

## SAFETY DATA SHEET

Preparation Date: No data available

Revision Date: 06/30/2015

Revision Number: G1

**Product identifier**

**Product code:** S1378  
**Product Name:** SODIUM PERCHLORATE, MONOHYDRATE, REAGENT, ACS

**Other means of identification**

**Synonyms:** No information available  
**CAS #:** 7791-07-3  
**RTECS #** SC9850000  
**CI#:** Not available

**Recommended use of the chemical and restrictions on use**

**Recommended use:** No information available.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>

**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Martin LaBenz (West Coast)  
**Contact Person:** Ibad Tirmiz (East Coast)

### 2. HAZARDS IDENTIFICATION

**Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Oxidizing solids	Category 3

**Label elements**

## Warning

### Hazard statements

May be harmful if swallowed  
Causes skin irritation  
Causes serious eye irritation  
May cause damage to organs through prolonged or repeated exposure  
May cause respiratory irritation  
May intensify fire; oxidizer



### Hazards not otherwise classified (HNOC)

Not Applicable

### Other hazards

May be harmful if swallowed

### Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling  
Do not breathe dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Keep away from heat/sparks/open flames/hot surfaces. — No smoking  
Keep/Store away from clothing/ .? /combustible materials  
Take any precaution to avoid mixing with combustibles .?  
Wear protective gloves/protective clothing/eye protection/face protection

### Precautionary Statements - Response

Specific treatment (see .? on this label)  
Get medical advice/attention if you feel unwell  
In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
IF ON SKIN: Wash with plenty of soap and water  
If skin irritation occurs: Get medical advice/attention  
Take off contaminated clothing and wash before reuse  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

### Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed  
Store locked up

### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %	Trade Secret
Sodium Perchlorate, Monohydrate 7791-07-3	7791-07-3	100	*

### 4. FIRST AID MEASURES

#### First aid measures

##### **General Advice:**

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)

##### **Skin Contact:**

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention. If skin irritation persists, call a physician.

##### **Eye Contact:**

Flush eye with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

##### **Inhalation:**

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

##### **Ingestion:**

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

#### Most important symptoms and effects, both acute and delayed

##### **Symptoms**

Causes serious eye irritation. Causes skin irritation. May cause irritation of respiratory tract. May be harmful if swallowed.

#### Indication of any immediate medical attention and special treatment needed

##### **Notes to Physician:**

Treat symptomatically

#### Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

### 5. FIRE-FIGHTING MEASURES

#### Extinguishing Media

##### **Suitable Extinguishing Media:**

The product is not flammable.

##### **Unsuitable Extinguishing Media:**

No information available.

#### Specific hazards arising from the chemical

##### **Hazardous Combustion Products:**

No information available.

**Specific hazards:**

Mixtures with perchlorates and organic materials, or combustible materials, or oxidizable materials are easily ignited by friction or heat.  
Explosive decomposition may occur under fire conditions.  
Forms explosive mixtures with alcohols.  
Mixture of calcium hydride or strontium hydride and perchlorates explodes violently when rubbed in a mortar.  
Forms explosive mixtures with combustible, organic or other easily oxidizable materials. These mixtures are easily ignited by friction or heat.  
Perchlorates explode when mixed with reducing agents or when projected into red-hot charcoal

**Special Protective Actions for Firefighters****Specific Methods:**

No information available.

**Special Protective Equipment for Firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures****Personal Precautions:**

Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Remove all sources of ignition. Keep combustibles (wood, paper, oil, clothing, etc.) away from spilled material.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

**Methods and material for containment and cleaning up****Methods for containment**

Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

**Methods for cleaning up**

Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

**7. HANDLING AND STORAGE****Precautions for safe handling****Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

**Safe Handling Advice:**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice. Keep away from combustible material.

**Conditions for safe storage, including any incompatibilities****Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. Deliquescent.

