLOGICAL INFORMATION**

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

<table>
<thead>
<tr>
<th>Sodium chlorate (7775-09-9)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LC50 Fish 1</strong></td>
</tr>
<tr>
<td><strong>LC50 Fish 2</strong></td>
</tr>
</tbody>
</table>

Persistence and Degradability
Bioaccumulative Potential

<table>
<thead>
<tr>
<th>Sodium chlorate solution (R3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and Degradability</td>
</tr>
<tr>
<td>Bioaccumulative Potential</td>
</tr>
</tbody>
</table>

Mobility in Soil: Not available

Other Adverse Effects
Other Information: Avoid release to the environment.

**SECTION 13: DISPOSAL CONSIDERATIONS**

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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**

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

*When shipped in accordance with US DOT 49 CFR part 171.4(c) and other appropriate sections/provisions this material is not designated as a marine pollutant when transported by road or rail.

**When shipped in accordance with the Canada Transport of Dangerous Goods Regulations part 1.45.1 and other appropriate sections/provisions this material is not designated as a marine pollutant when transported by road or rail.

Special precautions for user: Transport within user’s premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
### Sodium chlorate solution (R3)

Safety Data Sheet


<table>
<thead>
<tr>
<th>TRANSPORTATION CLASSIFICATION</th>
<th>DOT</th>
<th>TDG</th>
<th>IMDG</th>
<th>IATA</th>
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<tr>
<td>Identification Number</td>
<td>UN2428</td>
<td>UN2428</td>
<td>UN2428</td>
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<td>Proper Shipping Name</td>
<td>SODIUM CHLORATE, AQUEOUS SOLUTION</td>
<td>SODIUM CHLORATE, AQUEOUS SOLUTION</td>
<td>SODIUM CHLORATE, AQUEOUS SOLUTION</td>
<td>SODIUM CHLORATE, AQUEOUS SOLUTION</td>
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<tr>
<td>Transport Hazard Class(es)</td>
<td>5.1</td>
<td>5.1</td>
<td>5.1</td>
<td>5.1</td>
</tr>
<tr>
<td>Environmental Hazards</td>
<td>Marine Pollutant: Yes*</td>
<td>Marine Pollutant: Yes**</td>
<td>Marine Pollutant: Yes</td>
<td>Marine Pollutant: N/A</td>
</tr>
<tr>
<td>Emergency Response</td>
<td>ERG Number: 140</td>
<td>ERAP Index: Not applicable</td>
<td>EMS: F-H, S-Q</td>
<td>ERG code (IATA): 5L</td>
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<tr>
<td>Additional Information</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
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</table>

### SECTION 15: REGULATORY INFORMATION

#### US Federal Regulations

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>CERCLA RQ</th>
<th>EPCRA 304 RQ</th>
<th>SARA 302 TPQ</th>
<th>SARA 313</th>
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</thead>
<tbody>
<tr>
<td>Sodium chlorate (7775-09-9)</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>No</td>
</tr>
</tbody>
</table>

#### SARA 311/312

- Sodium chlorate solution (R3)
  - Fire hazard, Immediate (acute) health hazard

#### US TSCA Flags

- Not present

#### US State Regulations

**California Proposition 65**

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>Carcinogenicity</th>
<th>Developmental Toxicity</th>
<th>Female Reproductive Toxicity</th>
<th>Male Reproductive Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chlorate (7775-09-9)</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

#### State Right-To-Know Lists

- **Sodium chlorate (7775-09-9)**
  - U.S. - Massachusetts - Right To Know List - Yes
  - U.S. - New Jersey - Right to Know Hazardous Substance List - Yes
  - U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List - No
  - U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances - No
  - U.S. - Pennsylvania - RTK (Right to Know) List - Yes

#### Canadian Regulations

- **Sodium chlorate (7775-09-9)**
  - Listed on the Canadian DSL (Domestic Substances List)
  - Not listed on the Canadian NDSL (Non-Domestic Substances List)

#### International Inventories/Lists

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>Australia AICS</th>
<th>Turkey CICR</th>
<th>Korea ECL</th>
<th>EU EINECS</th>
<th>EU ELINCS</th>
<th>EU SVHC</th>
<th>EU NLP</th>
<th>Mexico INSQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chlorate (7775-09-9)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
# Sodium chlorate solution (R3)

**Safety Data Sheet**


## Chemical Name (CAS No.)

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>China IECSC</th>
<th>Japan ENCS</th>
<th>Japan ISHL</th>
<th>Japan PDSCL</th>
<th>Japan PRTR</th>
<th>Philippines PICCS</th>
<th>New Zealand NZIOC</th>
<th>US TSCA</th>
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</thead>
<tbody>
<tr>
<td>Sodium chlorate (7775-09-9)</td>
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<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
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</table>

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

**Date of Preparation or Latest Revision**: 05/09/18

**Revision Summary**

<table>
<thead>
<tr>
<th>Section</th>
<th>Change</th>
<th>Date Changed</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>HPR Trade Secret Statement</td>
<td>05/09/18</td>
</tr>
</tbody>
</table>

**Other Information**: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada’s Hazardous Products Regulations (HPR).

### 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. Liq. 2**: Oxidizing liquids Category 2
- **H272**: May intensify fire; oxidizer
- **H302**: Harmful if swallowed
- **H411**: Toxic to aquatic life with long lasting effects

---

### NFPA 704

- **NFPA Health Hazard**: 2
- **NFPA Fire Hazard**: 2
- **NFPA Reactivity Hazard**: 1
- **NFPA Specific Hazards**: OX - Materials that posses oxidizing properties.

