

# Safety Data Sheet

According to Regulation (EC) No. 1907/2006  
OSHA Regulation 29 CFR 1910.1200  
Canadian Regulation SOR/88-66

**Revision Date:** 2012-05-21  
**Reason for Revision:** Section 14 Updated

## **SECTION 1: IDENTIFICATION OF THE PRODUCT AND COMPANY**

**Product Name:** Persulfate Reagent

**Application:** Determination of Phosphorus in Water Samples

**Company Information (USA):**

Hanna Instruments, Inc.  
584 Park East Dr, Woonsocket, Rhode Island, USA 02895

**Technical Service Contact Information:**

1-800-426-6287 (8:30AM - 5:00PM ET)  
+1-401-766-4260 (8:30AM - 5:00PM ET)

**USA Emergency Contact Information:**

1-800-424-9300 (Chemtrec 24Hr. Emergency)

**International Emergency Contact Information:**

+1-703-527-3887 (Chemtrec 24Hr. Emergency)

**E-mail Address:**

tech@hannainst.com

## **SECTION 2: HAZARD IDENTIFICATION**

Contact with combustible material may cause fire. Harmful if swallowed. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact.

**According to Regulation (EC) No. 1272/2008:**

**Classification:** Oxidising Solids (Category 3)  
Acute Toxicity, Oral (Category 4)  
Eye Irritation (Category 2)  
Specific Target Organ Toxicity, Single Exposure (Category 3)  
Skin Irritation (Category 2)  
Respiratory Sensitization (Category 1)  
Skin Sensitization (Category 1)

**Signal Word:** **Danger**

**Pictograms:**



**Hazard Statements:** H272: May intensify fire; oxidiser.  
H302: Harmful if swallowed.  
H315: Causes skin irritation.  
H317: May cause an allergic skin reaction.  
H319: Causes serious eye irritation.  
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335: May cause respiratory irritation.

**Precaution Statements:** P210: Keep away from heat/ sparks/open flames/hot surfaces. — No smoking.  
P220: Keep/Store away from clothing/combustible materials.  
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.  
P280: Wear protective gloves.  
P302+P352: IF ON SKIN: Wash with plenty of soap and water.  
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P342+P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

**According to Directives 67/548/EEC and 1999/45/EC:**

**Symbol:** O: Oxidizing  
Xn: Harmful

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

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

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## **SECTION 3: COMPOSITION AND COMPONENT INFORMATION**

<b>Component:</b>	<b>EC No:</b>	<b>CAS No:</b>	<b>Hazard Class:</b>	<b>Phrases:</b>	<b>Concentration:</b>
Potassium persulfate	231-781-8	7727-21-1	Ox. Sol. 3 Acute Tox. 4 Eye Irrit. 2 STOT SE 3 Skin Irrit. 2 Resp. Sens. 1 Skin Sens. 1 O, Xn, Xi	H272, H302, H319, H335, H315, H334, H317 R: 8-22-36/37/38-42/43	-

## **SECTION 4: FIRST AID MEASURES**

<b>After Inhalation:</b>	Remove to fresh air.
<b>After Skin Contact:</b>	Wash affected area with plenty of water. Remove contaminated clothing.
<b>After Eye Contact:</b>	Rinse out with plenty of water. Summon eye specialist.
<b>After Swallowing:</b>	Drink plenty of water, induce vomiting. Obtain medical attention.
<b>General Information:</b>	Remove contaminated, soaked clothing immediately and dispose of safely.

## **SECTION 5: FIRE-FIGHTING MEASURES**

### **Suitable Extinguishing Media:**

Water spray, Carbon Dioxide, Dry Chemical Powder, Appropriate Foam.

### **Special Risks:**

Fire-promoting (oxydizing). Keep away from combustible materials and sources of ignition and heat. Development of hazardous combustion gases or vapors possible in the event of fire. The following may develop in event of fire: Sulfur Oxides

### **Special Protective Equipment:**

Do not stay in dangerous zone without suitable chemical protection clothing and self-contained breathing apparatus.

### **Additional Information:**

Substance itself is non-combustible.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions:**

Avoid generation of dusts. Do not inhale dusts. Avoid substance contact. Ensure supply of fresh air in enclosed rooms.

### **Environmental Precautions:**

Do not discharge into the drains/surface waters/groundwater.

### **Additional Notes:**

Take up dry. Clean up affected area and dispose according to local regulation.

## **SECTION 7: HANDLING AND STORAGE**

### **Handling:**

Avoid generation of dusts. Use appropriate personal protective equipment.

### **Storage:**

Store away from combustible materials and sources of ignition and heat. Protect from moisture. Accessible only for authorized persons.

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## **SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION**

<i>Type</i>	<i>Value</i>	<i>Source</i>	<i>Type</i>	<i>Value</i>	<i>Source</i>
<b>Potassium Persulfate</b>					
TWA (8hr)	0.1 mg persulfate/m <sup>3</sup>	Canada (Ontario)	TWA (8hr)	0.1 mg/m <sup>3</sup>	Poland
TWA (8hr)	0.1 mg/m <sup>3</sup>	Spain	TWA (8hr)	1 mg/m <sup>3</sup>	UK

### **Engineering:**

Maintain general industrial hygiene practice.

