HASA OXIDIZER

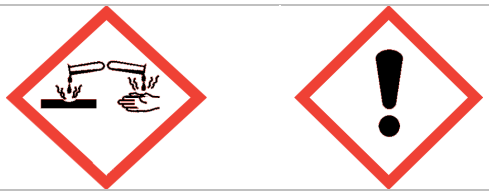
Safety Data Sheet

Emergency 24 Hour Telephone: **CHEMTREC 800.424.9300**

Corporate Headquarters: Hasa Inc.
P. O. Box 802736
Santa Clarita, CA 91355
Telephone • 661.259.5848
Fax • 661.259.1538

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION			
1.1	**Product Identification:**		
	1.1.1	**Product Name:**	Hasa Oxidizer
	1.1.2	**CAS #:** (Chemical Abstracts Service)	This product is a mixture of Oxone® and other ingredients. The active ingredient of Oxone® is potassium peroxymonosulfate, $KHSO_5$ [CAS 10058-23-8], commonly known as potassium monopersulfate, which is present as a component of a triple salt with the formula $2KHSO_5 \cdot KHSO_4 \cdot K_2SO_4$ (potassium hydrogen peroxymonsulfate sulfate (5:3:2:2), [CAS 70693-62-8]).
	1.1.3	**RTECS:** (Registry of Toxic Effects of Chemical Substances)	Not available.
	1.1.4	**EINECS:** (European Inventory of Existing Chemical Substances)	Not available.
	1.1.5	**Synonym:**	Oxone® (DuPont™), Potassium Monopersulfate (MPS), Potassium Peroxymonosulfate.
	1.1.6	**Chemical Name:**	Potassium Peroxymonosulfate Sulfate
	1.1.7	**Chemical Formula:**	$2KHSO_5 \cdot KHSO_4 \cdot K_2SO_4$
1.2	**Recommended Use:**		Pool and spa shock oxidizer.
1.3	**Company Identification:**		Hasa Inc. P. O. Box 802736 Santa Clarita, CA 91355
1.4	**Emergency Telephone Number:**		**CHEMTREC:** 1-800-424-9300 (24 hour)
1.5	**Non-Emergency Assistance:**		661-259-5848 (8 AM – 5 PM PST / PDT)

SECTION 2: HAZARD(S) IDENTIFICATION

Health Hazard	Skin Corrosion/Irritation Acute Toxicity (oral)	Category 1 Category 4
Symbol		
Signal Word	**WARNING**	
Hazard Statements	Causes severe skin burn and eye damage. Harmful if swallowed.	
Precautionary Statements	**Prevention**	
	Do not breathe dusts or mists. Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product.	
	Response	
	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a Poison Center or doctor if you feel unwell. **IF ON SKIN (OR HAIR)**: Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. **IF INHALED**: Remove person to fresh air and keep comfortable for breathing. Immediately call a Poison Center or doctor. **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
	Storage	
	Store locked up.	
	Disposal	
	Dispose of contents/container in accordance with local / regional / national / international regulations.	

SECTION 3: COMPOSITION INFORMATION ON INGREDIENTS

	Ingredient	Formula	CAS No.	Weight %
3.1	Potassium Peroxymonosulfate	$KHSO_5$	10058-23-8	43.0
3.2	Potassium Bisulfate	$KHSO_4$	7646-93-7	23.0
3.3	Potassium Sulfate	K_2SO_4	7778-80-5	29.0
3.4	Potassium Peroxydisulfate	$K_2S_2O_8$	7727-21-1	3.0
3.5	Magnesium Carbonate	$MgCO_3$	546-93-0	2.0

SECTION 4: FIRST AID MEASURES

4.1	**IF IN EYES**	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
4.2	**IF ON SKIN OR CLOTHING**	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
4.3	**IF INHALED**	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
4.4	**IF SWALLOWED**	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

NOTE TO PHYSICIAN

Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5: FIRE FIGHTING MEASURES

5.1	**Flammable Limits:**	Nonflammable and noncombustible.
5.2	**Flash Point:**	Will not flash.
5.3	**Fire & Explosion Hazards:**	Improper storage of large masses of Oxone® can trap heat and lead to ignition of combustibles (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.
5.4	**Extinguishing Media:**	Water. DO NOT use carbon dioxide or other gas containing extinguishers.
5.5	**Products of Combustion:**	Oxygen.
5.6	**Fire Fighting Instructions:**	Will release oxygen when heated, intensifying a fire. Acidic mist may be present; self contained breathing apparatus should be used.
5.7	**Fire and Explosion Hazards:**	Improper storage of large masses of this product can trap heat and lead to ignition of combustibles (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.