### HMIS Rating

- **Health**: 2
- **Flammability**: 2
- **Physical**: 2
- **PPE**: See Section 8

### Abbreviations and Acronyms

- **AICS**: Australian Inventory of Chemical Substances
- **ACGIH**: American Conference of Governmental Industrial Hygienists
- **AIHA**: American Industrial Hygiene Association
- **ATE**: Acute Toxicity Estimate
- **BCF**: Bioconcentration factor
- **BEI**: Biological Exposure Indices (BEI)
- **CAS No.**: Chemical Abstracts Service number
- **CERCLA RQ**: Comprehensive Environmental Response, Compensation, and Liability Act - Reportable Quantity
- **CICR**: Turkish Inventory and Control of Chemicals
- **DOT**: Department of Transportation – Code of Federal Regulations Title 49 – Transportation.
- **EC50**: Median effective concentration
- **ECL**: Korea Existing Chemicals List
- **EINECS**: European Inventory of Existing Commercial Chemical Substances
- **ELINCS**: European List of Notified Chemical Substances
- **EmS**: IMDG Emergency Schedule Fire & Spillage
- **ENC**: Japanese Existing and New Chemical Substances Inventory
- **EPA**: Environmental Protection Agency
- **LC50**: Median Lethal Concentration
- **LDS**: Median Lethal Dose
- **LOAEL**: Lowest Observed Adverse Effect Level
- **LOEC**: Lowest-observed-effect Concentration
- **Log Pow**: Octanol/water Partition Coefficient
- **NOS**: National Institute for Occupational Safety and Health
- **NOAEL**: No-Observed Adverse Effect Level
- **NOEC**: No-Observed Effect Concentration
- **NZIOC**: New Zealand Inventory of Chemicals
- **NOS**: National Institute for Occupational Safety and Health
- **NLP**: Europe No Longer Polymers List
- **NOAEL**: No-Oberved Adverse Effect Level
- **NOEC**: No-Oberved Effect Concentration
- **NZIOC**: New Zealand Inventory of Chemicals
- **OEL**: Occupational Exposure Limits
- **OEL**: Occupational Exposure Limits
- **PEL**: Permissible Exposure Limits
- **PICCS**: Philippine Inventory of Chemicals and Chemical Substances
- **PDSCL**: Japan Poisonous and Deleterious Substances Control Law
- **PE**: Personal Protective Equipment
- **PRTR**: Japan Pollutant Release and Transfer Register
**Sodium chlorate solution (R3)**

Safety Data Sheet


<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPCRA 304 ROQ</td>
<td>EPCRA 304 Extremely Hazardous Substance Emergency Plan</td>
</tr>
<tr>
<td>ERAP Index</td>
<td>Emergency Response Assistance Plan Quantity Limit</td>
</tr>
<tr>
<td>ErCSO - ECSO</td>
<td>ErCSO in Terms of Reduction Growth Rate</td>
</tr>
<tr>
<td>ERG code (IATA)</td>
<td>Emergency Response Drill Code as found in the International Civil Aviation Organization (ICAO)</td>
</tr>
<tr>
<td>ERG No.</td>
<td>Emergency Response Guide Number</td>
</tr>
<tr>
<td>HCCL</td>
<td>Hazard Communication Carcinogen List</td>
</tr>
<tr>
<td>HMIS</td>
<td>Hazardous Materials Information System</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>IATA</td>
<td>International Air Transport Association – Dangerous Goods Regulations</td>
</tr>
<tr>
<td>IDLH</td>
<td>Immediately Dangerous to Life or Health</td>
</tr>
<tr>
<td>IECSC</td>
<td>Inventory of Existing Chemical Substances Produced or Imported in China</td>
</tr>
<tr>
<td>IMDG</td>
<td>International Maritime Dangerous Goods Code</td>
</tr>
<tr>
<td>INSQ</td>
<td>Mexican National Inventory of Chemical Substances</td>
</tr>
<tr>
<td>ISHL</td>
<td>Japan Industrial Safety and Health Law</td>
</tr>
<tr>
<td>REL</td>
<td>Recommended Exposure Limit</td>
</tr>
<tr>
<td>SADT</td>
<td>Self Accelerating Decomposition Temperature</td>
</tr>
<tr>
<td>SARA</td>
<td>Superfund Amendments and Reauthorization Act</td>
</tr>
<tr>
<td>SARA 302</td>
<td>Section 302, 40 CFR Part 302</td>
</tr>
<tr>
<td>SARA 313</td>
<td>Section 313, 40 CFR Part 372</td>
</tr>
<tr>
<td>SARA 311/312</td>
<td>Sections 311 and 312, 40 CFR Part 370 Hazard Categories</td>
</tr>
<tr>
<td>SRCL</td>
<td>Specifically Regulated Carcinogen List</td>
</tr>
<tr>
<td>STEL</td>
<td>Short Term Exposure Limit</td>
</tr>
<tr>
<td>SVHC</td>
<td>European Candidate List of Substance of Very High Concern</td>
</tr>
<tr>
<td>TDG</td>
<td>Transport Canada Transport of Dangerous Goods Regulations</td>
</tr>
<tr>
<td>TLM</td>
<td>Median Tolerance Limit</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>TPQ</td>
<td>Threshold Planning Quantity</td>
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<tr>
<td>TSCA</td>
<td>United States Toxic Substances Control Act</td>
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<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
<tr>
<td>WEEL</td>
<td>Workplace Environmental Exposure Levels</td>
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</table>

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