

## Material Safety Data Sheet

### SeaKlear: Chlorine-Free Shock Oxidizer

#### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**Manufacturer's Name:** HaloSource, Inc.  
**Corporate Address:** 1631 220<sup>th</sup> St. SE, Suite 100, Bothell, WA 98021  
**Manufacturer's Telephone:** (425) 881-6464 (Monday-Friday, 8AM-5PM PDT)  
**Emergency Telephone (24 Hours):** 800-424-9300 CHEMTREC (Domestic, North America)  
703-527-3887 CHEMTREC (International, collect calls accepted)

**Material/Trade/Product Name:** **SeaKlear: Chlorine-Free Shock Oxidizer**  
**Synonyms:** None  
**Chemical Name:** Potassium Hydrogen Peroxymonosulfate Sulfate  
**Chemical Formula:** Not available  
**CAS#:** 70693-62-8  
**EPA Registration Number:** Not applicable  
**Product Use:** Keeps swimming pool water clear and odor-free.

#### SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

CAS NO.	COMPONENT	%	OSHA HAZARDOUS?
10058-23-8	Potassium Peroxymonosulfate	45.2	YES
7778-80-5	Potassium Sulfate	29	YES
7646-93-7	Potassium Bisulfate	23	YES
7727-21-1	Potassium Peroxydisulfate	2.8	YES

NOTE: See Section 8 for permissible exposure limits.

#### SECTION 3: HAZARDS IDENTIFICATION

##### EMERGENCY OVERVIEW

White, granular solid with no odor.

WARNING! Corrosive to skin and eyes. Nose and throat irritant. Harmful if swallowed.

##### POTENTIAL HEALTH EFFECTS

**EYE:** May cause eye corrosion or ulceration. Severe eye damage may result if not immediately treated.

**SKIN:** 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. Skin contact with the product may cause allergic skin reactions in sensitive individuals.

**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.

**CHRONIC EXPOSURE/CARCINOGENICITY:** None of the components present in this material at concentrations of equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

**SIGNS AND SYMPTOMS OF OVEREXPOSURE:** Eye corrosion. Skin burns. Nose bleeds or coughing. Stomach pain.

**AGGRAVATION OF PRE-EXISTING CONDITIONS:** Individuals with preexisting diseases of the skin or gastrointestinal tract may have increased susceptibility to the toxicity of excessive exposures.

**POTENTIAL ENVIRONMENTAL EFFECTS:** None.

## SECTION 4: FIRST AID MEASURES

### FIRST AID PROCEDURES

**EYE CONTACT:** Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids open. Contact a physician.

**SKIN CONTACT:** Immediately wash skin contaminated skin with plenty of water for at least 15 minutes. Remove contaminated clothing and wash before re-use. Contact a physician.

**INHALATION:** Remove victim from exposure to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice if effects persist.

**INGESTION:** If swallowed do NOT induce vomiting. Immediately give two glasses of water. Seek immediate medical assistance.

**NOTE TO PHYSICIANS:** None.

## SECTION 5: FIRE FIGHTING MEASURES

**FLASH POINT:** Not available

**UPPER FLAMMABLE LIMIT:** Not available

**FLAMMABILITY CLASS (OSHA):** Not applicable

**AUTOIGNITION TEMPERATURE:** Not available

**LOWER FLAMMABLE LIMIT:** Not available

**FLAME PROPAGATION/BURNING RATE:** Not available

**UNIQUE FIRE PROPERTIES:** Improper storage of large masses of this product can trap heat and lead to ignition of combustibles (see handling and storage).

**HAZARDOUS COMBUSTION PRODUCTS:** Grinding or intensive mixing may cause decomposition with liberation of heat and oxygen; ignition of oxidizable material if present may occur.

**EXTINGUISHING MEDIA:** Water. Do not use carbon dioxide or other gas-filled fire extinguishers; they will have no effect on decomposing persulfates.

**PROTECTION OF FIREFIGHTERS:** Will release oxygen when heated, intensifying a fire. Acidic mist may be present; self-contained breathing apparatus should be used.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**PERSONAL PROTECTIVE EQUIPMENT:** See Section 8 (Personal Protective Equipment).

**ENVIRONMENTAL PRECAUTIONS:** None known.

**METHODS FOR CLEANING UP:** Sweep up. Flush area with low-pressure water.

## SECTION 7: HANDLING AND STORAGE

### SAFE HANDLING RECOMMENDATIONS

**VENTILATION:** Use sufficient ventilation to keep employee exposure below recommended limits.

**FIRE PREVENTION:** Use in a cool, dry, well-ventilated area away from heat sources.

**SPECIAL HANDLING REQUIREMENTS:** Do not inhale. Do not get in eyes, on skin or clothing. Wash thoroughly after handling. Wash clothing after use.

### SAFE STORAGE RECOMMENDATIONS

**CONTAINMENT:** No special containment.

**STORAGE ROOM RECOMMENDATIONS:** Store in a cool, dry, well-ventilated area 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.

**STORAGE CONDITIONS:** Stack on pallets providing air space; closely stacked bags should not exceed a 4 ft. cube. Keep packages dry.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Use sufficient ventilation to keep employee exposure below recommended limits.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**EYE/FACE PROTECTION:** For operations where eye or face contact can occur, wear chemical, splash proof goggles or face shield.