SECTION 6: ACCIDENTAL RELEASE MEASURES		
6.1	**Safeguards (Personnel):**	Review FIRE FIGHTING MEASURES (Section 5) and HANDLING AND STORAGE (Section 7.1) before proceeding with clean-up. Use appropriate Personal Protective Equipment during clean-up.
6.2	**Spills:**	Sweep up. Place in plastic bag for disposal. Flush area with low pressure water. If necessary, neutralize with soda ash.
6.3	**Precautions:**	Will release oxygen when heated, intensifying a fire. Acidic mist may be present; self contained breathing apparatus should be used.
6.4	**Disposal:**	See Section 13.

SECTION 7: HANDLING AND STORAGE		
7.1	**Handling:**	Do not inhale. Do not get in eyes, on skin or clothing. Wash thoroughly after handling. Wash clothing after use.
7.2	**Storage:**	This product should be stored in cool, dry areas, away from combustible materials, incompatible chemicals (Section 10.4), and sources of heat such as space heaters and light fixtures. Prolonged storage at ambient temperatures greater than 32°C (90°F) should be avoided. Oxone® decomposition will be accelerated on contact with moisture. Product packaging includes a water-resistant liner, but storage conditions should also include provisions for prevention of contact with water, including high airborne humidity. 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. Keep packages dry.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1	**Engineering Controls:**	Use sufficient ventilation to keep employee exposure below recommended limits.	
8.2	**Personal Protection:**		
	8.2.1 **Eye / Face:**	Wear safety glasses or coverall chemical splash goggles.	
	8.2.2 **Inhalation:**	A NIOSH approved air-purifying respirator with an appropriate particulate 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.	
	8.2.3 **Skin:**	Where there is potential for skin contact, wear impervious clothing such as gloves, apron, boots or whole bodysuit.	
8.3	**Exposure Guidelines:**		

	Ingredient	**OSHA PEL** (Permissible Exposure Limit)	**ACGIH** (American Conference of Governmental and Industrial Hygienists) **TLV** (Threshold Limit Value)
8.3.1	**Oxone® Monopersulfate Compound:**	**PNOR** (Particulates Not Otherwise Regulated): 15 mg/m³, 8 hr, TWA, Total Dust 5 mg/m³, 8 hr, TWA, Respirable Dust	None Established.
8.3.2	**Potassium Sulfate:**	**PNOR:** 15 mg/m³, Total Dust, 8 hr, TWA 5 mg/m³, Respirable Dust, 8 hr, TWA	None Established.
8.3.3	**Potassium Peroxydisulfate:**	**PNOR:** 15 mg/m³, Total Dust, 8 hr, TWA 5 mg/m³, Respirable Dust, 8 hr, TWA	0.1 mg/m³, 8 hr, TWA
8.3.4	**Magnesium Carbonate:**	**PNOR:** 15 mg/m³, Total Dust, 8 hr, TWA 5 mg/m³, Respirable Dust, 8 hr, TWA	10 mg/m³, Total Dust, 8 hr, TWA

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES		
9.1	**Appearance:**	White, free flowing granules.
9.2	**Odor:**	Odorless.
9.3	**Odor Threshold:**	Odorless.
9.4	**pH:**	2.3 (1% of unblended "OXONE®" solution)
9.5	**Melting Point:**	Decomposes.
9.6	**Freezing point:**	Not pertinent.
9.7	**Boiling Point & Boiling Range:**	Not pertinent.
9.8	**Flash Point:**	No information available.
9.9	**Evaporation Rate:**	No information available.
9.10	**Flammability (solid, gas):**	Not flammable.
9.11	**Upper / Lower Flammability or Explosive Limits:**	No information available.
9.12	**Vapor Pressure:**	Not pertinent.
9.13	**Vapor Density:**	Not volatile.
9.14	**Bulk Density:**	1100 – 1400 kg/m^3 (69 – 87 lb/ft^3).
9.15	**Specific Gravity:** (H_2O=1)	Not pertinent.
9.16	**Solubility in Water:**	25.6 g /100 mL water @ 20^{O}C (68^{O}F) (for unblended "OXONE®")
9.17	**Partition Coefficient: (n-octanol / water):**	log Pow: <0.3 at 20°C
9.18	**Auto-ignition Temperature:**	No information available.
9.19	**Decomposition Temperature:**	Decomposes.
9.20	**Molecular Weight:**	614.7 g/mole (triple salt as $2KHSO_5 \cdot KHSO_4 \cdot K_2SO_4$)
9.21	**Viscosity:**	Not pertinent.

