# SAFETY DATA SHEET

## 1. Identification

**Product identifier**

- **Product code:** P-445
- **Product Name:** POTASSIUM PERMANGANATE, 0.1 N AQUEOUS SOLUTION

**Other means of identification**

- **Synonyms:** No information available
- **CAS #:** Mixture
- **RTECS #:** Not available
- **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 not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

**Label elements**

**Not classified**

**Hazards not otherwise classified (HNOC)**

- Not Applicable

**Other hazards**

- Harmful to aquatic life with long lasting effects
- Harmful to aquatic life
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>99.7</td>
</tr>
<tr>
<td>Potassium Permanganate</td>
<td>7722-64-7</td>
<td>0.3</td>
</tr>
</tbody>
</table>

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 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. Get medical attention.

Ingestion: 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 Health injuries are not known or expected under normal use

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. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous combustion products No information available.

Specific hazards No information available.
### 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

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### 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. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**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. In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

**Methods for cleaning up** Absorb spill with inert material (e.g. vermiculite, dry sand or earth). Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

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### 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. Keep away from heat and sources of ignition. Do not ingest. Do not breathe vapors or spray mist. 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. Store at room temperature in the original container. Store away from incompatible materials.

**Incompatible Materials:**
- Acids
- Metals
- Powdered metals
- Reducing agents
- Ammonia
- Ammonium salts
- Alcohols

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

**Product code:** P-445  
**Product name:** POTASSIUM PERMANGANATE, 0.1 N AQUEOUS SOLUTION

---
### National occupational exposure limits

#### United States

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<tr>
<th>Component</th>
<th>CAS No</th>
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<th>NIOSH</th>
<th>ACGIH</th>
<th>AIHA WEEL</th>
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<td>None</td>
<td>0.02 mg/m³ TWA (respirable fraction, as Mn)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.1 mg/m³ TWA (inhalable fraction, as Mn)</td>
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<td></td>
<td></td>
<td>Listed under manganese inorganic compounds</td>
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#### Canada

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<th>Canada - Ontario</th>
<th>Canada - Quebec</th>
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<td>None</td>
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<td>0.2 mg/m³ TWA (as Mn)</td>
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<td>0.02 mg/m³ TWA (respirable fraction, as Mn)</td>
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#### Australia and Mexico

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<td>None</td>
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<tr>
<td>Potassium Permanganate</td>
<td>7722-64-7</td>
<td>None</td>
<td>0.2 mg/m³ TWA (as Mn) Listed under manganese inorganic compounds</td>
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</table>

### Appropriate engineering controls

**Engineering measures to reduce exposure:** Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

### 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:** Respiratory protection is not necessary for normal handling. Good room ventilation or use of local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of
high concentrations of mist or vapor, 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. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

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<tr>
<th>Property</th>
<th>Value</th>
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<tr>
<td><strong>Appearance:</strong></td>
<td>Clear</td>
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<tr>
<td><strong>Color:</strong></td>
<td>Dark purple</td>
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<tr>
<td><strong>Odor:</strong></td>
<td>Odorless</td>
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<tr>
<td><strong>Taste:</strong></td>
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<tr>
<td><strong>Formula:</strong></td>
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<tr>
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<tr>
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<tr>
<td><strong>Evaporation rate:</strong></td>
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<tr>
<td><strong>Vapor density:</strong></td>
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<td><strong>Odor threshold (ppm):</strong></td>
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</tr>
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<td><strong>Partition coefficient (n-octanol/water):</strong></td>
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<td><strong>Miscibility:</strong></td>
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</tr>
<tr>
<td><strong>Solubility:</strong></td>
<td>Easily soluble in cold water</td>
</tr>
<tr>
<td></td>
<td>Easily soluble in hot water</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

**Reactivity**
May react with reducing agents, acids, formaldehyde, ammonia, ammonium salts, ammonium nitrate, dimethylformamide, glycerol, combustible materials, alcohols, arsenites, bromides, iodides, charcoal, organic materials, ferrous or mercurous salts, hypophosphites, hyposulfites, sulfites, peroxides, oxalates, ethylene glycol, metal powders, phosphorus, sulfur.

**Chemical stability**

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

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

**Conditions to avoid:** Incompatible materials.

**Incompatible Materials:** Acids

**Product code:** P-445  **Product name:** POTASSIUM PERMANGANATE, 0.1 N AQUEOUS SOLUTION
Metals
Powdered metals
Reducing agents
Ammonia
Ammonium salts
Alcohols

**Hazardous decomposition products:**
No information available.

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

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

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### 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Principal Routes of Exposure:**
Eyes. Skin. Ingestion.

