



Safety Data Sheet

Issue Date 10-Feb-2014

Revision Date: 04-Jun-2015

Version 2

1. IDENTIFICATION

Product Identifier

Product Name United 976 UNITED CAIROX®

Other means of identification

SDS # UNITED-976

Recommended use of the chemical and restrictions on use

Recommended Use Granular Permanganate.
Uses Advised Against For industrial and institutional use only.

Details of the supplier of the safety data sheet

Supplier Address

United Laboratories, Inc.
320 37th Avenue
St. Charles, IL 60174
www.unitedlabsinc.com
www.unitedlabsinc.ca

Emergency Telephone Number

Company Phone Number 800-323-2594 (to reorder)
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Classification

Oxidizing solid	Category 2
Acute Toxicity	Category 4
Aquatic Toxicity (acute)	Category 1
Aquatic Toxicity (chronic)	Category 1

Label elements

Signal word DANGER

Hazard statements

May intensify fire, oxidizer
Harmful, if swallowed
Very toxic to aquatic life with long lasting effects
Keep away from heat/sparks/open flames/hot surfaces. –No smoking
Keep/Store away from clothing/combustible materials.
Do not breathe dust
Wear protective gloves/protective clothing/eye protection/face protection
In case of fire: Use water for extinction
Dispose of contents/container to appropriate places.
Avoid release to the environment.



Appearance Odorless dark purple granular

Physical State Granular

Odor Odorless

Human and Environmental Hazards

Contact with combustible material may cause fire.

Harmful if swallowed.

Very toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.

This substance is hazardous in the European Union according to the latest adaptations to Regulations (EC).

Other Hazards

Eye Contact

Potassium Permanganate is damaging to eye tissue on contact. It may cause burns that result in damage to the eye.

Skin Contact

Momentary contact of solution at room temperature may be irritating to the skin, leaving brown stains. Prolonged contact is damaging to the skin. Concentrated solutions at elevated temperature and crystals are damaging to the skin.

Inhalation

Acute inhalation toxicity data are not available. However, airborne concentrations of potassium permanganate in the form of dust or mist may cause damage to the respiratory tract.

Ingestion

Potassium Permanganate, if swallowed, may cause burns to mucous membranes of the mouth, throat, esophagus, and stomach.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight%	Symbol	Risks
Potassium Permanganate	7722-64-7	>97.5	Xn N O	8,22,50/53

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact	Immediately flush eyes with large amounts of water for at least 15 minutes holding lids apart to ensure flushing the entire surface. Do not attempt to neutralize chemically. Seek medical attention immediately. Note to physicians: Decomposition products are alkaline. Insoluble decomposition product formed is brown colored manganese dioxide.
Skin Contact	Immediately wash contaminated areas with water. Remove contaminated clothing or footwear. Wash clothing and decontaminate footwear before reuse. Seek medical attention immediately.
Inhalation	Remove person from contaminated area to fresh air. If breathing has stopped, resuscitate and administer oxygen if readily available. Seek medical attention immediately.
Ingestion	Never give anything by mouth to an unconscious or convulsing person. If person is conscious give large quantities of water. Seek medical attention immediately.
Not to Physician	For inhalation, consider oxygen. Avoid gastric lavage or emesis. Decomposition products are alkaline. Insoluble decomposition product formed is brown colored manganese.

Most important symptoms and effects

Symptoms	No information available.
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5. FIRE-FIGHTING MEASURES

NFPA* Hazard Signs

Health Hazard 1 = Materials that under emergency conditions, can cause significant irritation. Materials that on the skin could cause irritation.

Flammability Hazard 0 = Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone and sand.

Instability Hazard 0 = Materials that in themselves are normally stable, even under fire conditions.

Special Hazard OX = Oxidizer

*National Fire Protection Association 704 (USA)

Suitable Extinguishing Media

Use large quantities of water. Water will turn pink to purple when in contact with potassium permanganate. Dike to contain. Do not use dry chemicals, CO₂, or foams, because they are not effective.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Wash hands thoroughly with soap and water after handling potassium permanganate. Do not eat, drink or smoke when working with potassium permanganate. Wear proper protective equipment. Remove clothing if it becomes contaminated. Provide sufficient mechanical and/or local exhaust to maintain exposure below the TLV/TWA.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store in accordance with NFPA 430 requirements for the Storage of Class II oxidizing materials. Protect containers from physical damage. Store in a cool, dry area in closed containers. Segregate from acids, peroxides, formaldehyde, and all combustible, organic, or easily oxidizable materials including antifreeze and hydraulic fluid.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV
Potassium Permanganate 7722-64-7	0.2mg/m ³ TWA

Individual protection measures, such as personal protective equipment

Ventilation

Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Personal Protective Equipment

Eye/Face

Face shield, goggles, or safety glasses with side shields should be worn. Provide eyewash in working area.

Gloves

Rubber or plastic gloves should be worn.

Other Protective Equipment

Chemically resistant clothing covering arms and legs, and rubber or plastic apron should be worn. **Caution:** If clothing becomes contaminated, wash off immediately.