**Incompatible Materials:**

Acids. Combustible materials. Organic materials. Reducing agents.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Control parameters****National occupational exposure limits****United States**

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Sodium Perchlorate, Monohydrate 7791-07-3	None	None	None	None

**Canada**

Components	Alberta	British Columbia	Ontario	Quebec
Sodium Perchlorate, Monohydrate 7791-07-3	None	None	None	None

**Australia and Mexico**

Components	Australia	Mexico
Sodium Perchlorate, Monohydrate 7791-07-3	None	None

**Appropriate engineering controls****Engineering measures to reduce exposure:**

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Individual protection measures, such as personal protective equipment****Personal Protective Equipment**

- Eye protection:** Safety glasses Safety glasses with side-shields
- Skin and body protection:** Chemical resistant apron. Gloves. Long sleeved clothing.
- Respiratory protection:** Effective dust mask Wear respirator with dust filter.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Solid.	<b>Appearance:</b> Deliquescent. Crystals.	<b>Color:</b> White.
<b>Odor:</b> Odorless.	<b>Taste</b> No information available	<b>Molecular/Formula weight:</b> 140.46
<b>Formula:</b> No information available	<b>Flammability:</b> Non-flammable	<b>Flash point (°C):</b> No data available
<b>Flashpoint (°C/°F):</b> No information available.	<b>Flash Point Tested according to:</b> Not available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>pH:</b> No information available
<b>Melting point/range(°C/°F):</b> 130°C/266°F	<b>Boiling point/range(°C/°F):</b> No information available	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Bulk density:</b> No information available	<b>Specific gravity:</b> 2.02	<b>Vapor pressure @ 20°C (kPa):</b> No information available
<b>Density (g/cm3):</b> No information available	<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> No information available
<b>VOC content (g/L):</b> No information available	<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> No information available
<b>Viscosity:</b> No information available	<b>Miscibility:</b> No information available	<b>Solubility:</b> Easily soluble in hot water Soluble in cold water

## 10. STABILITY AND REACTIVITY

### Reactivity

Oxidizer. Reacts with reducing agents, organic material, combustible materials, and metals (powdered aluminum, iron, sodium peroxide, silver salts)

### Chemical stability

**Stability:** Stable under recommended storage conditions

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Deliquescent in moist air. Incompatible materials.

**Incompatible Materials:** Acids. Combustible materials. Organic materials. Reducing agents.

**Hazardous decomposition products:** No information available

### Other Information

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

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## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Principal Routes of Exposure:

Ingestion. Inhalation.

### Acute Toxicity

#### Component Information

*Sodium Perchlorate, Monohydrate - 7791-07-3*

**LD50/oral/rat** = No information available

**LD50/oral/mouse** = No information available

**LD50/dermal/rat** = No information available

**LD50/dermal/rabbit** = No information available

**LC50/inhalation/rat** = No information available

**LC50/inhalation/mouse** = No information available

**Other LD50 or LC50 information** = No information available

#### Product Information

**LD50/oral/rat** =

**VALUE- Acute Tox Oral** = No information available

**LD50/oral/mouse** =

**Value - Acute Tox Oral** = No information available

**LD50/dermal/rabbit**

**VALUE-Acute Tox Dermal** = No information available

**LD50/dermal/rat**

**VALUE -Acute Tox Dermal** = No information available

**LC50/inhalation/rat**

**VALUE-Vapor** = No information available

**VALUE-Gas** = No information available

**VALUE-Dust/Mist** = No information available

**LC50/Inhalation/mouse**

**VALUE-Vapor** = No information available

**VALUE - Gas** = No information available

**VALUE - Dust/Mist** = No information available

### Symptoms

**Skin Contact:** Causes skin irritation.

**Eye Contact:** Causes serious eye irritation.

**Inhalation** May cause respiratory tract irritation. May cause methemoglobinemia and the ability of the blood to carry oxygen causing headache, fatigue, dizziness, and a blue color to the skin and lips. May also affect the kidneys if inhaled.

**Ingestion** May be harmful if swallowed. May cause irritation of the digestive tract with nausea and vomiting. May also affect behavior (excitement), respiration (dyspnea), metabolism, blood, and liver, kidneys.

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**Aspiration hazard** No information available

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Chronic Toxicity** Inhalation: It may affect the kidneys. It may affect the the blood (red blood cell count) and cause anemia. It may also cause methemoglobinemia.  
Ingestion: Prolonged or repeated ingestion of large amounts may affect the thyroid. Perchlorate affects the ability of the thyroid gland to take up iodine. Exposure of people to higher amounts of perchlorate for a long time may lower the level of thyroid activity leading to hypothyroidism.

