



MATERIAL SAFETY DATA SHEET

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

| Ingredient(s) | CAS # | Percent |
|---------------------------------------------|------------|---------|
| Peroxymonosulfuric acid, monopotassium salt | 10058-23-8 | 30 - 60 |
| Potassium hydrogen sulfate | 7646-93-7 | 10 - 30 |
| Sodium carbonate | 497-19-8 | 10 - 30 |
| Carbonic acid, magnesium salt (1:1) | 546-93-0 | 1 - 5 |
| Potassium persulfate | 7727-21-1 | 1 - 5 |

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

Exposure limits

| Ingredient(s) | Exposure Limits |
|---------------------------------------------|---------------------------------------------------------------------------|
| Carbonic acid, magnesium salt (1:1) | ACGIH-TLV Not established OSHA-PEL TWA: 15 mg/m3 |
| Peroxymonosulfuric acid, monopotassium salt | ACGIH-TLV TWA: 5 mg/m3 OSHA-PEL Not established |
| Potassium hydrogen sulfate | ACGIH-TLV TWA: 10 mg/m3 OSHA-PEL TWA: 10 mg/m3 |
| Potassium persulfate | ACGIH-TLV TWA: 0.1 mg/m3 OSHA-PEL Not established |
| Sodium carbonate | ACGIH-TLV Not established OSHA-PEL Not established |

Engineering controls

Use only under good ventilation conditions or with respiratory protection.

Personal protective equipment

Eye / face protection

Chemical splash goggles.

Hand protection

Rubber gloves. Confirm with a reputable supplier first.

Skin and body protection

As required by employer code.

Respiratory protection

Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.

General hygiene considerations

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.

9. Physical and Chemical Properties

| | |
|------------------------------------------------|----------------|
| Appearance | Granular |
| Color | White |
| Form | Solid. |
| Odor | Odorless |
| Odor threshold | Not available |
| Physical state | Solid |
| pH | Not available |
| Melting point | Not available |
| Freezing point | Not available |
| Boiling point | Not available |
| Pour point | Not available |
| Evaporation rate | Not available |
| Flash point | Not available |
| Auto-ignition temperature | Not available |
| Flammability limits in air, lower, % by volume | Not applicable |

| | |
|-------------------------------------------------------|----------------|
| Flammability limits in air, upper, % by volume | Not applicable |
| Vapor pressure | Not available |
| Vapor density | Not available |
| Specific gravity | Not available |
| Octanol/water coefficient | Not available |
| Viscosity | Not available |
| Percent volatile | Not available |

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 | Acids. Halogenated compounds. Metals. |
| 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.
(PEROXYMONOSULFURIC 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.
(PEROXYMONOSULFURIC 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 (1:1) | 546-93-0 | 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 (1:1) | 546-93-0 | Present (dust) |
|-------------------------------------|----------|----------------|

U.S. - New Jersey - Right to Know Hazardous Substance List

| | | |
|-------------------------------------|-----------|---------|
| Carbonic acid, magnesium salt (1:1) | 546-93-0 | 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 (1:1) | 546-93-0 | Toxic |
| Potassium persulfate | 7727-21-1 | Flammable |

Inventory name

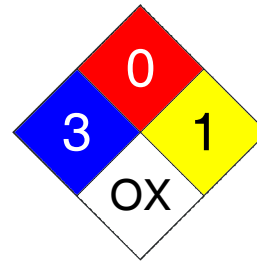
| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|-----------------------------------------------|------------------------|
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

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

16. Other Information

| LEGEND HMIS/NFPA | |
|---------------------|---|
| Severe | 4 |
| Serious | 3 |
| Moderate | 2 |
| Slight | 1 |
| Minimal | 0 |

| | |
|---------------------|-----|
| 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.

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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.