



# Material Safety Data

## SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

page 1 of 6

**PRODUCT NAME: MAINTAIN OXY-PLUS**

PRODUCT ID: 3100

DATE: 01-22-2004

SYNONYMS: NON-CHLORINE SHOCK / POTASSIUM MONOPERSULFATE

EDITION: 2

BALECO INTERNATIONAL INC  
3200 STATELINE ROAD  
NORTH BEND, OHIO 45052

EMERGENCY PHONE NUMBERS  
24-HOUR PHONE NUMBER: 517-636-4400  
CHEMTREC: 1-800-424-9300  
INFORMATION (304)746-3000

## SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

MATERIAL	CAS NUMBER	PERCENT
Potassium Peroxymonosulfate	10058-23-8	43
Potassium Bisulfate	7646-93-7	23
Potassium Sulfate	7778-80-5	29
Potassium Peroxydisulfate	727-21-1	3
Magnesium Carbonate	546-93-0	2

## SECTION 3 HAZARDS IDENTIFICATION

**POTENTIAL HEALTH EFFECTS:** Oxone Monopersulfate is a skin and eye corrosive, and a nose and throat irritant. May cause allergic skin reactions in sensitive individuals. Ingestion may cause inflammation and damage to the lining of the stomach, resulting in bleeding.

**HUMAN HEALTH EFFECTS:** 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. Human patch tests with the product diluted in water at concentrations up to 150 ppm did not cause allergic skin reaction. Eye contact may cause eye corrosion or ulceration. Severe eye damage may result if not immediately treated (see First Aid Measures).

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.

Individuals with preexisting diseases of the skin or gastrointestinal tract may have increased susceptibility to the toxicity of excessive exposures.



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

**SECTION 4****FIRST AID**

**IF INHALED,** remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**SKIN CONTACT**

In case of contact, immediately flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Call a physician. Wash contaminated clothing before reuse.

**EYE CONTACT**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

**INGESTION**

If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

**SECTION 5****FIRE AND EXPLOSION HAZARD INFORMATION****FLAMMABILITY DATA**

Will not burn.

Fire and 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.

FLAMMABLE: NO  
COMBUSTIBLE: NO  
PYROPHORIC: NO  
FLASH POINT: N/A  
AUTOIGNITION TEMP: N/A

FLAMMABLE LIMITS AT NORMAL ATMOSPHERIC TEMPERATURE AND PRESSURE  
(PERCENT VOLUME IN AIR): N/A

EXTINGUISHING MEDIA: Water

**FIRE FIGHTING TECHNIQUES AND COMMENTS:** Use water to cool containers exposed to fire. May use other extinguishing agents suitable for surrounding materials. Will release oxygen when heated, intensifying a fire. Acidic mist may be present; self contained breathing apparatus should be used.

**SECTION 6****HANDLING AND STORAGE**

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

**STORAGE:** Store in a cool, dry, well-ventilated area away from heat sources such as light fixtures or space heaters.

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. (1.2m) cube keep packages dry. Do not store with com-



bustible materials or with incompatibles (see "INCOMPATIBILITY WITH OTHER MATERIALS").

**SAFEGUARDS (Personal)**

**NOTE:** Review FIRE FIGHTING MEASURES & HANDLING (Personnel) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

**ACCIDENTAL RELEASE MEASURES:** Sweep up solid. Flush liquid spills with low pressure water. (See disposal considerations).

**SECTION 7****EXPOSURE CONTROLS/PERSONAL PROTECTION**

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

**PERSONAL PROTECTIVE EQUIPMENT**

**EYE/FACE PROTECTION:** Wear safety glasses or coverall chemical splash goggles.

**SKIN PROTECTION:** Wear gloves, boots, chemical goggles, aprons or impermeable suit to avoid skin and eye contact.

**RESPIRATORY PROTECTION:** A NIOSH approved air-purifying respirator with an appropriate particulate cartridge or canister may be 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.