SECTION 10: STABILITY AND REACTIVITY		
10.1	**Stability:**	This product is a very stable peroxygen in the solid state and loses less than 0.5% (relative) of its activity per month when stored under recommended conditions. However, like all other peroxygens, this product undergoes very slow disproportionation with the liberation of heat and oxygen gas.
10.2	**Instability Temperature:**	Decomposition is associated with high temperature; decomposition of the constituent salts of this product may generate oxygen, sulfur dioxide, or sulfur trioxide. Since the decomposition of this product is exothermic, the decomposition can self-accelerate if storage conditions allow the product temperature to rise.
10.3	**Conditions of Instability:**	The stability is reduced by the presence of small amounts of moisture, alkaline chemicals, chemicals that contain water of hydration, transition metals in any form, and/or any material with which this product can react.
10.4	**Incompatibility with Various Substances:**	The mixture of Oxone® with compounds containing halides or active halogens can cause release of the respective halogen if moisture is present. For example, mixing with sodium dichloroisocyanurate or with calcium hypochlorite can cause release of chlorine gas. Mixing with cyanides can cause release of hydrogen cyanide gas. Mixing with heavy metal salts such as those of cobalt, nickel, copper, or manganese can cause decomposition with release of oxygen and heat.
10.5	**Hazardous Polymerization:**	Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION			
11.1	**Routes of Entry:**		Eyes, skin, ingestion, dermal absorption.
11.2	**Sensitization (human):**		May cause sensitization of susceptible persons by skin contact or by inhalation of dust.
11.3	**Acute Animal Toxicity:**		
	11.3.1	**NOAEL:**	There were no toxic effects noted at 20 or 200 mg/kg and the no-observed-adverse-effect-level (NOAEL) is considered to be 200 mg/kg.
	11.3.2	**Oral** (LD_{50})**:**	500 mg/kg in rats
	11.3.3	**Inhalation** (LC_{50})**:**	>5 mg/l in rats (4 hours)
	11.3.4	**Dermal** (LD_{50})**:**	>2,000 mg/kg in rabbits
11.4	**Toxic Effects on Animals:**		Oxone® Monopersulfate is a severe skin and eye irritant, but is not a skin sensitizer in animals. Single exposures by inhalation to Oxone® Monopersulfate produced nonspecific effects such as weight loss and slight respiratory irritation. Repeated inhalation exposures produced eye irritation and reversible corneal damage. Administration of large single ingestion doses of Oxone® Monopersulfate produced nonspecific effects such as weight loss and irritation, as well as gastric ulceration, necrosis and hemorrhage. Repeated administration of Oxone® Monopersulfate 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.
11.5	**Chronic Effects:**		None of the components present in this material at concentrations equal to or greater than 0.1% are listed by the following organization or government agency as a carcinogen: **IARC** (International Agency for Research on Cancer) **NTP** (National Toxicology Program) **OSHA** (Occupational Safety & Health Administration) **ACGIH** (American Conference of Governmental and Industrial Hygienists)

SECTION 12: ECOLOGICAL INFORMATION			
12.1	**Ecotoxicity:**		This product is toxic to fish and aquatic organisms. Do not contaminate water containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.
12.2	**Ecotoxicological Information:**		
	12.2.1	**Oxone®:**	LC_{50} (96-hour) rainbow trout: 53 mg/L
	12.2.2	**Oxone®**:	LC_{50} (48-hour) daphnia magna: 3.5 mg/L

SECTION 13: DISPOSAL CONSIDERATIONS

Comply with Federal, State, and local regulations. 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.