**Acute Toxicity**

**Component Information**

**Water**

| LD50/oral/rat | > 90 mL/kg Oral LD50 Rat
| 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

**Potassium Permanganate**

| LD50/oral/rat | 750 mg/kg Oral LD50 Rat(LOLI, RTECS, European Chemicals Bureau IUCLID dataset); 1090 mg/kg (European Chemicals Bureau IUCLID dataset)
| LD50/oral/mouse | 2157 mg/kg (RTECS and European Chemicals Bureau IUCLID dataset) 750 mg/kg (RTECS and European Chemicals Bureau IUCLID dataset)
| LD50/dermal/rabbit | No information available
| LD50/dermal/rat | 750 mg/kg Oral LD50
| LC50/inhalation/rat | No information available
| LC50/inhalation/mouse | No information available

**Other LD50 or LC50 information**

1151 mg/kg Oral LD50 Guinea Pig
100 mg/kg oral LDL woman
135-143 oral LDL human

**Product Information**

LD50/oral/rat =
Value - Acute Tox = No information available

**Product code:** P-445  **Product name:** POTASSIUM PERMANGANATE, 0.1 N AQUEOUS SOLUTION
LD50/oral/mouse =  
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit  
Value - Acute Tox = 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: May cause skin irritation. It can cause brown stains on the skin.

Eye Contact: May cause eye irritation.

Inhalation May cause irritation of respiratory tract.

Ingestion May cause digestive (gastrointestinal) tract irritation. May cause nausea. May cause vomiting. Contains potassium permanganate which if ingested in large amounts, may affect the cardiovascular system, urinary system (kidneys), liver, and central nervous system (somnolence, dizziness, tremor, fatigue).

Aspiration hazard No information available.

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

Chronic Toxicity No information available.

Sensitization: No information available.

Mutagenic Effects: For Potassium Permanganate: 
Mutations in microorganisms 
Experiments with bacteria and/or yeast have shown mutagenic effects

Carcinogenic effects: Not considered carcinogenic.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>IARC</th>
<th>ACGIH - Carcinogens</th>
<th>NTP</th>
<th>OSHA HCS - Carcinogens</th>
<th>Australia - Notifiable Carcinogenic Substances</th>
<th>Australia - Prohibited Carcinogenic Substances</th>
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<tr>
<td>Water</td>
<td>7732-18-5</td>
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<td>Not listed</td>
<td>Not listed</td>
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<tr>
<td>Potassium Permanganate</td>
<td>7722-64-7</td>
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<td>Group A4- Not Classifiable as a Human Carcinogen (listed under manganese)</td>
<td>Not listed</td>
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</tbody>
</table>

Product code: P-445  
Product name: POTASSIUM PERMANGANATE, 0.1 N AQUEOUS SOLUTION
Reproductive toxicity: No data is available

Reproductive Effects: For Potassium Permanganate: May cause adverse reproductive effects based on animal data. From RTECS and ReproTox: Reproductive Effects Data: oral, mouse (Paternal Effects: Spermatogenesis). In vivo experiments in mice using high concentrations of Potassium Permanganate reported abnormal sperm head formation, interpreted by some authors as suggesting alteration in the genetic control of spermatogenesis.

Developmental Effects: No information available.
Teratogenic Effects: No information available.

Specific Target Organ Toxicity

STOT - single exposure: No information available.
STOT - repeated exposure: No information available.
Target Organs: Central nervous system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Potassium Permanganate - 7722-64-7

Fish
0.3-0.6 mg/L LC50 Oncorhynchus mykiss 96 h
0.769-1.27 mg/L LC50 Oncorhynchus mykiss 96 h static 1
1.08-1.38 mg/L LC50 Oncorhynchus mykiss 96 h 1
1.8-5.6 mg/L LC50 Lepomis macrochirus 96 h static 1
2.3 mg/L LC50 Lepomis macrochirus 96 h flow-through 1
2.7 mg/L LC50 Lepomis macrochirus 96 h 1
2.97-3.11 mg/L LC50 Cyprinus carpio 96 h 1
3.16-3.77 mg/L LC50 Cyprinus carpio 96 h 1
3.3-3.93 mg/L LC50 Carassius auratus 96 h static 1

Crustacea
0.84 mg/L LC50 Daphnia magna 48 h

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

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
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<td>7732-18-5</td>
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<td>None</td>
<td>None</td>
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<tr>
<td>Potassium Permanganate</td>
<td>7722-64-7</td>
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<td>None</td>
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</tbody>
</table>

14. TRANSPORT INFORMATION

DOT
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Class: No information available
Packing group: No information available
Emergency Response Guide Number: No information available
Marine Pollutant: No data available
DOT RQ (lbs): No information available
Special Provisions: No Information available
Symbol(s): No information available
Description: No information available

TDG (Canada)
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant: No Information available
Description: No information available

ADR
UN Number: Not regulated
Proper Shipping Name: No information available
Transport hazard class(es): No information available
Packing group: No information available
Subsidiary Risk: No information available

IMDG
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant: No information available

RID
UN Number: Not Regulated
Proper Shipping Name: No information available
Transport hazard class(es): No information available

