

## SAFETY DATA SHEET

Preparation Date: 12/11/2019

Revision date 12/11/2019

Revision Number: G1

### 1. IDENTIFICATION

#### Product identifier

**Product code:** P1360  
**Product Name:** POTASSIUM PERCHLORATE, CRYSTAL, REAGENT, ACS

#### Other means of identification

**Synonyms:** No information available  
**CAS #:** 7778-74-7  
**RTECS #** SC9700000  
**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:** Tom Tyner (USA - West Coast)  
**Contact Person:** Ibad Tirmiz (USA - East Coast)

### 2. HAZARDS IDENTIFICATION

#### Classification

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

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Serious eye damage/eye irritation	Category 2B
Oxidizing solids	Category 1

#### Label elements

**Danger**

#### **Hazard statements**

Harmful if swallowed  
 Causes eye irritation  
 May cause fire or explosion; strong oxidizer



**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Causes mild skin irritation

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Keep away from heat/sparks/open flames/hot surfaces. — No smoking  
Keep/Store away from clothing and other combustible materials  
Take any precaution to avoid mixing with combustibles  
Wear protective gloves  
Wear eye/face protection  
Wear fire/flame resistant/retardant clothing

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. IN CASE OF FIRE: Use water to extinguish. Do not use dry chemicals or foams. CO2 or Halon may provide limited control.

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 attention.

IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes

IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell

Rinse mouth

**Precautionary Statements - Disposal**

Dispose of contents and container to an approved waste disposal plant in accordance with local, regional, national and international regulations as applicable

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS No	Weight-%
Potassium Perchlorate	7778-74-7	100

**4. FIRST AID MEASURES**

**First aid measures**

**General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

**Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. Consult a physician if necessary.

**Eye Contact:** Flush eyes with water for 15 minutes. Get medical attention. If symptoms persist, call a physician.

**Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:** Harmful if swallowed. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

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

**Symptoms** Mild skin irritation  
Causes eye irritation  
Causes digestive (gastrointestinal) tract irritation  
May cause nausea and vomiting  
It may affect the thyroid  
It may affect the kidneys  
It may affect the blood

**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:** Water. CO2 may be of no value in extinguishing fires involving oxidizers and may only provide limited control.

**Unsuitable Extinguishing Media:** Dry chemical. Foam. Halons.

**Specific hazards arising from the chemical**

**Hazardous combustion products** If it is involved in a fire the following can be released: hydrogen chloride gas. Chlorine gas.

**Specific hazards** May cause fire or explosion: strong oxidizer. The product is not flammable, but it may cause fire when in contact with other material. Contact with combustible or organic materials may cause fire. Will accelerate burning when involved in a fire. Container explosion may occur under fire conditions or when heated.

**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. Wear 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. Avoid dust formation. DO NOT use combustible materials such as sawdust. Remove all sources of ignition.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Prevent from entering into soil, ditches, sewers, waterways, and/or ground water. Prevent product from entering drains. Do not let this chemical enter the environment.

### 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** Clean contaminated surface thoroughly. Sweep up and shovel. Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Do not use combustible materials such as paper towels, sawdust, clothing, etc. to clean up spill.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Technical Measures/Precautions:**

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

**Safe Handling Advice:**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Use only in well-ventilated areas. Do not breathe dust. Do not ingest. Keep away from heat and sources of ignition. When using do not smoke. Keep away from combustible material. Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Do not store near combustible materials. Store at room temperature in the original container. Store away from incompatible materials. Store in a segregated and approved area.

**Incompatible Materials:**

Reducing agents  
Combustible materials  
Strong acids  
Metals  
Powdered metals  
Aluminum powder  
Magnesium powder  
Nickel  
Titanium  
Organic materials  
Fluorine  
Titanium dioxide

Boron  
Alcohols  
Aluminum compounds  
Barium compounds

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### National occupational exposure limits

##### United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
Potassium Perchlorate	7778-74-7	None	None	None	None

##### Canada

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Potassium Perchlorate	7778-74-7	None	None	None	None

##### Australia and Mexico

Component	CAS No	Australia	Mexico
Potassium Perchlorate	7778-74-7	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:** Goggles or Safety glasses with side-shields.