**SECTION 8****PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE:** White; Granular; free flowing solid

**ODOR:** None.

**MELTING POINT:** Decomposes

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

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

**VAP. PRESS:** Nil

**VAP. DENSITY:** Not Volatile

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

**SPECIFIC GRAVITY:** 1.1-1.4

**SECTION 9****STABILITY AND REACTIVITY**

**CONDITIONS UNDER WHICH THIS PRODUCT MAY BE UNSTABLE**

**TEMPERATURES ABOVE:** 240-250°C (464-482°F)

**MECHANICAL SHOCK OR IMPACT:** No

**ELECTRICAL (STATIC) DISCHARGE:** No

**HAZARDOUS POLYMERIZATION:** Will no occur



**INCOMPATIBLE MATERIALS:** The mixture of Oxone (R) with compounds containing halides or active halogens (bromine, chlorine, iodine) can cause the release of the respective halogen gas, if moisture is present. Avoid these gases (bromine and chlorine) because they are very irritating to eyes and lungs even at low concentrations. Never mix concentrated Oxone (R) with dry or concentrated bromine-containing chemicals, such as bromates, bromides, or any concentrated bromine pool chemicals. Mixing concentrated Oxone (R) with dry or concentrated chlorine-containing chemicals, such as hypochlorites ("Hypo" for pools), sodium dichloroisocyanurate (dichlor), sodium trisocyanurate (trichlor) or with sodium chloride (salt), may cause the release of chlorine gas.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxygen Gas

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

**POLYMERIZATION:** Will not occur

**SUMMARY OF REACTIVITY:**

OXIDIZER:	NO
PYROPHORIC:	NO
ORGANIC PEROXIDE:	NO
WATER REACTIVE:	NO
OTHER:	NO

## SECTION 10 TOXICOLOGICAL INFORMATION

### ANIMAL DATA

Inhalation 4 hour LC50:	> 5 mg/L in rats
Skin absorption LD50:	> 11,000 mg/kg in rabbits
Oral LD50:	200 – 2000 mg/kg in rats

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. 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.

Tests for carcinogenic activity, developmental and reproductive toxicity have not been performed.

Oxone Monopersulfate did not produce genetic damage in bacterial cell cultures. Oxone Monopersulfate did produce genetic damage in mammalian cell cultures. It did not produce genetic damage in test on animals, but showed some evidence of bone marrow cell toxicity in female mice.

## SECTION 11 ECOLOGICAL INFORMATION

### ECOTOXICOLOGICAL INFORMATION

#### Aquatic Toxicity

96 hour LC50 – Rainbow trout: 53 mg/L  
48 hour EC50 – Daphnia magna: 3.5 mg/L



**SECTION 12 DISPOSAL CONSIDERATIONS (SEE SECTION 15 FOR REGULATORY INFORMATION)****WASTE DISPOSAL**

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 13 TRANSPORT INFORMATION****THIS MATERIAL IS REGULATED AS A DOT HAZARDOUS MATERIAL**

PROPER SHIPPING NAME: Corrosive Solid, Acidic, Inorganic, N.O.S. (Monopersulfate Compounds)  
8 Corrosive, UN3260, PGII

**SECTION 14 REGULATORY INFORMATION****U.S. FEDERAL REGULATIONS:**

TSCA Inventory status Reported/Included.

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

ACUTE: YES  
CHRONIC: NO  
FIRE: NO  
REACTIVITY: NO  
PRESSURE: NO

**LIST:**

SARA Extremely Hazardous Substance – NO  
CERCLA Hazardous Material - NO  
SARA Toxic Chemical - NO

**CANADA PEST CONTROL PRODUCTS ACT**

Registration Number 23137

**NFPA, NPCA-HMIS**

HEALTH : 3  
FLAMMABILITY : 0  
REACTIVITY : 1

**SECTION 15 OTHER INFORMATION**

The data in this material safety data sheet relates only to the specific material designated herein and does not relate to use in combination with any process. The information set forth herein is furnished free of charge and is based on technical data that, Baleco International Inc. believes to be reliable. It is intended for use by person having technical skill and at his or her own discretion and risk. Since conditions of use are outside our control, we make no warranties, explicit or implied, and assume no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under, or a recommendation to infringe any patents.

DATE OF LAST REVISION: 01-22-2004

The following has been revised since the last issue of this MSDS: Date, Edition. MSDS has been reformatted into 16 sections.

Baleco Disclaimer: Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, Baleco International Inc. makes no representation as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving it will make their own determination as to its safety and suitability for their purposes prior to use. In no event will Baleco Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. No representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose or of any other nature, are made of here under with respect to information or the product to which the information refers.

Prepared by: MSDS Department Baleco International Inc  
P.O. Box 11331  
Cincinnati, OH 45211  
Phone number: (513) 353-3000