Material Safety Data Sheet  
Potassium periodate

ACC# 19510

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Potassium periodate  
**Catalog Numbers:** AC198390000, AC198390050, AC198391000, AC198395000, AC418290000, AC418291000, S80144, P277-100  
**Synonyms:** Potassium metaperiodate; Periodic acid (HIO₄), potassium salt.  
**Company Identification:**  
Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410  
**For information, call:** 201-796-7100  
**Emergency Number:** 201-796-7100  
**For CHEMTREC assistance, call:** 800-424-9300  
**For International CHEMTREC assistance, call:** 703-527-3887

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>7790-21-8</td>
<td>Periodic acid (HIO₄), potassium salt</td>
<td>&gt;99</td>
<td>232-196-0</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: white crystalline powder.  
**Danger!** Strong oxidizer. Contact with other material may cause a fire. Causes eye, skin, and respiratory tract irritation.  
**Target Organs:** Respiratory system, eyes, skin.

**Potential Health Effects**  
**Eye:** Causes eye irritation.  
**Skin:** Causes skin irritation.  
**Ingestion:** May cause irritation of the digestive tract. May be harmful if swallowed.  
**Inhalation:** Causes respiratory tract irritation. May be harmful if inhaled.  
**Chronic:** Effects may be delayed.

Section 4 - First Aid Measures
**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

**Skin:** Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Ingestion:** Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

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**Section 5 - Fire Fighting Measures**

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Strong oxidizer. Contact with other material may cause fire.

**Extinguishing Media:** May require flooding with water in order to eliminate hazardous reactions since the materials generate their own oxygen. For small fires, do NOT use dry chemicals, carbon dioxide, halon or foams. USE WATER ONLY. For large fires flood fire with water from a distance.

**Flash Point:** Not available.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 0; Instability: 1; Special Hazard: OX

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**Section 6 - Accidental Release Measures**

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation. Do not use combustible materials such as paper towels to clean up spill.

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**Section 7 - Handling and Storage**

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep from contact with clothing and other combustible materials. Avoid breathing dust.

**Storage:** Do not store near combustible materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from reducing agents. Keep containers tightly closed. Avoid storage on wood floors.

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**Section 8 - Exposure Controls, Personal Protection**

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http://fscimage.fishersci.com/msds/19510.htm
Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Periodic acid (HIO₄), potassium salt</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Periodic acid (HIO₄), potassium salt: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Crystalline powder
Appearance: white
Odor: odorless
pH: Not available.
Vapor Pressure: Negligible.
Vapor Density: Negligible.
Evaporation Rate: Negligible.
Viscosity: Not applicable.
Boiling Point: Not available.
Freezing/Melting Point: 582 deg C
Decomposition Temperature: 582 deg C
Solubility: 0.42 g/100 g @ 20°C
Specific Gravity/Density: 3.62
Molecular Formula: KIO₄
Molecular Weight: 230

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: High temperatures, dust generation.
Incompatibilities with Other Materials: Reducing agents, organic materials, combustible materials.
Hazardous Decomposition Products: Hydrogen iodide, oxygen, oxides of potassium, iodide ions (I⁻).
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

http://fscimage.fishersci.com/msds/19510.htm
RTECS#:  
CAS# 7790-21-8 unlisted.

LD50/LC50:  
Not available.

Carcinogenicity:  
CAS# 7790-21-8: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found
Teratogenicity: No information found
Reproductive Effects: No information found
Mutagenicity: No information found
Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

<table>
<thead>
<tr>
<th></th>
<th>US DOT</th>
<th>Canada TDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping Name:</td>
<td>OXIDIZING SOLID, N.O.S.</td>
<td>OXIDIZING SOLID NOS (POTASSIUM PERIODATE)</td>
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<tr>
<td>Hazard Class:</td>
<td>5.1</td>
<td>5.1</td>
</tr>
<tr>
<td>UN Number:</td>
<td>UN1479</td>
<td>UN1479</td>
</tr>
<tr>
<td>Packing Group:</td>
<td>II</td>
<td>II</td>
</tr>
</tbody>
</table>

Section 15 - Regulatory Information

US FEDERAL

TSCA  
CAS# 7790-21-8 is listed on the TSCA inventory.

Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.

**Chemical Test Rules**
None of the chemicals in this product are under a Chemical Test Rule.

**Section 12b**
None of the chemicals are listed under TSCA Section 12b.

**TSCA Significant New Use Rule**
None of the chemicals in this material have a SNUR under TSCA.

**CERCLA Hazardous Substances and corresponding RQs**
None of the chemicals in this material have an RQ.

**SARA Section 302 Extremely Hazardous Substances**
None of the chemicals in this product have a TPQ.

**SARA Codes**
- CAS # 7790-21-8: immediate, fire, reactive.

**Section 313**
No chemicals are reportable under Section 313.

**Clean Air Act:**
- This material does not contain any hazardous air pollutants.
- This material does not contain any Class 1 Ozone depletors.
- This material does not contain any Class 2 Ozone depletors.

**Clean Water Act:**
- None of the chemicals in this product are listed as Hazardous Substances under the CWA.
- None of the chemicals in this product are listed as Priority Pollutants under the CWA.
- None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:**
None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**
CAS# 7790-21-8 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

**California Prop 65**
California No Significant Risk Level: None of the chemicals in this product are listed.

**European/International Regulations**

**European Labeling in Accordance with EC Directives**

**Hazard Symbols:**
- XI

**Risk Phrases:**
- R 36/37/38 Irritating to eyes, respiratory system and skin.
- R 8 Contact with combustible material may cause fire.

**Safety Phrases:**
- S 17 Keep away from combustible material.
- S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S 37/39 Wear suitable gloves and eye/face protection.

**WGK (Water Danger/Protection)**
- CAS# 7790-21-8: 1

**Canada - DSL/NDSL**
- CAS# 7790-21-8 is listed on Canada's DSL List.

**Canada - WHMIS**
This product has a WHMIS classification of C.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
Canadian Ingredient Disclosure List

Section 16 - Additional Information

**MSDS Creation Date:** 1/25/1999  
**Revision #6 Date:** 6/22/2006

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.