Material Safety Data Sheet  
Potassium Persulfate, ACS

Section 1 - Chemical Product and Company Identification

**MSDS Name:**  
Potassium Persulfate, ACS

**Catalog Numbers:**  
LC20070

**Synonyms:**  
Anthion; Peroxydisulfuric acid, dipotassium salt; Potassium peroxydisulfate; Dipotassium peroxydisulfate.

**Company Identification:**  
LabChem Inc  
200 William Pitt Way  
Pittsburgh, PA 15238

**Company Phone Number:**  
(412) 826-5230

**Emergency Phone Number:**  
(800) 424-9300

**CHEMTREC Phone Number:**  
(800) 424-9300

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name:</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>7727-21-1</td>
<td>Potassium persulfate</td>
<td>100</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**Appearance:** White crystals

**Caution!** Strong oxidizer. Contact with other material may cause a fire. May cause allergic respiratory and skin reaction. Causes eye, skin, and respiratory tract irritation. May be harmful if swallowed.

**Target Organs:** Skin, eyes, respiratory system.

**Potential Health Effects**

**Eye:**  
Causes eye irritation. May cause transient corneal injury. Burn of cornea healed in 48 hours.

**Skin:**  
Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

**Ingestion:**  
May be harmful if swallowed.

**Inhalation:**  
Dust is irritating to the respiratory tract. May cause allergic respiratory reaction.
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:
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

Skin:
In case of contact, immediately flush skin with soap and plenty of water. Remove contaminated clothing and shoes. Get medical aid if symptoms occur. Wash clothing before reuse.

Ingestion:
If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

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 other material may cause 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.

Autoignition Temperature:
Not available.

Flash Point:
Not available.

NFPA Rating:
CAS# 7727-21-1: H-2, F-0, I-1, Special Hazard- OX

Explosion Limits:
Lower: n/a  Upper: n/a

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 that lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, and then place into a suitable container for disposal. Avoid generating dusty conditions. Remove all sources of ignition. Provide ventilation. Keep combustibles (wood, paper, oil, etc..) away from spilled material.
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. Keep from contact with clothing and other combustible materials. Inform laundry personnel of contaminant's hazards.

Storage:
Do not store near combustible materials. Store in a cool, dry place. Keep containers tightly closed. Avoid storage on wood floors.

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</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium peroxydisulfate</td>
<td>0.1 mg/m3 TWA (as persulfate)</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td></td>
<td>(listed under Persulfates, inorganic, n.o.s.)</td>
<td></td>
<td></td>
</tr>
</tbody>
</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 appropriate protective 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.

Section 9 - Physical and Chemical Properties

Physical State: Crystals
Color: White
Odor: Odorless
pH: Acidic in water
Vapor Pressure: Not available
Vapor Density: Not available
Evaporation Rate: Not available
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**Viscosity:** Not applicable  
**Boiling Point:** Not available  
**Freezing/Melting Point:** 100°C  
**Decomposition Temperature:** 100°C  
**Solubility in water:** Soluble  
**Specific Gravity/Density:** 2.477  
**Molecular Formula:** $\text{K}_2\text{S}_2\text{O}_8$  
**Molecular Weight:** 270.31

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**Section 10 - Stability and Reactivity**

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

**Conditions to Avoid:**  
Dust generation.  

**Incompatibilities with Other Materials:**  
Reducing agents, organic solvents, combustible materials.  

**Hazardous Decomposition Products:**  
Oxides of sulfur, oxygen, oxides of potassium.  

**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

**Carcinogenicity:**  
CAS# 7727-21-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.  
California: None.

**Epidemiology:**  
The occurrence of frequent skin rashes, causing both irritant dermatitis & hypersensitivity reactions,  
was found in workers producing ammonium & potassium persulfates. The rashes were reduced by  
the use of protective clothing & gloves & improved dust removal from the workplace air. Others  
reported asthma in hairdressers that was induced by exposure to persulfates.

**Teratogenicity:**  
No information found

**Reproductive:**  
No information found

**Mutagenicity:**  
No information found

**Neurotoxicity:**  
No information found
Section 12 - Ecological Information

No information found.

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Potassium persulfate
Hazard Class: 5.1
UN Number: UN1492
Packing Group: PGIII

Section 15 - Regulatory Information

US Federal
TSCA:
CAS# 7727-21-1 is listed on the TSCA inventory.
SARA Reportable Quantities (RQ):
None of the chemicals in this material have an RQ.
CERCLA/SARA Section 313:
No chemicals are reportable under Section 313.
OSHA - Highly Hazardous:
None of the chemicals in this product are considered highly hazardous by OSHA.

US State
State Right to Know:
CAS# 7727-21-1 can be found on the following state right to know lists: New Jersey, Pennsylvania, Massachusetts.
California Regulations:
None

European/International Regulations
Canadian DSL/NDSL:
CAS# 7727-21-1 is listed on Canada's DSL List.
Canada Ingredient Disclosure List:
CAS# 7727-21-1 is not listed on the Canadian Ingredient Disclosure List.
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Section 16 - Other Information

MSDS Creation Date: July 26, 2007
Revision Date: September 17, 2009

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