Respiratory Protection

In cases where overexposure to dust may occur, the use of an approved NIOSH-MSHA dust respirator or an air supplied respirator is advised. Engineering or administrative controls should be implemented to control dust.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Solid	Odor	Odorless
Appearance	Dark purple solid with metallic lust	Odor Threshold	Not determined
Color	Dark purple		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not determined	
Melting Point/Freezing Point	Starts to decompose with evolution of oxygen (O ₂) at a temperature above 150°C/ 302°F	Literary Reference
Boiling Point/Boiling Range	Not determined	
Flash Point	Not determined	
Evaporation Rate	As water	

Flammability (Solid, Gas)	Not determined	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	2.7	
Specific Gravity	Not determined	(1=Water)
Water Solubility	6% at 20°C	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Property	Values	Remarks • Method
Dynamic Viscosity	Not determined	
Explosive Properties	Explosive in contact with sulfuric acid or peroxide, or readily oxidizable substances.	
Oxidizing Properties	Strong oxidizer.	
VOC Content	None	

10. STABILITY AND REACTIVITY

Reactivity
Not applicable.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to Avoid
Contact with incompatible materials or heat (150°C / 302°F) could result in violent exothermic chemical reaction.

Incompatible Materials
Acids, peroxides, formaldehyde, anti-freeze, hydraulic fluids and all combustible organic or readily oxidizable inorganic materials including metal powders. With hydrochloric acid, chlorine gas is liberated.

Hazardous Decomposition Products
When involved in a fire, potassium permanganate may liberate irritating, poisonous and/or corrosive fumes. Oxides of potassium and manganese may be formed.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Contact with eye is damaging to eye tissues. It may cause severe burns that result in damage to the eye.
Skin Contact	The product may be absorbed into the body through the skin. Major effects of exposure: severe irritation, damage to the skin, and brown staining of skin.
Inhalation	The product may be absorbed into the body by inhalation. Major effects of exposure: respiratory disorder, cough.
Ingestion	Harmful, if swallowed. The estimated lethal human dose is 10 g. Ingestion may cause nausea, vomiting, sore throat, stomach-ache, and eventually lead to a perforation of the intestine. Liver and kidney injuries may occur.

Acute Toxicity

LC 50 inhalation: No data available.

LD 50 dermal: No data available.

LD 50 oral rat: 780 mg/kg male (14 days); 525 mg/kg female (14 days). Harmful if swallowed. ALD: 10g. Ingestion may cause nausea, vomiting, sore throat, stomach-ache and eventually lead to a perforation of the intestine. Liver and kidney injuries may occur.

Chronic Toxicity

No known cases of chronic poisoning due to permanganates have been reported. Prolonged exposure, usually over many years, to heavy concentrations of manganese oxides in the form of dust and fumes may lead to chronic manganese poisoning, chiefly involving the central nervous system.

Carcinogenicity

Potassium permanganate has not been classified as a carcinogen by ACGIH, NIOSH, OSHA, NTP, or IARC.

Information on physical, chemical and toxicological effects**California Proposition 65**

This product does not contain chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life.

Persistence/Degradability

Expected to be readily converted by oxidizable materials to insoluble manganese oxides.

Bioaccumulation

Potential for Bioaccumulation is low.

Mobility

Miscible to water.

Other Adverse Effects

Harmful to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

Offer surplus and non-recyclable product or solutions to a licensed disposal company. Disposal of all materials shall be in full and strict compliance with all federal, state, and local regulations. This material and its container must be disposed of as hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. When it becomes a waste, potassium permanganate is considered a D001 hazardous (ignitable) waste. For disposal of potassium permanganate solutions, follow procedures in Section 6 and deactivate the permanganate to insoluble manganese dioxide. Dispose of it in a permitted landfill. Packaging materials must be triple rinsed to remove all residues prior to re-cycling or disposal as a

14. TRANSPORT INFORMATION

DOT

ID UN 1490
Proper Shipping Name Potassium permanganate
Hazard Class Oxidizer
Packing Group II
Division 5.1

IATA

ID UN 1490
Proper Shipping Name Potassium permanganate
Hazard Class Oxidizer
Packing Group II
Division 5.1

IMDG

ID UN 1490
Proper Shipping Name Potassium permanganate
Hazard Class Oxidizer
Packing Group II
Division 5.1

15. REGULATORY INFORMATION

CLP Classification

This product is hazardous according to the Regulation (EC) No. 1272/2008 on Classification, Labeling and Packaging of Substances and Mixtures (CLP).

Components Analysis – Inventory

Components	Cas-No	US	CA	EU	AU	PH	JP	KR	CN	NZ
Potassium permanganate	7722-64-7	TSCA	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes

US Federal Regulations

Ingredient	Cas-No	SARA 302		SARA 313	
		RQ	TPQ	List	Chemical Category
Potassium Permanganate	7722-64-7	No	No	Yes	Yes

Ingredient	Cas-No	CERCLA	RCRA	TSCA 8(d)
Potassium permanganate	7722-64-7	Yes (RQ=100lbs)	D001	No

Ingredient	Cas-No	CWC	TSCA 12(b)	CDTA	SARA 311/312
Potassium Permanganate	7722-64-7	No	No		4545 Kg

Ingredient	Cas-No	Acute	Chronic	Fire	Pressure	Reactivity	Pure/Liquid
Potassium Permanganate	7722-64-7	Yes	Yes	Yes	No	No	Pure

Ingredient	Cas-No	Australian Hazchem	WHMIS	IDL
Potassium permanganate	7722-64-7	IYE	C,D2B	Yes

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards	Flammability	Instability	Special Hazards
	1	0	0	OX
<u>HMIS</u>	Health Hazards	Flammability	Physical Hazards	Personal Protection
	1	0	0	F

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet