1. Product and Company Identification

Product Name: Salt Shock Oxidizer  
CAS #: Mixture  
Product use: Spa water treatment  
Manufacturer: Natural Chemistry L.P.  
40 Richards Ave.  
Norwalk, CT 06854 US  
Phone: (800) 753-1233  
Emergency Phone: CHEMTREC (800) 424-9300

2. Hazards Identification

Emergency overview: DANGER -- CORROSIVE OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.

Potential short term health effects:
- **Routes of exposure**: Eye, Skin contact, Inhalation, Ingestion.
- **Eyes**: Causes chemical burns. May cause blindness.
- **Skin**: Causes chemical burns.
- **Inhalation**: Dust extremely irritating to respiratory tract.
- **Ingestion**: Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.

Target organs: Eyes. Respiratory system. Skin.

Chronic effects: May cause respiratory and/or skin sensitization in sensitive individuals.

Signs and symptoms: The product may cause burns to eyes, skin and mucous membranes.

OSHA Regulatory Status: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential environmental effects: Not available

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peroxymonosulfuric acid, monopotassium salt</td>
<td>10058-23-8</td>
<td>30 - 60</td>
</tr>
<tr>
<td>Potassium hydrogen sulfate</td>
<td>7646-93-7</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Carbonic acid, magnesium salt (1:1)</td>
<td>546-93-0</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Potassium persulfate</td>
<td>7727-21-1</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

4. First Aid Measures

**First aid procedures**

- **Eye contact**: Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.
- **Skin contact**: Brush away excess of dry material. Immediately flush with cool water for 15 minutes. Obtain medical attention if irritation persists.
- **Inhalation**: Move victim to fresh air. If symptoms persist, obtain medical attention.
- **Ingestion**: Do not induce vomiting. Never give anything by mouth if victim is unconscious, or is convulsing. Obtain medical attention.

**Notes to physician**: Symptoms may be delayed.

**General advice**: If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.
5. Fire Fighting Measures

Flammable properties
Not flammable by WHMIS/OSHA criteria. This substance is an oxidizing agent and can supply oxygen to stimulate or accelerate the combustion of organic or other combustible substances.

Extinguishing media
Suitable extinguishing media
Dry chemical. Foam. Water spray.

Unsuitable extinguishing media
Carbon dioxide (CO2)

Protection of firefighters
Specific hazards arising from the chemical
Container may explode in heat of fire.

Protective equipment for firefighters
Firefighters should wear full protective clothing including self contained breathing apparatus.

Hazardous combustion products
May include and are not limited to: Oxides of carbon. Oxides of sulfur. Hydrogen sulfide. Oxygen.

Explosion data
Sensitivity to mechanical impact
Not available

Sensitivity to static discharge
Not available

6. Accidental Release Measures

Personal precautions
Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

Environmental precautions
Prevent entry into waterways, sewers, basements or confined areas.

Methods for containment
Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk.

Methods for cleaning up
Before attempting clean up, refer to hazard data given above. Use broom or dry vacuum to collect material for proper disposal without raising dust. Rinse area with water. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice.

7. Handling and Storage

Handling
Use good industrial hygiene practices in handling this material. Do not get in eyes, on skin or on clothing. Keep from contact with clothing and other combustible materials. Wash thoroughly after handling.

Storage
Keep out of reach of children. Store in a cool, dry, well-ventilated place. Store in a closed container away from incompatible materials. Do not store with chlorine, bromine or liquid acids. Keep away from heat, open flames or other sources of ignition.
8. Exposure Controls / Personal Protection

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbonic acid, magnesium salt (1:1)</td>
<td>ACGIH-TLV</td>
</tr>
<tr>
<td></td>
<td>Not established</td>
</tr>
<tr>
<td></td>
<td>OSHA-PEL</td>
</tr>
<tr>
<td></td>
<td>TWA: 15 mg/m³</td>
</tr>
<tr>
<td>Peroxymonosulfuric acid, monopotassium salt</td>
<td>ACGIH-TLV</td>
</tr>
<tr>
<td></td>
<td>TWA: 5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>OSHA-PEL</td>
</tr>
<tr>
<td></td>
<td>Not established</td>
</tr>
<tr>
<td>Potassium hydrogen sulfate</td>
<td>ACGIH-TLV</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³</td>
</tr>
<tr>
<td></td>
<td>OSHA-PEL</td>
</tr>
<tr>
<td></td>
<td>TWA: 10 mg/m³</td>
</tr>
<tr>
<td>Potassium persulfate</td>
<td>ACGIH-TLV</td>
</tr>
<tr>
<td></td>
<td>TWA: 0.1 mg/m³</td>
</tr>
<tr>
<td></td>
<td>OSHA-PEL</td>
</tr>
<tr>
<td></td>
<td>Not established</td>
</tr>
<tr>
<td>Sodium carbonate</td>
<td>ACGIH-TLV</td>
</tr>
<tr>
<td></td>
<td>Not established</td>
</tr>
<tr>
<td></td>
<td>OSHA-PEL</td>
</tr>
<tr>
<td></td>
<td>Not established</td>
</tr>
<tr>
<td><strong>Engineering controls</strong></td>
<td>Use only under good ventilation conditions or with respiratory protection.</td>
</tr>
<tr>
<td><strong>Personal protective equipment</strong></td>
<td></td>
</tr>
<tr>
<td>Eye / face protection</td>
<td>Chemical splash goggles.</td>
</tr>
<tr>
<td>Hand protection</td>
<td>Rubber gloves. Confirm with a reputable supplier first.</td>
</tr>
<tr>
<td>Skin and body protection</td>
<td>As required by employer code.</td>
</tr>
<tr>
<td>Respiratory protection</td>
<td>Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.</td>
</tr>
<tr>
<td>General hygiene considerations</td>
<td>Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.</td>
</tr>
</tbody>
</table>

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Granular</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
</tr>
<tr>
<td>Form</td>
<td>Solid</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not available</td>
</tr>
<tr>
<td>Pour point</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability limits in air, lower, % by volume</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
Flammability limits in air, upper, % by volume
Vapor pressure
Vapor density
Specific gravity
Octanol/water coefficient
Viscosity
Percent volatile

Flammability limits in air, upper, % by volume
Vapor pressure
Vapor density
Specific gravity
Octanol/water coefficient
Viscosity
Percent volatile

10. Stability and Reactivity

Reactivity
This product reacts with acids. and halogenated compounds
Possibility of hazardous reactions
Hazardous polymerization does not occur.
Chemical stability
Stable under recommended storage conditions.
Conditions to avoid
Heat, flames and sparks. Do not mix with other chemicals.
Incompatible materials
Hazardous decomposition products
May include and are not limited to: Oxides of carbon. Oxides of sulfur. Hydrogen sulphide. Oxygen.

11. Toxicological Information

Component analysis - LC50
Ingredient(s)
LC50
Carbonic acid, magnesium salt (1:1)
Not available
Peroxymonosulfuric acid, monopotassium salt
> 5 mg/kg rat
Potassium hydrogen sulfate
Not available
Potassium persulfate
> 5 Mg/L rat
Sodium carbonate
400 mg/m3 guinea pig

Component analysis - Oral LD50
Ingredient(s)
LD50
Carbonic acid, magnesium salt (1:1)
Not available
Peroxymonosulfuric acid, monopotassium salt
2000 mg/kg rat
Potassium hydrogen sulfate
2340 mg/kg rat
Potassium persulfate
802 mg/kg rat
Sodium carbonate
4090 mg/kg rat

Effects of acute exposure
Eye
Causes chemical burns. May cause blindness.
Skin
Causes chemical burns.
Inhalation
Dust extremely irritating to respiratory tract.
Ingestion
Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
Sensitization
May cause sensitization by inhalation or skin contact.
Chronic effects
Non-hazardous by WHMIS/OSHA criteria.
Carcinogenicity
Non-hazardous by WHMIS/OSHA criteria.
Mutagenicity
Non-hazardous by WHMIS/OSHA criteria.
Reproductive effects
Non-hazardous by WHMIS/OSHA criteria.
Teratogenicity
Non-hazardous by WHMIS/OSHA criteria.
Name of Toxicologically Synergistic Products
Not available
12. Ecological Information

Ecotoxicity Components of this product have been identified as having potential environmental concerns.

Ecotoxicity - Freshwater Algae - Acute Toxicity Data
Sodium carbonate 497-19-8 120 Hr EC50 Nitzschia: 242 mg/L

Ecotoxicity - Freshwater Fish - Acute Toxicity Data
Sodium carbonate 497-19-8 96 Hr LC50 Lepomis macrochirus: 300 mg/L [static]; 96 Hr LC50 Pimephales promelas: 310 - 1220 mg/L [static]

Ecotoxicity - Water Flea - Acute Toxicity Data
Sodium carbonate 497-19-8 48 Hr EC50 Daphnia magna: 265 mg/L

Persistence / degradability Not available
Bioaccumulation / accumulation Not available
Mobility in environmental media Not available
Environmental effects Not available
Aquatic toxicity Not available
Partition coefficient Not available
Chemical fate information Not available
Other adverse effects Not available

13. Disposal Considerations

Disposal instructions Review federal, state/provincial, and local government requirements prior to disposal.
Waste from residues / unused products Not available
Contaminated packaging Not available

14. Transport Information

U.S. Department of Transportation (DOT)

Basic shipping requirements:
Proper shipping name Corrosive solid, acidic, inorganic, n.o.s. (PEROXYSULFURIC ACID, MONOPOTASSIUM SALT)
Hazard class 8
UN number UN3260
Packing group II
Additional information:
Special provisions IB8, IP2, IP4, T3, TP33
Packaging exceptions 154
ERG number 154

Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:
Proper shipping name CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (PEROXYSULFURIC ACID, MONOPOTASSIUM SALT)
Hazard class 8
UN number UN3260
Packing group II
Additional information:
Special provisions 16
### 15. Regulatory Information

**Canadian federal regulations**

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

- **Canada - WHMIS - Ingredient Disclosure List**
  - Potassium hydrogen sulfate 7646-93-7 1 %
  - Potassium persulfate 7727-21-1 0.1 %
  - Sodium carbonate 497-19-8 1 %

**WHMIS status**

Controlled

**WHMIS classification**

Class C - Oxidizing Material, Class D - Division 2A, 2B, Class E - Corrosive Material

**WHMIS labeling**

**Occupational Safety and Health Administration (OSHA)**

29 CFR 1910.1200 hazardous chemical Yes

**US Federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**CERCLA (Superfund) reportable quantity**

None

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

- **Hazard categories**
  - Immediate Hazard - Yes
  - Delayed Hazard - Yes
  - Fire Hazard - No
  - Pressure Hazard - No
  - Reactivity Hazard - Yes

- **Section 302 extremely hazardous substance**
  No

- **Section 311 hazardous chemical**
  Yes

**Clean Water Act (CWA)**

Not available

**State regulations**

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

- **U.S. - Massachusetts - Right To Know List**
  - Carbonic acid, magnesium salt 546-93-0 (1:1) Present (dust, exempt when encapsulated or if particulates are not present and cannot be substantially generated through use of the product)
  - Potassium persulfate 7727-21-1 Present

- **U.S. - Minnesota - Hazardous Substance List**
  - Carbonic acid, magnesium salt 546-93-0 (1:1) Present (dust)

- **U.S. - New Jersey - Right to Know Hazardous Substance List**
  - Carbonic acid, magnesium salt 546-93-0 (1:1) sn 4018
  - Potassium hydrogen sulfate 7646-93-7 sn 1569
  - Potassium persulfate 7727-21-1 sn 1580

- **U.S. - Pennsylvania - RTK (Right to Know) List**
  - Potassium persulfate 7727-21-1 Present

- **U.S. - Rhode Island - Hazardous Substance List**
  - Carbonic acid, magnesium salt 546-93-0 (1:1) Toxic
  - Potassium persulfate 7727-21-1 Flammable

**Inventory name**

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
**16. Other Information**

<table>
<thead>
<tr>
<th>LEGEND HMIS/NFPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe</td>
</tr>
<tr>
<td>Serious</td>
</tr>
<tr>
<td>Moderate</td>
</tr>
<tr>
<td>Slight</td>
</tr>
<tr>
<td>Minimal</td>
</tr>
</tbody>
</table>

**Health**

- * 3

**Flammability**

- 0

**Physical Hazard**

- 1

**Personal Protection**

- B

**Disclaimer**

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

**Issue date**

06-Mar-2013

**Effective date**

01-Jul-2011

**Expiry date**

01-Jul-2014

**Prepared by**

Dell Tech Laboratories Ltd.  (519) 858-5021

**Other information**

For an updated MSDS, please contact the supplier/manufacturer listed on the first page of the document.

This MSDS conforms to the ANSI Z400.1/Z129.1-2010 Standard.