### **Personal Protective Equipment:**

As appropriate to quantity handled.

### **Respiratory Protection:**

Required when dusts are generated.

### **Protective Gloves:**

Rubber or plastic

### **Eye Protection:**

Goggles or face mask

### **Industrial Hygiene:**

Change contaminated clothing. Wash hands after working with substance.

## **SECTION 9: PHYSICAL/CHEMICAL PROPERTIES**

<b>Appearance:</b>	White powder	<b>Odor:</b>	Odorless	<b>Density at 20°C:</b>	2.48 g/cm <sup>3</sup>
<b>Melting Point:</b>	NA	<b>Boiling Point:</b>	NA	<b>Solubility:</b>	47 g/L (20 °C)
<b>pH at 20°C:</b>	4.0 – 5.0 @ 50 g/L	<b>Explosion Limit:</b>	NA	<b>Flash Point:</b>	NA
<b>Thermal Decomp.:</b>	100 °C				

## **SECTION 10: STABILITY AND REACTIVITY**

### **Conditions to be Avoided:**

Heating

### **Hazardous Polymerization:**

Will not occur.

### **Further Information:**

Fire-promoting; strong oxydizing substance.

### **Hazardous Decomposition Products:**

In the event of fire: See section 5.

### **Substances to be Avoided:**

Combustible substances, reducing agents, peroxides, water, bases, strong alkalis, acids, metals and heavy metals, silver compounds

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## **SECTION 11: TOXICOLOGICAL INFORMATION**

### **Product Toxicity**

#### **Potential Health Effects:**

- Inhalation:** Irritation of the respiratory tract. Possibility of sensitization.  
**Skin Contact:** Slight irritations. Possibility of sensitization.  
**Eye Contact:** Irritations.  
**Ingestion:** Risk of mucosal irritations, coughing, dyspnoea.  
**Further Data:** Further hazardous properties cannot be excluded. The product should be handled with the usual care when dealing with chemicals.

### **Component Toxicity**

#### **Acute Toxicity:**

#### **Chronic Toxicity:**

Not Available

#### **Potassium Persulfate**

**LD50:** Oral - Rat - 802 mg/kg

#### **Additional Data:**

Not Available

## **SECTION 12: ECOLOGICAL INFORMATION**

Biological effects: toxic decomposition products form after reaction with water. Harmful effect on aquatic organisms.  
Fish toxicity: *P. reticulata* LC50: 100 mg/L / 96 h.  
Daphnia toxicity: *Daphnia magna* EC0: 180 mg/L / 24 h; *Daphnia magna* EC50: 357 mg/L / 24 h.  
Bacterial toxicity: *Ps. putida* EC50: 36 mg/L.

**Further Data:** Do not allow to enter waters, waste water or soil!

## **SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Disposal:** Chemical residues are generally classified as special waste and thus covered by local regulations. Contact local authorities or disposal companies for advice. Handle contaminated packaging in the same way as the substance itself.

## **SECTION 14: TRANSPORTATION INFORMATION**

	<b>Land (ADR/RID):</b>	<b>Sea (IMDG):</b>	<b>Air (ICAO/IATA):</b>
<b>UN No.:</b>	1492	1492	1492
<b>Proper Shipping Name:</b>	Potassium persulphate	Potassium persulphate	Potassium persulphate
<b>Class (Sub Risk):</b>	5.1	5.1	5.1
<b>Packing Group:</b>	III	III	III

## **SECTION 15: REGULATORY INFORMATION**

Complies with European Regulations (EC) No. 1907/2006 and No. 1272/2008.  
Complies with European Council Directives 67/548/EEC and 1999/45/EC.  
Complies with OSHA Regulation 29 CFR 1910.1200.  
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**SECTION 16: OTHER INFORMATION*****Text of phrases under Section 3***

R8: Contact with combustible material may cause fire.  
R22: Harmful if swallowed.  
R36/37/38: Irritating to eyes, respiratory system and skin.  
R42/43: May cause sensitization by inhalation and skin contact.  
H272: May intensify fire; oxidiser.  
H302: Harmful if swallowed.  
H315: Causes skin irritation.  
H317: May cause an allergic skin reaction.  
H319: Causes serious eye irritation.  
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335: May cause respiratory irritation.

***Revision Information***

<b>Revision Date:</b>	2012-05-21
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<b>Reason for revision:</b>	Section 14 Updated
<b>Legend</b>	NA: Not Applicable ND: Not Determined

**THE INFORMATION CONTAINED HEREIN IS BASED ON THE PRESENT STATE OF OUR  
KNOWLEDGE. IT CHARACTERIZES THE PRODUCT WITH REGARD TO THE  
APPROPRIATE SAFETY PRECAUTIONS. IT DOES NOT REPRESENT A GUARANTEE OF  
THE PROPERTIES OF THE PRODUCT.**