

Product Name: Shock Oxidizer
Date: 10/29/15

SECTION 1 **IDENTIFICATION**

Supplier: Phoenix Products Company
55 Container Drive
Terryville, CT 06786
(860) 589-7502

Distributor: Essentials
5070 Wallace Drive
Cumming, GA 30041
(626) 305-1182

U.S. Emergency Telephone: 1-800-222-1222
Product Name: **Shock Oxidizer**
Synonyms: Potassium Peroxymonosulfate; Potassium Hydrogen Sulfate;
Potassium Monopersulfate Sulfate; Pentapotassium
bis(peroxymonosulfate)bis(sulfate); Potassium Peroxysulfate
Chemical Name: Potassium Monopersulfate
Chemical Formula: $\text{HKO}_5\text{S} \cdot 0.5\text{HKO}_4\text{S} \cdot 0.5\text{K}_2\text{O}_4\text{S}$
CAS Number: 70693-62-8
Product Use: Non-Chlorine Water Shock

SECTION 2 **HAZARDS IDENTIFICATION**

EMERGENCY OVERVIEW
Danger



GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Oxidizing solids (Category 3)
Skin corrosion (Category 1A)
Serious eye damage (Category 1)
Respiratory sensitization (Category 1)
Skin sensitization (Category 1)
Specific target organ toxicity - single exposure (Category 3), Respiratory system

Hazard Statement(s)

H272: May intensify fire; oxidizer.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335: May cause respiratory irritation.

Precautionary statement(s)

P210: Keep away from heat.
P220: Keep/Store away from clothing/combustible materials.
P221: Take any precaution to avoid mixing with combustibles.
P260: Do not breathe dust or mist.
P264: Wash skin thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P272: Contaminated work clothing should not be allowed out of the workplace.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

SECTION 2 HAZARDS IDENTIFICATION - Continued

P285: In case of inadequate ventilation wear respiratory protection.
 P321: Specific treatment (see First Aid Measures on this label).
 P363: Wash contaminated clothing before reuse.
 P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
 P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
 P405: Store locked up.
 P501: Dispose of contents/ container to an approved waste disposal plant.

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Component	CAS Number	Percent
Potassium Monopersulfate	70693-62-8	32.18%
Sodium Carbonate	497-19-8	30.00%
Potassium Sulfate	7778-80-5	20.30%
Potassium Bisulfate	7646-93-7	16.10%
Magnesium Carbonate	546-93-0	1.42%

SECTION 4 FIRST-AID MEASURES

General Advice: Consult a physician. Move out of dangerous area. Show this safety data sheet to the doctor in attendance.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin Contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5 FIRE FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture: Carbon oxides, Sulphur oxides, Potassium oxides, Magnesium oxide.

Hazardous Combustion Products: Grinding or intensive mixing may cause decomposition with liberation of heat and oxygen; ignition of oxidizable material if present may occur.

Advice for Firefighters: Wear self contained breathing apparatus for firefighting if necessary.

Further Information: Use water spray to cool unopened containers. Contact with combustible materials may cause fire. Improper storage of large masses of "oxone" can trap heat and lead to ignition of combustibles (see "SECTION 7: **HANDLING AND STORAGE**").

SECTION 6 **ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental Precautions: Do not let product enter drains.

Methods and materials for containment and cleaning up: Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

SECTION 7 **HANDLING AND STORAGE**

Precautions for Safe Handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition – No smoking. Keep away from heat and sources of ignition.

Special Handling Requirements: Do not inhale. Do not get in eyes, on skin or clothing. Wash thoroughly after handling. Wash clothing after use.

Conditions for Safe Storage: Keep container tightly closed in a dry and well-ventilated place away from heat sources.

Incompatible Materials: The mixture of this product with compounds containing halides or active halogens can cause release of the respective halogen if moisture is present. For example, mixture with chloride can cause release of chlorine gas; mixture with cyanides can cause release of hydrogen cyanide gas; and heavy metal salts such as those of cobalt, nickel, copper, or manganese cause the evolution of oxygen.

Specific End Use(s): Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8 **EXPOSURE CONTROLS/PERSONAL PROTECTION**

Control Parameters

Components with workplace control parameters: Contains no substances with occupational exposure limit values.

