Safety Data Sheet

Issue Date 11-Apr-2015 **Revision Date** 01-Feb-2016 **Version** 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Product Name United 896 OXY BLUE Tablets

Other means of identification

SDS# UNITED 896

Recommended use of the chemical and restrictions on use

Recommended use Odor eliminator tablets for wastewater treatment.

Uses Advised Against For industrial and institutional use only.

Details of the supplier of the safety data sheet

Company Name

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 INFOTRAC 1-800-535-5053 (North America)
1-352-323-3500 (International)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Oxidizing solids	Category 2
Serious eye damage/irritation	Category 1
Acute toxicity – Oral	Category 4
Skin corrosion/irritation	Category 1B
Carcinogenicity	Category 2
Specific target organ toxicity – single exposure	Category 1 (Respiratory System)
Specific target organ toxicity – repeated exposure	Category 1 (Respiratory System, Central Nervous System, Lung)
Hazardous to the aquatic environment – acute hazard and long-term hazard	Category 1

Label elements

Emergency Overview

Danger

Hazard statement

May intensity fire; oxidizer. Harmful if swallowed. Causes severe skin burns and eye damage. Causes damage to organs (Respiratory System). Causes damage to organs (Respiratory System, Central Nervous System) through prolong or repeated exposure. Very toxic to aquatic life with long lasting effect.

Appearance Dark purple solid with metallic luster **Physical state** Solid Odor Odorless

Precautionary Statements

Prevention
Keep away from heat. Keep/store away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Do not breathe dust. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection and face protection. Do not eat, drink or smoke when using this product. Avoid release to the environment.

Response
If on skin: Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If in the eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If inhaled: Remove individual to fresh air and keep comfortable for breathing. Immediately call a poison control center or doctor. If exposed: call a poison center/doctor. Collect spillage.

Storage
Store locked up.

Disposal
Dispose of contents/container in accordance with local, regional, national and international regulations.

Hazards not otherwise classified (HNOC) None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Potassium permanganate	7722-64-7	30-70%	*
Calcium Sulfate	7778-18-9	22-60%	*
Calcium Carbonate	1317-65-3	4-18%	*
Silicon dioxide (Quartz)	14808-60-7	0.5	*

*The exact percentage (concentration) of composition has been withheld as a trade secret. All concentrations are in percent of weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

First aid measures

Skin Contact Take off immediately all contaminated clothing. Immediately flush skin with plenty of water. Get medical attention immediately. Wash contaminated clothing before reuse. Contact with skin may leave brown stain of insoluble manganese oxide. This can be easily removed by washing with a mixture of equal volume of household vinegar and 3% hydrogen peroxide, followed by washing with soap and water.

Eye contact Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids wide apart. Continue rinsing. Get medical attention immediately.

Inhalation Remove individual to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties, oxygen may be necessary. Get medical attention immediately.

Ingestion Immediately rinse mouth and drink plenty of water. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical attention immediately.

General information In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to doctor in attendance. For personal protection, see Section 8 of the SDS. Wash contaminated clothing before reuse.

Most important symptoms and effects, both acute and delayed

Contact with this material will cause burns to the skin, eyes and mucous membranes. Permanent eye damage including blindness could result.

Indication of any immediate medical attention and special treatment needed

Note to physicians Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Decomposition products are alkaline. Brown stain is insoluble manganese dioxide.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Flood with water from a distance, water spray or fog.

Unsuitable extinguishing media Dry chemical. Foam. Halogenated materials. Carbon dioxide (CO2).

Specific hazards arising from the chemical
May intensify fire; oxidizer. May ignite combustibles (wood, paper, oil, clothing, etc.). Contact with incompatible materials or heat (135°C/275°F) could result in violent exothermic chemical reaction. Oxidizing agent may cause spontaneous ignition of combustible materials. By heating and fire, corrosive vapors/gases may be formed.

Protective equipment and precautions for firefighters
Wear self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Fire-fighting equipment/instructions
Move container from fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Dike fire control water for later disposal. Water runoff can cause environmental damage.

General fire hazards
The product is not flammable. May intensify fire; oxidizer. May ignite combustibles (wood, paper, oil, clothing, etc.). Contact with incompatible materials or heat (135°C/275°F) could result in violent exothermic chemical reaction.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep upwind. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors and contact with skin and eyes. Wear protective as described in Section 8 of this SDS. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for containment and for cleaning up

Keep combustibles (wood, paper, oil etc.) away from spilled material. Should not be released into the environment. This product is miscible in water. Stop leak if possible without any risk. Dike the spilled material, where this is possible. Clean up spills immediately by sweeping or shoveling up the material. Do not return spilled material to the original container; transfer to a clean metal or plastic drum. To clean up potassium permanganate solutions, follow either of the following two options:

Option #1: Dilute to approximately 6% with water, and then reduce with sodium thiosulfate, a bisulfite or ferrous salt solution. The bisulfite or ferrous salt may require some dilute sulfuric acid (10% w/w) to promote reduction. Neutralize with sodium carbonate to neutral pH, if acid was used. Decant or filter and deposit sludge in approved landfill. Where permitted, the sludge may be drained into sewer with large quantities of water.

Option #2: Absorb with inert media like diatomaceous earth or inert floor dry, collect into a drum and dispose of properly. Do not use saw dust or other incompatible media. Disposal of all materials shall be in full and strict compliance with all federal, state, and local regulations pertaining to permanganates.

To clean contaminated floors, flush with abundant quantities of water into sewer, if permitted by federal, state, and local regulations. If not, collect water and treat as described above. Never return spills to original containers for re-use. For waste disposal, see Section 13 of this SDS.