**Sensitization:** No information available

**Mutagenic Effects:** May affect genetic material

**Carcinogenic effects:** Not considered carcinogenic

Components	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Sodium Perchlorate, Monohydrate	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available  
**Developmental Effects:** No information available  
**Teratogenic Effects:** No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** No information available  
**STOT - repeated exposure** May cause damage to organs through prolonged or repeated exposure.  
**Target Organs:** No information available

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** No data available.

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available

**Mobility:** No information available

**13. DISPOSAL CONSIDERATIONS**

**Disposal Methods**

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### 13. DISPOSAL CONSIDERATIONS

**Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Sodium Perchlorate, Monohydrate	None	None	None	None

### 14. TRANSPORT INFORMATION

**DOT**

**UN-No:** UN1502  
**Proper Shipping Name:** Sodium perchlorate  
**Hazard Class:** 5.1  
**Subsidiary Risk:**  
**Packing Group:** II  
**ERG No:** 140  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available

**Symbol(s):**

**TDG (Canada)**

**UN-No:** UN1502  
**Proper Shipping Name:** Sodium perchlorate  
**Hazard Class:** 5.1  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Description:** No information available

**ADR**

**UN-No:** UN1502  
**Proper Shipping Name:** Sodium perchlorate  
**Hazard Class:** 5.1  
**Packing Group:** II  
**Subsidiary Risk:** No information available  
**Classification Code:** No information available  
**Description:** No information available  
**CEFIC Tremcard No:** No information available

**IMO / IMDG**

**UN-No:** UN1502  
**Proper Shipping Name:** Sodium perchlorate  
**Hazard Class:** 5.1  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Description:** No information available  
**IMDG Page:** No information available  
**Marine Pollutant:** No information available  
**EMS:** F-H  
**MFAG:** No information available

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## 14. TRANSPORT INFORMATION

**Maximum Quantity:** No information available

### RID

**UN-No:** UN1502  
**Proper Shipping Name:** Sodium perchlorate  
**Hazard Class:** 5.1  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Classification Code:** No information available  
**Description:** No information available

### ICAO

**UN-No:** UN1502  
**Proper Shipping Name:** Sodium perchlorate  
**Hazard Class:** 5.1  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Description:** No information available

### IATA

**UN-No:** UN1502  
**Proper Shipping Name:** Sodium perchlorate  
**Hazard Class:** 5.1  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**ERG Code:** 5L  
**Description:** No information available

## 15. REGULATORY INFORMATION

### International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Sodium Perchlorate, Monohydrate</i>	Not Listed	Not present	Not present	Not present	Present	Present	Not present

### U.S. Regulations

#### California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

##### Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

##### Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Sodium Perchlorate, Monohydrate	Not Listed	Not Listed	Not Listed	Not Listed

### CERCLA/SARA

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Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
Sodium Perchlorate, Monohydrate	None	None	None	None	None

#### U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Sodium Perchlorate, Monohydrate	Not Applicable	Not Applicable

#### Canada

##### WHMIS hazard class:

C Oxidizing materials  
D2B Toxic materials

##### Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

#### Inventory

Components	Canada (DSL)	Canada (NDSL)
Sodium Perchlorate, Monohydrate	Not Listed	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Sodium Perchlorate, Monohydrate	Not listed	Not listed

#### EU Classification

##### R-phrase(s)

R 9 - Explosive when mixed with combustible material.  
R22 - Harmful if swallowed.

##### S -phrase(s)

S13 - Keep away from food, drink and animal feedingstuffs.  
S22 - Do not breathe dust.  
S27 - Take off immediately all contaminated clothing.

Components	Classification	Concentration Limits:	Safety Phrases
Sodium Perchlorate, Monohydrate		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

##### Indication of danger:

O - Oxidising.

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## 16. OTHER INFORMATION

**Revision Date:** 06/30/2015  
**Prepared by:** Sonia Owen

**Disclaimer:** All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**