Exposure Controls

Appropriate Engineering Controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued

Personal Protective Equipment:

Eye/Face Protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of Environmental Exposure: Do not let product enter drains.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White Granular
Odor:	Odorless
Odor Threshold:	Not Available
pH:	2 at 30 g/l at 77°C (171°F)
Melting Point/Freezing Point:	Not Available
Initial Boiling Point and Boiling Range:	@ 760 mm Hg Decomposes
Flash Point:	Not Available
Evaporation Rate:	Not Available
Flammability (solid, gas):	Not Available
Upper/Lower Flammability or Explosive Limits:	Not Available
Vapor Pressure:	Not Available
Vapor Density:	Not Available
Relative Density:	1.100 - 1.400 g/cm ³
Water Solubility:	25.6 wt% @ 20°C (68°F)
Partition Coefficient (n-octanol/water):	Not Available
Auto-ignition Temperature:	Not Available
Decomposition Temperature:	kJ/kg 251 and Btu/lb 108
Viscosity:	Not Available
Explosive Properties:	Not Available
Oxidizing Properties:	The substance or mixture is classified as oxidizing

SECTION 10 **STABILITY AND REACTIVITY**

Reactivity: Not Available

Chemical Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Not Available

Conditions to Avoid: Excess heat.

Incompatible Materials: Strong bases, Acids, Bases, Powdered metals, Strong oxidizing agents, Organic materials, Alcohols, acids, phosphorous, Halogens, Anhydrides, Phosphorus, Strong reducing agents

Hazardous Decomposition Products: Decomposes when heated or dampened, releasing oxygen and heat of decomposition.

SECTION 11 **TOXICOLOGICAL INFORMATION**

Oral LD50 (rat): 2,000 mg/kg

Dermal LD50 (rabbit): > 11,000 mg/kg

Inhalation 4-hr LC50 (rat): >5 mg/L

Skin Irritation: Severe skin irritant.

Eye Irritation: Severe eye irritant.

Skin Sensitization: Not a skin sensitizer in animals.

Germ Cell Mutagenicity: Not Available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive Toxicity: Not Available

Specific Target Organ Toxicity - Single Exposure: Not Available

Specific Target Organ Toxicity - Repeated Exposure: Not Available

Aspiration Hazard: Not Available

SECTION 12 **ECOLOGICAL INFORMATION**

Aquatic Toxicity: 96 hour LC50 – rainbow trout: 53 mg/L
48 hour EC50 – daphnia magna: 3.5 mg/L

Ecotoxicity: Not Available.

Mobility in Soil: Not Available.

Products of Biodegradation: Possibly hazardous short-term degradation products are not likely. However, long-term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Results of PBT and vPvB Assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

SECTION 13 **DISPOSAL CONSIDERATIONS**

Waste Treatment Methods

Product: Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated Packaging: Dispose of as unused product.

SECTION 14 **TRANSPORTATION DATA**

DOT: **UN Number:** ORM-D
 UN Proper Shipping Name: ORM-D
 Transport Hazard Class: ORM-D
 Packing Group: ORM-D

Consumer commodity (ORM-D) means a material that is packaged and distributed in a form intended or suitable for sale through retail sales agencies or instrumentalities for consumption by individuals for purposes of personal care or household use. Valid until December 31, 2020.



TDG: **UN Number:** 3215
 UN Proper Shipping Name: Persulfates, inorganic, n.o.s.
 Transport Hazard Class: 5.1
 Packing Group: III
 Marine Pollutant: No

MEX: **UN Number:** 3215
 UN Proper Shipping Name: Persulfates, inorganic, n.o.s.
 Transport Hazard Class: 5.1
 Packing Group: III
 Marine Pollutant: No

IMDG: **UN Number:** 3215

UN Proper Shipping Name: Persulfates, inorganic, n.o.s.
Transport Hazard Class: 5.1
Packing Group: III
EMS-No: F-A, S-Q
Marine Pollutant: No

IATA: UN Number: 3215
UN Proper Shipping Name: Persulfates, inorganic, n.o.s.
Transport Hazard Class: 5.1
Packing Group: III

SECTION 15 REGULATORY INFORMATION

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards: Reactivity Hazard, Acute Health Hazard

Massachusetts Right To Know Components	CAS-No.	Revision Date
Magnesium Carbonate	546-93-0	

Pennsylvania Right To Know Components	CAS-No.	Revision Date
Sodium Carbonate	497-19-8	
Potassium Sulfate	7778-80-5	
Potassium Bisulfate	7646-93-7	

New Jersey Right To Know Components	CAS-No.	Revision Date
Sodium Carbonate	497-19-8	
Potassium Sulfate	7778-80-5	
Potassium Bisulfate	7646-93-7	

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16 ADDITIONAL INFORMATION

Hazard Ratings:

NFPA: Health - 3;	Fire Hazard - 0;	Reactivity Hazard - 1;	Special Hazard.I - OX
HMIS: Health - 3;	Flammability - 0;	Physical Hazard - 1	

Representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose or any other nature are made hereunder with respect to information or the product to which information refers.

Date: 10/29/15
Phoenix Products Company