SECTION 14: TRANSPORT INFORMATION

14.1	**US D.O.T.**			
			Inside packages up to 2.2 pounds.	**Inside or individual packages over 2.2 pounds.**
	14.1.1	**Proper Shipping Name:**	Consumer Commodity	Corrosive Solid, acidic, inorganic n.o.s. (Monopersulfate Compound)
	14.1.2	**Hazard Class:**	ORM-D	8
	14.1.3	**UN ID Number:**	Not applicable	UN3260
	14.1.4	**Labels:**	ORM-D	Corrosive 8.
	14.1.5	**Placards:**	None required	Corrosive 8.
	14.1.6	**Packing Group:**	None required	PG II
14.2	**"Materials of Trade" Exceptions.** Certain hazardous materials transported in small quantities as part of a business are subject to less regulation, because of the limited hazard they pose. These materials are known as Materials of Trade. The regulations that apply to MOTs are found in 49 CFR § 173.6.			
14.3	**Canadian TDG** (Transportation of Dangerous Goods)			
	14.4.1	**Shipping Name:**	Corrosive Solid, acidic, inorganic n.o.s. (Monopersulfate Compound)	
	14.4.2	**UN ID Number:**	UN3260	
	14.4.3	**Hazard Class:**	8	
	14.4.4	**Packing Group:**	PG II	

SECTION 15: REGULATORY INFORMATION

15.1	**U.S. Regulations:**		
	15.1.1	**OSHA HAZCOM** (Hazard Communication)	This product is considered hazardous under the HAZCOM Standard (29 CFR §1910.1200)
	15.1.2	**OSHA PSM** (Process Safety Management)	Not regulated under PSM Standard (29 CFR §1910.119)
	15.1.3	**EPA FIFRA** (Federal Insecticide, Fungicide and Rodenticide Act)	Not regulated as a pesticide.
	15.1.4	**SARA (**Superfund Amendments and Reauthorization Act) **311/312**	Acute: Yes; Chronic: No; Fire: No; Reactivity: No; Pressure: No.
	15.1.5	**EPA CERCLA** (Comprehensive Environmental Response, Compensation, and Liability Act)	Not regulated as hazardous substances.
	15.1.6	**EPA TSCA** (Toxic Substance Control Act)	Listed on the inventory.
	15.1.7	**EPA RCRA** (Resource Conservation and Recovery Act)	See Section 13.
	15.1.8	**EPA RMP** (Risk Management Plan)	Not regulated. (40 CFR § 68.130)
15.2	**State of California Regulations:**		
	15.2.1	**Cal ARP** (California Accidental Release Prevention)**:**	Not regulated.
	15.2.2	**CDPR** (California Department of Pesticide Regulation):	10897-50034-AA
	15.2.3	**Prop 65:** (California Safe Drinking Water and Toxins Enforcement Act 1986)	Not listed.
15.3	**Canada Regulations:**		
	15.3.1	**WHMIS** (Workplace Hazardous Materials Information System)**:**	
		15.3.1.1 **WHMIS Classification:**	CLASS C Oxidizing Material CLASS D Division 2 Subdivision B - Toxic Material. Skin or Eye Irritant. CLASS E Corrosive Material.
		15.3.1.2 **WHMIS Health Effects Criteria Met by this Chemical:**	No information.
	15.3.2	**DSL** (Domestic Substances List):	The substance is specified on the DSL.
15.4	**International Inventory:**		
	15.4.1	**AICS** (Australian Inventory of Chemical Substances):	On inventory or in compliance with inventory.
	15.4.2	**KECI** (Korean Existing Chemicals Inventory):	On inventory or in compliance with inventory.
	15.4.3	**PICCS** (Philippine Inventory of Chemicals and Chemical Substances):	On inventory or in compliance with inventory.
	15.4.4	**IECSC** (Inventory of Existing Chemical Substances in China):	On inventory or in compliance with inventory.
	15.4.5	**NZIoC** (New Zealand Inventory of Chemicals):	On inventory or in compliance with inventory.

SECTION 16: OTHER INFORMATION

16.1	**HMIS III** (Hazardous Materials Identification System):			
	16.1.1	**HEALTH**	**3**	
	16.1.2	**FLAMMABILITY**	**0**	
	16.1.3	**PHYSICAL HAZARD**	**1**	
	16.1.4	**PERSONAL PROTECTION**	**Section 8**	
16.2	**NFPA 704** (National Fire Protection Association):			
	16.2.1	**HEALTH**	**3**	
	16.2.2	**FLAMMABILITY**	**0**	
	16.2.3	**INSTABILITY**	**1**	
	16.2.4	**SPECIAL**	**None**	
16.3	**ANSI** (American National Standards Institute):			
	16.3.1	**Hazardous Industrial Chemicals -** MSDSs-Preparation:	Complies with **ANSI Z400.1 – 2004**.	
	16.3.2	**Hazardous Industrial Chemicals -** Precautionary Labeling:	Complies with **ANSI Z129.1 – 2006**.	
16.4	**International Fire Code/ International Building Code.**		Irritant	

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