Material Safety Data Sheet  
Potassium Persulfate

ACC# 19540

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Potassium Persulfate  
**Catalog Numbers:** S80145, BP180 100, BP180-100, BP180100, P281 500, P281-500, P281500, P282 100, P282 500, P282-100, P282-500, P282100, P282500, S80145-1, S801451  
**Synonyms:** Anthion; Peroxydisulfuric acid, dipotassium salt; Potassium peroxydisulfate; Potassium persulfate  

**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>
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<tbody>
<tr>
<td>7727-21-1</td>
<td>Potassium peroxydisulfate</td>
<td>100</td>
<td>231-781-8</td>
</tr>
</tbody>
</table>

**Hazard Symbols:** XN O  
**Risk Phrases:** 22 36/37/38 42/43 8

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: colorless or white solid. **Danger!** Strong oxidizer. Contact with other material may cause a fire. Causes digestive and respiratory tract irritation. May cause allergic respiratory reaction. May cause allergic skin reaction. May be harmful if swallowed. May cause severe eye, skin and respiratory tract irritation with possible burns.  
**Target Organs:** No data found.

**Potential Health Effects**

**Eye:** May cause severe eye irritation. May cause conjunctivitis. May cause permanent corneal opacification.  
**Skin:** May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. May cause severe irritation and possible burns.  
**Ingestion:** May cause burns to the gastrointestinal tract. May be harmful if swallowed. May cause nausea, vomiting, and diarrhea, possibly with blood.  
**Inhalation:** Dust is irritating to the respiratory tract. May cause asthmatic attacks due to allergic sensitization of the respiratory tract. May cause acute pulmonary edema, asphyxia, chemical pneumonitis, and upper airway obstruction caused by edema.  
**Chronic:** Prolonged or repeated skin contact may cause sensitization dermatitis and possible destruction and/or ulceration. Repeated exposure may cause allergic respiratory reaction (asthma).
Section 4 - First Aid Measures

**Eyes:** 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 immediately. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

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

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

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

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 combustible materials may cause a fire. Use water with caution and in flooding amounts.

**Extinguishing Media:** In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Contact professional fire-fighters immediately.

**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

Section 6 - Accidental Release Measures

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

**Spills/Leaks:** Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Remove all sources of ignition. Provide ventilation.

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 clothing and other combustible materials. Do not get on skin or in eyes. Avoid ingestion and inhalation.

**Storage:** Keep away from heat, sparks, and flame. Do not store near combustible materials. Store in a cool, dry place. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

**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>
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<tbody>
<tr>
<td>Potassium peroxydisulfate</td>
<td>none listed</td>
<td>none listed</td>
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</table>

**OSHA Vacated PELs:** Potassium peroxydisulfate: 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 gloves to prevent skin exposure.

**Clothing:** Wear a chemical apron. Wear appropriate clothing to prevent skin exposure.

**Respirators:** Wear a NIOSH/MSHA or European Standard EN 149 approved full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

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### Section 9 - Physical and Chemical Properties

**Physical State:** Solid

**Appearance:** colorless or white

**Odor:** odorless

**pH:** Acidic in water (<7)

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not applicable.

**Boiling Point:** Not available.

**Freezing/Melting Point:** Decomposes

**Decomposition Temperature:** 100 deg C

**Solubility:** Soluble in water.

**Specific Gravity/Density:** 2.4770

**Molecular Formula:** K2S2O8

**Molecular Weight:** 270.3118

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### Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, ignition sources, dust generation, combustible materials, reducing agents.

**Incompatibilities with Other Materials:** Reducing agents.

**Hazardous Decomposition Products:** Oxygen, oxides of potassium, sulfur oxides (SOx), including sulfur oxide and sulfur dioxide.

**Hazardous Polymerization:** Will not occur.

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### Section 11 - Toxicological Information

**RTECS#:**

**CAS# 7727-21-1:** SE0400000

**LD50/LC50:**

**CAS# 7727-21-1:**

Oral, rat: LD50 = 802 mg/kg;
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

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<tr>
<th>US DOT</th>
<th>IATA</th>
<th>RID/ADR</th>
<th>IMO</th>
<th>Canada TDG</th>
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<tr>
<td>POTASSIUM PERSULFATE</td>
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Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 7727-21-1 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.

SARA

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 # 7727-21-1: acute, flammable.

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 depleters. This material does not contain any Class 2 Ozone depleters.

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# 7727-21-1 can be found on the following state right to know lists: New Jersey, Pennsylvania, Massachusetts.
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:
XN O

Risk Phrases:
R 22 Harmful if swallowed.
R 36/37/38 Irritating to eyes, respiratory system and skin.
R 42/43 May cause sensitization by inhalation and skin contact.
R 8 Contact with combustible material may cause fire.

Safety Phrases:
S 22 Do not breathe dust.
S 24 Avoid contact with skin.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 37 Wear suitable gloves.

WGK (Water Danger/Protection)
CAS# 7727-21-1: 1

Canada - DSL/NDSL
CAS# 7727-21-1 is listed on Canada's DSL List.

Canada - WHMIS
This product has a WHMIS classification of C, E.

Canadian Ingredient Disclosure List
CAS# 7727-21-1 is not listed on the Canadian Ingredient Disclosure List.

Exposure Limits
CAS# 7727-21-1: OEL-DENMARK:TWA 2 mg/m3 OEL-UNITED KINGDOM:TWA 1 mg/m3 OEL-UNITED KINGDOM:TWA 1 mg/m3 JANUARY 1993

Section 16 - Additional Information

MSDS Creation Date: 12/12/1997
Revision #7 Date: 3/18/2003
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.