**SKIN PROTECTION:** For operations where skin contact can occur, wear impervious clothing such as apron, boots, or whole bodysuit.

**HAND PROTECTION:** For operations where hand contact can occur, wear impervious rubber or neoprene gloves. Gloves may be decontaminated by washing with mild soap and water.

**RESPIRATORY PROTECTION:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air-purifying respirator with a dust/mist cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection

provided by air purifying respirators is limited. 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.

**GOOD HYGIENE/WORK PRACTICES:** Always follow good hygiene/work practices by avoiding vapors or mists and contact with eyes and skin. Thoroughly wash hands after handling and before eating or drinking. Always wear the appropriate PPE when repairing or performing maintenance on contaminated equipment.

### EXPOSURE GUIDELINES

PERMISSIBLE EXPOSURE LIMITS						
INGREDIENT CAS NO.	OSHA		WISHA		ACGIH (TLV)	
	TWA	STEL	TWA	STEL	TWA	STEL
None Established	None Established	None Established	None Established	None Established	None Established	None Established

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**COLOR:** White

**PHYSICAL FORM:** Free flowing solid

**pH:** 1% solution = 2.3; 3% solution = 2.0

**VAPOR DENSITY:** Not volatile

**MELTING POINT:** Decomposes

**SOLUBILITY IN WATER:** 25.6 wt % @ 20 C (68F)

**SHAPE:** Granular

**ODOR:** Odorless

**VAPOR PRESSURE:** Nil

**BOILING POINT:** @ 760 mm Hg Decomposes

**FREEZING POINT:** Not available

**SPECIFIC GRAVITY OR DENSITY:** 1.1 - 1.4

*NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Values should not be construed as a guaranteed analysis of any specific lot or as specifications.*

## SECTION 10: STABILITY AND REACTIVITY

**CHEMICAL STABILITY:** Stable when handled and stored as indicated.

**CONDITIONS TO AVOID:** Excess heat.

**MATERIALS TO AVOID (INCOMPATIBILITY):** 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.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Decomposes when heated or dampened, releasing oxygen and heat of decomposition.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## SECTION 11: TOXICOLOGICAL INFORMATION

**ORAL LD<sub>50</sub> (rat):** 200 - 2,000 mg/kg

**DERMAL LD<sub>50</sub> (rabbit):** > 11,000 mg/kg

**INHALATION 4-hr LC<sub>50</sub> (rat):** >5 mg/L

**SKIN IRRITATION:** Severe skin irritant.

**EYE IRRITATION:** Severe eye irritant.

**SKIN SENSITIZATION:** Not a skin sensitizer in animals.

**ADDITIONAL INFORMATION:** Not available.

## SECTION 12: ECOLOGICAL INFORMATION

**ECOTOXICITY:** Not available.

**AQUATIC TOXICITY:**

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

**MOBILITY:** Not available.

**PERSISTENCE AND DEGRADABILITY:** Not available.

**BIOACCUMULATIVE POTENTIAL:** Not available.

**ADDITIONAL INFORMATION:** Not available.

## SECTION 13: DISPOSAL CONSIDERATIONS

If this product as supplied becomes a waste, it does meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

*NOTE: Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate.*

## SECTION 14: TRANSPORT INFORMATION

**U.S. DEPARTMENT OF TRANSPORTATION (DOT):**

<b>Proper Shipping Name:</b>	Corrosive solid, acidic, inorganic, n.o.s. (Monopersulfate compound)
<b>Hazard Class:</b>	8
<b>Identification Number (UN Number):</b>	3260
<b>Packing Group (PG):</b>	II

## SECTION 15: REGULATORY INFORMATION

**TSCA STATUS:** Listed

**CERCLA REPORTABLE QUANTITY (RQ):**

CHEMICAL NAME	RQ
Not applicable	Not applicable

**SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (EHS):**

CHEMICAL NAME	TPQ	RQ
Not applicable	Not applicable	Not applicable

**SARA TITLE III SECTION 311/312 HAZARD CATEGORIES:** Does this product/material meet the definition of the following hazard classes according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of SARA Title III?

ACUTE HEALTH HAZARD	CHRONIC HEALTH HAZARD	FIRE HAZARD	REACTIVE HAZARD	SUDDEN RELEASE OF PRESSURE
YES	NO	NO	NO	NO

**SARA TITLE III SECTION 313 TOXIC CHEMICALS INFORMATION:**

CHEMICAL NAME	CAS NO.	CONCENTRATION (%)
Not applicable	Not applicable	Not applicable

**CALIFORNIA PROPOSITION 65:** The following chemical(s) is/are known to the state of California to cause cancer or reproductive toxicity:

CHEMICAL NAME	CAS NO.	CONCENTRATION (%)
Not applicable	Not applicable	Not applicable

**SECTION 16: OTHER INFORMATION**

**REVISION INFORMATION:**

MSDS sections(s) changed since last revision of document:

- Product name changed from "Chlorine-Free Shock" to "Chlorine-Free Shock Oxidizer".
- International emergency telephone number added.

**DISCLAIMER:**

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