**Skin and body protection:** Chemical resistant apron  
Gloves  
Long sleeved clothing

**Respiratory protection:** Effective dust mask. or. Wear respirator with dust filter. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

**Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Solid	<b>Appearance:</b> Crystalline solid. Crystals.	<b>Color:</b> White.
<b>Odor:</b> Odorless.	<b>Taste</b> Slight. Salty.	<b>Formula</b> KClO4
<b>Molecular/Formula weight (g/mole):</b> 138.55 g/mol	<b>Flammability (solid, gas)</b> no data available	<b>Flashpoint (°C/°F):</b> No information available
<b>Flash Point Tested according to:</b> Not available	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Melting point/range(°C/°F):</b> 525°C/966°F	<b>Decomposition temperature(°C/°F):</b> >400°C/>752°F
<b>Boiling point/range(°C/°F):</b> No information available	<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> 2.52-2.53
<b>Specific gravity:</b> 2.52-2.53	<b>pH</b> No information available	<b>Vapor pressure @ 20°C (kPa):</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> Slightly soluble in water Practically insoluble in alcohol	

## 10. STABILITY AND REACTIVITY

### Reactivity

Can react explosively with many reducing agents  
 Contact with powdered metals may cause fire or explosion  
 Highly reactive with combustible materials and organic materials  
 Reactive with strong acids  
 Contact with acids or acid fumes may evolve highly toxic hydrogen chloride fumes

### Chemical stability

**Stability:** Stable under recommended storage conditions.

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

**Conditions to avoid:** Avoid dust formation. Contact with combustible materials (wood, paper, oil, clothing, etc.). Heat, flames and sparks. Incompatible materials. Contact with finely divided (powdered) metals.

**Incompatible Materials:**  
 Reducing agents  
 Combustible materials  
 Strong acids  
 Metals  
 Powdered metals  
 Aluminum powder  
 Magnesium powder

Nickel  
Titanium  
Organic materials  
Fluorine  
Titanium dioxide  
Boron  
Alcohols  
Aluminum compounds  
Barium compounds

**Hazardous decomposition products:** Hydrogen chloride. Chlorine.

**Other Information**  
**Corrosivity:** No information available

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

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**  
Ingestion. Inhalation.

### Acute Toxicity

### Component Information

Potassium Perchlorate	
CAS No	7778-74-7

**LD50/oral/rat** = No information available  
**LD50/oral/mouse** = No information available  
**LD50/dermal/rabbit** = No information available  
**LD50/dermal/rat** = 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 Toxicity =** No information available

**LD50/oral/mouse =**  
**Value - Acute Tox =** No information available

**LD50/dermal/rabbit**  
**Value - Acute Toxicity =** No information available

**LD50/dermal/rat**  
**VALUE - Acute Tox =** No information available

**LC50/inhalation/rat**

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VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = 28000 mg/m<sup>3</sup>

**LC50/Inhalation/mouse**

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

**Symptoms**

**Skin Contact:** Mild skin irritation.

**Eye Contact:** Causes eye irritation.

**Inhalation** It can irritate the nose and throat and cause coughing and shortness of breath, but it is not clear how much can be absorbed through the lungs. It may cause ulceration of the nasal septum. It may cause pulmonary edema, chemical pneumonitis, and upper airway obstruction caused by edema.

**Ingestion** Causes digestive (gastrointestinal) tract irritation. Ingestion may cause nausea, vomiting. May affect urinary system (kidneys). It may affect the blood (changes in white and red blood cell count).

**Aspiration hazard** No information available.

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

**Chronic Toxicity** Prolonged or repeated ingestion may affect the thyroid. Prolonged or repeated ingestion may affect the kidneys. Prolonged or repeated ingestion may affect the blood (changes in white blood cell count). Prolonged or repeated ingestion may affect the blood (changes in red blood cell count).

**Sensitization:** No information available.

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Potassium Perchlorate	7778-74-7	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

*NTP (National Toxicology Program)*

*OSHA (Occupational Safety and Health Administration of the US Department of Labor)*

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available

**Developmental Effects:** No information available

**Teratogenic Effects:** No information available

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### Specific Target Organ Toxicity

STOT - single exposure No information available.  
STOT - repeated exposure No information available.  
Target Organs: Kidneys. Blood.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Ecotoxicity effects: No data available.  
Persistence and degradability: No information available  
Bioaccumulative potential: No information available.  
Mobility in soil No information available  
Other adverse effects No information available.