Product code: P-445
Product name: POTASSIUM PERMANGANATE, 0.1 N AQUEOUS SOLUTION

Page
Subsidiary Risk: No information available
Packing group: No information available

ICAO (air)
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available

IATA
UN Number: Not Regulated
Proper Shipping Name: No information available
Transport hazard class(es): No information available
Subsidiary Risk: No information available
Packing group: No information available
Precautionary Statements - Response: IF exposed or concerned
Special Provisions: No information available

15. REGULATORY INFORMATION

International Inventories

<table>
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<tr>
<th>Component</th>
<th>CAS No</th>
<th>U.S. TSCA</th>
<th>KOREA KECL</th>
<th>Philippines (PICCS)</th>
<th>Japan ENCS</th>
<th>China IECSC</th>
<th>Australia AICS</th>
<th>EINECS-No.</th>
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<td>7722-64-7</td>
<td>Present</td>
<td>Present KE-29180</td>
<td>Present</td>
<td>Present (1)-446</td>
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<td>Present 231-760-3</td>
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U.S. Regulations

Potassium Permanganate

Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: 1578
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
Pennsylvania RTK: Environmental hazard
Pennsylvania RTK - Environmental Hazard List Present
Minnesota - Hazardous Substance List: Present (as Manganese compounds)
New York Release Reporting - List of Hazardous Substances:
100 lb RQ
Louisana Reportable Quantity List for Pollutants: 100lbfinal RQ
45.4kgfinal RQ
California Directors List of Hazardous Substances: Present
FDA - Direct Food Additives 21 CFR 172.892 (<=0.2%)
FDA - 21 CFR - Total Food Additives 172.892, 175.105, 178.1010
- List Sourced from EAFUS


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 |
-----------|--------|------------|------------------------|-----------------------------|-------------------------------|

Product code: P-445  Product name: POTASSIUM PERMANGANATE, 0.1 N AQUEOUS SOLUTION
### CERCLA/SARA

<table>
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<th>Component</th>
<th>CAS No</th>
<th>CERCLA - Hazardous Substances and their Reportable Quantities</th>
<th>Section 302 Extremely Hazardous Substances and TPQs</th>
<th>Section 302 Extremely Hazardous Substances and RQs</th>
<th>Section 313 - Chemical Category</th>
<th>Section 313 - Reporting de minimis</th>
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### U.S. TSCA

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<th>TSCA 8(d) - Health and Safety Reporting</th>
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### Canada

#### WHIMIS 2015 - GHS Classifications

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<th>WHIMIS 2015 Hazard Classification</th>
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<tr>
<td>Water</td>
<td>Not a dangerous product according to HPR classification criteria</td>
<td>Oxidizing solids - Category 2: H272 May intensify fire, oxidizer.; Acute toxicity - Oral - Category 4: H302 Harmful if swallowed.; Health Hazard Not Otherwise Classified - Category 1: Causes severe damage to the respiratory tract; Skin corrosion/irritation - Category 1: H314 Causes severe skin burns and eye damage.; Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage.</td>
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<tr>
<td>Potassium Permanganate</td>
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<td></td>
</tr>
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#### 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

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<th>Component</th>
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<th>Canada (NDSL)</th>
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<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>Present</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Potassium Permanganate</td>
<td>7722-64-7</td>
<td>Present</td>
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### CEPA

<table>
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<tr>
<th>Component</th>
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<td>7722-64-7</td>
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<th>CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting</th>
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<tr>
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<td>7722-64-7</td>
<td>Not listed</td>
</tr>
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</table>

**Product code:** P-445  
**Product name:** POTASSIUM PERMANGANATE, 0.1 N AQUEOUS SOLUTION  
**Page**
EU Classification

EU GHS - SV - CLP 1272/2008

<table>
<thead>
<tr>
<th>Component</th>
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<th>EU GHS - SV - CLP (1272/2008)</th>
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<tr>
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<td>Oxidizing solids - Ox. Sol. 2: H272 May intensify fire, oxidizer.; Acute toxicity - Oral - Acute Tox. 4: H302 Harmful if swallowed. (Minimum classification); Hazardous to aquatic environment - acute hazard - Aquatic Acute 1: H400 Very toxic to aquatic life.; Hazardous to aquatic environment - chronic hazard - Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects.025-002-00-9</td>
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<td>7722-64-7</td>
<td>Xn; R22 N; R50-53 O; R8 No information Safety Phrases S2 S60 S61</td>
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EU - CLP (1272/2008)

S-phrase(s)

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<td>Xn; R22 N; R50-53 O; R8</td>
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</table>

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

Indication of danger:
Not dangerous

16. OTHER INFORMATION

Preparation Date: 03/25/2015
Revision date: 1/21/2019
Prepared by: Sonia Owen

Disclaimer:
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Product code: P-445
Product name: POTASSIUM PERMANGANATE, 0.1 N AQUEOUS SOLUTION
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End of Safety Data Sheet