

should be used.

6-ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES AND HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONNEL PROTECTIVE EQUIPMENT during clean-up

Accidental Release Measures

Sweep up. Flush area with low pressure water. (See Disposal Consideration).

7-HANDLING AND STORAGE

Handling (Personnel)

Do not inhale. Do not get in eyes, on skin or on 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 may be stacked. Leave open space on all sides of each pallet to provide ventilation. See local fire codes for allowable limits. Do not store with combustible materials or with incompatibles (See incompatibility with other materials*)

8-EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use sufficient ventilation to keep employee exposure below recommended limits.

Personal Protective Equipment

For Exposure to Dry Material

Eye/Face Protection:

Wear safety glasses or coverall chemical splash goggles

Respirators:

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.

Protective Clothing:

Where there is potential for skin contact, have available and wear as appropriate impervious gloves, apron, pants and jacket.

For Exposure To Solutions:

Eye/Face Protection: Wear coverall chemical splash goggles. Additionally wear a face shield where the possibility exists for face contact due to splashing or spraying of material.

Respirators: 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.

Protective Clothing:

Where there is potential for skin contact, wear impervious clothing such as gloves, apron, boots or whole bodysuit.

Exposure Guidelines

Exposure Limits:

PEL (OSHA) – Particulates (Not Otherwise Regulated)

15 mg/m³, 8 hr. TWA total dust,

5 mg/m³, 8 hr. TWA, respirable dust

Other Applicable Exposure Limits

Potassium Monopersulfate Compound

PEL (OSHA): None Established

TLV (ACGIH): None Established

AEL* (Dupont): 1 ,g/m³, total dues, 8 & 12 hr., TWA

Sodium Carbonate

PEL (OSHA): None Established

TLV (ACGIH): None Established

AEL* (Dupont): 5 ,g/m³, 8 hr., TWA

8-EXPOSURE CONTROLS/PERSONAL PROTECTION (Con't)

*AEL is Dupont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

9-PHYSICAL AND CHEMICAL PROPERTIES

Physical Data (for unblended "Oxone" unless otherwise noted)

Boiling Point:	@760 mm Hg Decomposes
Vapor Pressure:	Nil
Vapor Density:	Not volatile
Melting Point:	Decomposes
Evaporation Rate:	(Butyl Acetate = 1) Not volatile
Solubility in Water:	25.6 WT% @ 20°C (68°F)
pH:	1% solution = 2.3, 3% solution = 2
Odor:	Odorless
Form:	Granular; free flowing solid
Color:	Blue
Specific Gravity:	1.1 – 1.4

10-STABILITY AND REACTIVITY

Chemical Stability:

Stable when handled and stored as indicated. The mixture reacts when moistened with small quantities of water to produce heat and carbon dioxide gas.

Incompatibility with Other Materials

The mixture of potassium monopersulfate with compounds containing halides or active halogens can cause release of the respective halogen if moisture is present. For example, mixing with calcium hypochlorite or sodium bromide 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.

Decomposition:

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

Polymerization

Polymerization will not occur

11-TOXICOLOGICAL INFORMATION

Animal Data

Oxone Monopersulfate

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

Potassium Monopersulfate is a severe skin and eye irritant, but is not a skin sensitizer in animals. Single exposures by inhalation to potassium 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 potassium monopersulfate produced nonspecific effects such as weight loss and irritation, as well as gastric ulceration, necrosis and hemorrhage. Repeated administration of potassium 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 or reproductive toxicity have not been performed. A range-finding developmental toxicity study showed developmental effects only at exposure levels producing other toxic effects in the adult animal. Potassium monopersulfate did produce genetic damage in mammalian cell cultures. It did not produce genetic damage in tests on animals, but showed some evidence of bone marrow cell toxicity in female mice.

Sodium Carbonate:

Oral LD50: 4200 mg/kg in rats

The compound is a skin irritant, is a severe eye irritant, but is untested for animal sensitization. Single exposure by inhalation caused respiratory irritation. Repeated exposures caused reduced weight gain and respiratory irritation. No animal data are available to define the carcinogenicity or reproductive hazards of the material. In animal testing, sodium carbonate has not caused developmental toxicity. It does not produce genetic damage in bacterial or

mammalian cell cultures or animals, but has not been tested for heritable genetic damage

12-ECOLOGICAL INFORMATION

Ecotoxicological Information

Aquatic Toxicity

Oxone

96 hour LC50, rainbow trout: 53 mg/L

48 hour EC50, daphnia magna: 3.5 mg/L

Sodium Carbonate

96 hour LC50, daphnia magna: 265-565 mg/L

96 hour LC50, bluegill sunfish: 300-320 mg/L

13- DISPOSAL CONSIDERATIONS

Waste Disposal:

Comply with Federal, State and local regulations. Solutions of unblended potassium monopersulfate 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, as needed to adjust pH.

14-TRANSPORTATION INFORMATION

Shipping Information

DOT/IMO

Proper Shipping Name: Corrosive, Solid, Acidic, Inorganic N.O.S. (monopersulfate compound)

Hazard Class: 8

UN No.: 3260

DOT/IMO label: II

Shipping Containers:

Plastic bottles/pails

15-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

Lists:

SARA Extremely Hazardous Substance: No

CERCLA Hazardous Material: No

SARA Toxic Chemical: No

16-OTHER INFORMATION

Date Prepared: June 2011

Revision Date: December 2014

NPPA, NPCA-HMIS

NPCA-HMIS Rating:

Health: 3

Flammability: 0

Reactivity: 1

Personal Protection rating to be supplied by user depending on use conditions.

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 other material or in any process.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.