## 13. DISPOSAL CONSIDERATIONS

### Disposal Methods

**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

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Potassium Perchlorate	7778-74-7	None	None	None	None

## 14. TRANSPORT INFORMATION

### DOT

UN-No: UN1489  
Proper Shipping Name: Potassium perchlorate  
Hazard Class 5.1  
Subsidiary Class No information available  
Packing group: II  
Emergency Response Guide Number 140  
Marine Pollutant No data available  
DOT RQ (lbs): No information available  
Special Provisions IB6, IP2, T3, TP33  
Symbol(s): No information available  
Description: UN1489, Potassium perchlorate, 5.1, II

### TDG (Canada)

UN-No: UN1489  
Proper Shipping Name: Potassium perchlorate

Product code: P1360

Product name: POTASSIUM  
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**Hazard Class** 5.1  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Marine Pollutant** No Information available  
**Description:** UN1489, Potassium perchlorate, 5.1, II

**ADR**

**UN Number** UN1489  
**Proper Shipping Name:** Potassium perchlorate  
**Transport hazard class(es)** 5.1  
**Packing group** II  
**Subsidiary Risk:** No information available  
**Description:** UN1489, Potassium perchlorate, 5.1, II

**IMDG**

**UN-No:** UN1489  
**Proper Shipping Name:** Potassium perchlorate  
**Hazard Class:** 5.1  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Marine Pollutant** No information available  
**EMS:** F-H  
**Description** UN1489, Potassium perchlorate, 5.1, II

**RID**

**UN Number** UN1489  
**Proper Shipping Name:** Potassium perchlorate  
**Transport hazard class(es)** 5.1  
**Subsidiary Risk:** No information available  
**Packing group** II  
**Description:** UN1489, Potassium perchlorate, 5.1, II

**ICAO (air)**

**UN-No:** UN1489  
**Proper Shipping Name:** Potassium perchlorate  
**Hazard Class** 5.1  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Description:** UN1489, Potassium perchlorate, 5.1, II

**IATA**

**UN Number** UN1489  
**Proper Shipping Name:** Potassium perchlorate  
**Transport hazard class(es)** 5.1  
**Subsidiary Risk:** No information available  
**Packing group** II  
**Precautionary Statements - Response** 5L  
**Special Provisions** No information available  
**Description:** UN1489, Potassium perchlorate, 5.1, II

<b>15. REGULATORY INFORMATION</b>
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**International Inventories**

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines	Japan ENCS	China IECSC	Australia	EINECS-No.
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				(PICCS)			(AICS)	
Potassium Perchlorate	7778-74-7	PresentACTIVE	Present KE-29178	Present	Present (1)-230	Present	Present	Present 231-912-9

## U.S. Regulations

### Potassium Perchlorate

Massachusetts RTK: Present

New Jersey RTK Hazardous Substance List: 1577

New Jersey - Discharge Prevention - List of Hazardous Substances: Present

Pennsylvania RTK: Present

## 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)

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Potassium Perchlorate	7778-74-7	Not Listed	Not Listed	Not Listed	Not Listed

## CERCLA/SARA

Component	CAS No	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 de minimis
Potassium Perchlorate	7778-74-7	None	None	None	None	None

## U.S. TSCA

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Potassium Perchlorate	7778-74-7	Not Applicable	Not Applicable

## Canada

### WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component  
Potassium Perchlorate  
7778-74-7 ( 100 )

WHMIS 2015 Hazard Classification  
Oxidizing solids - Category 2: H272 May intensify fire, oxidizer.;  
Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation. (due to lack of data, this classification was established by analogy to Sodium perchlorate); Specific target organ toxicity - Repeated exposure - Category 1: H372 Causes damage to organs through prolonged or repeated exposure. (due to lack of data, this classification was established by analogy to Sodium perchlorate)

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

## DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
Potassium Perchlorate	7778-74-7	Present	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Potassium Perchlorate	7778-74-7	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Potassium Perchlorate	7778-74-7	Not listed

## EU Classification

### EU GHS - SV - CLP 1272/2008

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Potassium Perchlorate	7778-74-7	Oxidizing solids - Ox. Sol. 1: H271 May cause fire or explosion, strong oxidizer.; Acute toxicity - Oral - Acute Tox. 4: H302 Harmful if swallowed. (Minimum classification)017-008-00-5

### EU - CLP (1272/2008)

#### R-phrase(s)

R22 - Harmful if swallowed

R 9 - Explosive when mixed with combustible material.

#### S -phrase(s)

S 2 - Keep out of the reach of children.

S13 - Keep away from food, drink and animal feedingstuffs.

S22 - Do not breathe dust

S27 - Take off immediately all contaminated clothing

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
Potassium Perchlorate	7778-74-7	Xn; R22 O; R9	No information	S:(2)-13-22-27

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

#### Indication of danger:

Xn - Harmful

O - Oxidising.



## 16. OTHER INFORMATION

Product code: P1360

Product name: POTASSIUM  
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REAGENT, ACS

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**Preparation Date:** 12/11/2019  
**Revision date** 12/11/2019  
**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**