

MSDS

DuPont Chemicals

MATERIAL SAFETY DATA SHEET

3661 CR

Revised 16-OCT-1996

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“OXONE” MONOPERSULFATE COMPOUND

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"OXONE" is a registered trademark of DuPont.

Corporate MSDS Number	DU005614
CAS Number	70693-62-8
CAS Name	POTASSIUM HYDROGEN PEROXYMONOSULFATE SULFATE
Grade	TECHNICAL

Tradenames and Synonyms

POTASSIUM MONOPERSULFATE
POTASSIUM PEROXYMONOSULFATE

Company Identification

MANUFACTURER/DISTRIBUTOR
DuPont
1007 Market Street
Wilmington, DE 19898

PHONE NUMBERS

Product Information	1-800-441-7515
Transport Emergency	CHEMTREC: 1-800-424-9300
Medical Emergency	1-800-441-3637

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
POTASSIUM PEROXYMONOSULFATE	10058-23-8	43
POTASSIUM BISULFATE	7646-93-7	23
POTASSIUM SULFATE	7778-80-5	29
POTASSIUM PEROXYDISULFATE	7727-21-1	3
MAGNESIUM CARBONATE	546-93-0	2

(Continued)

HAZARDS IDENTIFICATION

Potential Health Effects

Causes skin, eye, nose, and throat irritation. May cause allergic skin reactions at high concentrations in sensitive individuals. Ingestion may cause inflammation and damage to the lining of the stomach, resulting in bleeding.

HUMAN HEALTH EFFECTS:

Skin contact may cause skin irritation with discomfort or rash and may cause temporary body hair loss in contacted areas. Allergic skin reactions were observed at high concentrations, but at lower concentrations of 12 ppm and 150 ppm, no allergic reactions were noted. Eye contact may cause eye irritation with discomfort, tearing, or blurring of vision. Inhalation may cause 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.

FIRST AID MEASURES

First Aid

INHALATION

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 wash skin with soap and water. 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.

(Continued)

FIRE FIGHTING MEASURES

Flammable Properties

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.

Extinguishing Media

Water.

Fire Fighting Instructions

Will release oxygen when heated, intensifying a fire. Acidic mist may be present; self contained breathing apparatus should be used.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

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

Accidental Release Measures

Sweep up. Flush area with low pressure water. (see Disposal Considerations)

HANDLING AND STORAGE

Handling (Personnel)

Avoid breathing dust. Avoid contact with eyes, skin, or clothing, Wash thoroughly after handling.

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 combustible materials or with incompatibles (see "Incompatibility with Other Materials").

(Continued)

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. Wear coverall chemical splash goggles and face shield when the possibility exists for eye or face contact from airborne material.

RESPIRATORS

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.

PROTECTIVE CLOTHING

Wear impervious clothing, such as gloves, apron, boots or whole bodysuit, made of rubber, as appropriate. Leather gloves may be used when handling dry material.

Exposure Guidelines

Exposure Limits

"OXONE" MONOPERSULFATE COMPOUND

PEL	(OSHA)	Particulates (Not Otherwise Regulated) 15 mg/m ³ , 8 Hr. TWA, total dust 5 mg/m ³ , 8 Hr. TWA, respirable dust
TLV	(ACGIH)	None Established
AEL *	(DuPont)	1 mg/m ³ , 8 Hr. TWA

Other Applicable Exposure Limits

POTASSIUM SULFATE

PEL	(OSHA)	None Established
TLV	(ACGIH)	None Established
AEL *	(DuPont)	10 mg/m ³ , 8 Hr. TWA

POTASSIUM PEROXYDISULFATE

TLV	(ACGIH)	0.1 mg/m ³ , 8 Hr. TWA
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MAGNESIUM CARBONATE

PEL	(OSHA)	15 mg/m ³ , total dust, 8 Hr. TWA 5 mg/m ³ , respirable dust, 8 Hr. TWA
TLV	(ACGIH)	10 mg/m ³ , total dust, 8 Hr. TWA
AEL *	(DuPont)	None Established

* 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.

(Continued)

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

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 VT% @ 20 C (68 F)
pH	1% solution = 2.3; 3% solution = 2.0
Odor	Odorless
Form	Granular; free flowing solid
Color	White
Specific Gravity	1.1-1.4

STABILITY AND REACTIVITY

Chemical Stability

Stable when handled and stored as indicated.

Incompatibility with Other Materials

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 sodium chloride 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.

Decomposition

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

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

Inhalation 4-hour LC50:	>5 mg/l in rats
Skin absorption LD50 :	>11,000 mg/kg in rabbits
Oral LD50:	2,000 mg/kg in rats

The compound is a severe skin and eye irritant. Single inhalation exposures produced nonspecific effects such as weight loss and irritation. Repeated inhalation exposures produced eye irritation and reversible corneal damage. By ingestion, the administration of large single doses produced nonspecific effects such as weight loss and irritation as well as gastric ulceration, necrosis, and hemorrhage. The compound does not produce genetic damage in bacterial cell cultures.

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ECOLOGICAL INFORMATION

Ecotoxicological Information

Aquatic Toxicity

Potassium Sulfate		
96-hour Tim, bluegill sunfish:		3,500 mg/L
Magnesium Carbonate		
96-hour LC50, species unidentified:		>1,000 ppm

DISPOSAL CONSIDERATIONS

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.

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	CORROSIVE
Packing Group	III

Shipping Containers:

Multiwall Bags
Fiber Pack Drums
Bulk Bags

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:

(Continued)

REGULATORY INFORMATION (Continued)

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

CANADIAN WHMIS CLASSIFICATION:

D2B

CANADA PEST CONTROL PRODUCTS ACT

Registration Number 23137

OTHER INFORMATION**NFPA, NPCA-HMIS**

NPCA-HMIS Rating
Health 2
Flammability 0
Reactivity 1

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

Additional Information

For further information, see DuPont "OXONE" Monopersulfate Compound Data Sheet

The data in this Material Safety Data Sheet relates only to the specific material designate herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS :DuPont Chemicals
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> :Wilmington, DE 19880-0709
Telephone :(302) 999-4946

Indicates updated section.

End of MSDS