



MATERIAL SAFETY DATA SHEET

Product Name **Shock Oxidizer**
Product id 8849
Revision date 06/05/2007

Revision: 1

1. Identification of the substance & the company

Chemical name Potassium hydrogen peroxymonosulfate sulfate [70693-62-8]
Supplier NAVA Water Products
95 MacCorkle Ave. SW, South Charleston, WV 25303, USA
Tel: (304) 746-3000
Emergency Telephone Chemtrec (800)424-9300 Medical 1-800-420-9236

2. Composition / information on ingredients

Components CAS	Weight %	ACGIH-TLV Data	OSHA (PEL) Data
Potassium peroxymonosulfate 10058-23-8	43	Not determined	Not determined
Potassium bisulfate 7646-93-7	23	Not determined	Not determined
Potassium sulfate 7778-80-5	29	Not determined	Not determined
Potassium peroxydisulfate 7727-21-1	3	0.1 mg/m ³	Not determined
Magnesium carbonate 546-93-0	2	Not determined	Not determined

3. Hazards identification

Emergency overview

*White granular, free flowing solid, odorless
Corrosive to eyes and skin Irritating to nose and throat
May cause sensitization by skin contact. Ingestion may cause inflammation and
damage to the lining of the stomach, resulting in bleeding.*

Potential Health Effects: - Eye Contact

May cause corrosion or ulceration.



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- Skin contact Skin contact with aqueous solutions or the dry powder upon contact with moisture or perspiration may cause skin burns or ulceration; temporary body hair loss may occur in contacted areas. May cause allergic skin reactions in sensitive individuals. Human patch tests with the product diluted in water at concentrations up to 150 ppm did not cause allergic skin reaction.

- Inhalation May cause nose bleeds and irritation of the upper respiratory passages with coughing and discomfort.

- Ingestion May cause gastritis possibly progressing to necrosis or hemorrhage.

HMIS Ratings (Scale 0-4) Health = 3, Fire = 0, Reactivity = 1.

4. First-aid measures

Eye contact Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes. Get medical attention immediately.

Skin contact Flood skin with water directing a stream of water under the clothing while it is being removed. Wash skin thoroughly with mild soap and plenty of water for at least 15 minutes. Get medical attention immediately.

Inhalation In case of dust inhalation or breathing fumes released from heated material, remove person to fresh air.
Keep him quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.

Ingestion If swallowed, wash mouth thoroughly with plenty of water and give water to drink. Get medical attention immediately.

NOTE: Never give an unconscious person anything to drink.

Note to physician Corrosive. No specific antidote.
In case of ingestion DO NOT induce vomiting. Treat symptomatically and supportively.

5. Fire - fighting measures

Flash point Not available
Flammable/Explosion limits Not available



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Auto-ignition temperature Not available

Suitable extinguishing media Water

Extinguishing media not to be used Caron dioxide or other gas-filled fire extinguishers; they have no effect on decomposing persulfates.

Fire fighting procedure Cool containers with water spray. In closed stores, provide fire-fighters with self-contained breathing apparatus in positive pressure mode

Unusual fire and explosion hazards Improper storage of large masses of "Shock Oxidizer" can trap heat and lead to ignition of comustibles (See section on "Handling and Storage"). Grinding or intensive mixing may cause decomposition with liberation of heat and oxygen; ignition of oxidizable material if present may occur.

6. Accidental release measures

Personal precautions Wear appropriate safety clothing and eye/face protection (see Section 8)

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Flush liquid spills with low pressure water. (See disposal considerations)

7. Handling and storage

Handling Avoid bodily contact. Do not breath dust.

Storage Keep away from all sources of ignition.
Store in a dry, cool, well-ventilated area away from incompatible materials (see "materials to avoid"). Replace the lid on the plastic pails when they are not in use to prevent contamination and extend shelf life. Pallets of 25 kg bags can be stacked. Leave open space on all sides of each pallet to provide ventilation. See local fire codes for allowable limits. Bulk bags should be stored on pallets; if stacked use pyramid style, no more than 2 pallets high. Closely stacked bags should not exceed a 4 ft. (1.2 m) cube.



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8. Exposure controls / personal protection

Manufacturer's TLV-TWA Recommendation 1 mg/m³

Ventilation requirements Ventilation must be sufficient to maintain atmospheric concentration below recommended exposure limit.

Personal protective equipment:

- **Respiratory protection** A NIOSH approved air purifying respirator selection with appropriate particulate cartridge or canister. Use a positive pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
- **Hand protection** Protective gloves
- **Eye protection** Safety glasses or coverall chemical splash goggles
For Exposure to Solutions: Wear coverall chemical splash goggles and face shield
- **Skin and body protection** Body covering clothes and boots

Hygiene measures Safety shower and eye bath should be provided.
Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

9. Physical and chemical properties

Appearance White granular, free-flowing solid, odorless

Melting point/range Not applicable (decomposes)

Boiling point/range Not applicable (decomposes)

Vapour pressure Negligible

Vapor density Not volatile

Evaporation rate (ether=1) Not volatile

Solubility:

- **Solubility in water** 25.6 wt% @ 20°C

Specific gravity 1.1-1.4

pH 1% solution=2.3; 3% solution=2.0; 10% solution=1.6

Decomposition temperature Not available

10. Stability and reactivity

Stability Stable under recommended storage conditions.



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Materials to avoid	The mixture of this product with compounds containing halides or active halogens can cause the release of respective halogen gas, if moisture is present.
Decomposition	Decomposes when heated or dampened, releasing oxygen and heat
Conditions to avoid	Do not mix concentrated product with dry or concentrated halogen-containing chemicals.
Hazardous polymerization	Will not occur

11. Toxicological information

Acute toxicity:	
- Rat oral LD50	200-2000 mg/kg
- Rabbit dermal LD50	> 11000 mg/kg
- Rat inhalation LC50	>5 mg/l (4h)
- Eye irritation (rabbit)	Severe irritant
- Dermal irritation (rabbit)	Severe irritant
Dermal sensitization	Not a sensitizer
Sub-chronic toxicity:	Repeated administration at a combined dosage of 1000/600 mg/kg for 13 weeks caused pathological changes of the stomach, body weight loss, gasping, noisy respiration, and hunched posture. The NOAEL is considered to be 200 mg/kg.
Chronic toxicity	Not available
Mutagenicity	The material did not produce genetic damage in bacterial cell cultures The material did produce genetic damage in mammalian cell cultures The material did not produce genetic damage in tests on animals Some evidence were found for toxicity of bone marrow in female mice
Carcinogenicity	Not classified by IARC, OSHA, EPA. Not included in NTP 11th Report on Carcinogens

12. Ecological information

- 96 Hour-LC50, Fish	53 mg/l (Rainbow trout)
- 48 Hour-EC50, Daphnia magna	3.5 mg/l



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13. Disposal considerations

Waste disposal Observe all federal, state and local environmental regulations when disposing of this material
Solutions greater than 3% by weight have a pH < 2.0, and may be a RCRA hazardous waste upon disposal due to the acidic pH characteristic of the solution. if approved, flush to sewer or waste treatment plant. Large quantities should be neutralized with soda ash

14. Transportation information

UN No. 3260

DOT Proper shipping name: Corrosive Solid, acidic, inorganic, n.o.s.
Class: 8 - Corrosives
Label: CORROSIVE (8)
Packing Group: II

IMO Proper shipping name: Corrosive Solid, acidic, inorganic, n.o.s.
Class: 8 - Corrosives
Label: CORROSIVE (8)
Packing Group: II

ICAO/IATA Proper shipping name: Corrosive Solid, acidic, inorganic, n.o.s.
Class: 8
Hazard Label (s): Corrosive
Packing group: II

15. Regulatory information

USA Reported in the EPA TSCA Inventory

Sara (311, 312) hazard class This product is categorized as an acute health hazard.

- WHMIS hazard class C oxidizing materials
D2B toxic materials
E corrosive material



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16. Other information

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End of safety data sheet