Environmental precautions

Do not allow to enter drains, sewers or watercourses. Contact local authorities in case of spillage to drain/aquatic environment

7. HANDLING AND STORAGE

Conditions for safe storage, including any incompatibilities

Precautions for safe handling

Take any precaution to avoid mixing with combustibles. Do not get this material in your eyes, on your skin, or on your clothing. Do not breathe dust or mist or vapor of the solution. Use personal protection as recommended in Section 8 of this SDS. If clothing becomes contaminated, remove and wash off immediately. When using, do not eat, drink or smoke. Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving work site. Avoid release to environment.

Storage conditions, including Incompatible materials

Store locked up. Keep container tightly closed and in a well-ventilated place. Store in a cool, dry place. Store away from compatible material (See Section 10). Store in accordance with NFPA 430 requirements for Class II oxidizers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines Exposure guidelines noted for ingredient(s).

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Potassium Permanganate 7722-64-7	TWA: 0.1mg/m^3 (inhalable fraction) TWA: 0.02mg/m^3 (respirable fraction)	-	STEL: 3 mg/m^3 (fume) TWA: 1mg/m^3 (fume)
Silicon dioxide (Quartz) 14808-60-7	TWA: 0.025 mg/m^3 (respirable fraction)	TWA: 0.3 mg/m^3 (total dust) TWA: 0.1 mg/m^3 (respirable) TWA: 2.4 mppcf (respirable)	TWA: 0.05 mg/m^3 (respirable dust)
Calcium Sulfate 7778-18-9	TWA: 5 mg/m^3 (respirable fraction) TWA: 15 mg/m^3 (inhalation fraction)	-	TWA: 10mg/m^3 (Total) TWA: 5mg/m^3 (Resp)

NIOSH IDLH Immediately Dangerous to Life or Health

Biological limit values No biological exposure limits notes for the ingredient(s).

Appropriate engineering controls

Engineering Controls Follow standard monitoring procedures. Provide adequate general and local exhaust ventilation. An eye wash and safety shower must be available in the immediate work area.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Wear face shield if there is risk of splashes.

Skin and hand/body protection Wear chemical-resistant, impervious gloves. Use protective gloves made of: rubber or plastic. Suitable gloves can be recommended by the glove supplier. Wear appropriate chemical resistant clothing. Rubber or plastic apron.

Respiratory protection In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134.

Measurement Element Manganese (Mn) 10 mg/m$^{3'}$ - Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering face pieces) except quarter-mask respirators. The following filters may also be used: N99, Any supplied-air respirator.

25 mg/m^3 – Any supplied-air respirator operated in a continuous-flow mode. Any powered, air-purifying respirator with a high-efficiency particulate filter.

50 mg/m^3 – Any air-purifyng, full-face piece respirator equipped with an N100, R100, or P100 filter. Any supplied-air respirator with a tight-fitting face piece that is operated in a continuous-flow mode. Any powered, air-purifying respirator with a tight-fitting face piece and high-efficiency particulate filter. Any self-contained breathing apparatus with a full face piece. Any suppled-air respirator with a full face piece.

500 mg/m^3 – Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode.

Emergency or planned entry into unknown concentrations or IDLH conditions – Any self-contained breathing apparatus that has a full face piece and is operated in a pressure-demand or other positive-pressure mode. Escape-any air-purifying, full-face piece respirator equipped with an N100, R00, or P100 filter. Any appropriate escape-type self-contained breathing apparatus.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General Hygiene When using, do not eat, drink or smoke. Keep from contact with clothing and other combustible materials. Remove and wash contaminated clothing promptly. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid
Appearance	Dark purple solid with metallic luster.
Color	Dark purple
Odor	Odorless

Property	Values	Remarks • Method
pH	No information available	
Specific Gravity	No information available.	
Viscosity	No Information available	
Melting point/freezing point	Starts to decompose with evolution of oxygen (02) at temps above 150°C. Once initiated, the decomposition is exothermic and self-sustaining.	
Flash point	No information available.	
Boiling point / boiling range	No information available.	
Evaporation rate	No Information available	
Flammability (solid, gas)	Non-flammable.	
Flammability Limits in Air	No information available.	
Upper flammability limit:	No Information available	
Lower flammability limit:	No Information available	
Vapor pressure	<0 kPa at 25°C	
Vapor density	No information available.	
Water solubility	6% (20°C)	
Partition coefficient	No Information available (n-octanol/water)	
Autoignition temperature	No Information available	
Decomposition temperature	464°F (240°C)	

Other Information

Density	2.70 g/cm^3.
Explosive properties	Not explosive. Can explode in contact with sulfuric acid, peroxides and metal powders.
Molecular formula	H-Mn-04.K
Molecular weight	158.03 g/mol 158.03
Oxidizing properties	Strong oxidizing agent.
VOC Content	None.

10. STABILITY AND REACTIVITY

Reactivity
Stable and non-reactive under normal recommended conditions of use, storage and transport.

Chemical stability
Stable under normal recommended conditions.

Possibility of Hazardous Reactions
Contact with combustible material may cause fire. Can explode in contact with sulfuric acid, peroxides and metal powders. Starts to decompose with evolution of oxygen (02) at temperatures above 150°C. Once initiated, the decomposition is exothermic and self-sustaining.

Conditions to avoid
Contact with incompatible materials or heat (135°C/275°F) could result in violent exothermic chemical reaction.

Incompatible materials
Acids. Peroxides. Reducing agents. Combustible material. Metal powders. Contact with hydrochloric acid liberates chlorine gas.

Hazardous Decomposition Products
By heating and fire, corrosive vapors/gases may be formed.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation May cause irritation to the respiratory system.

Eye contact Causes severe eye damage.

Skin Contact Causes severe skin burns.

Ingestion Harmful if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Potassium permanganate 7722-64-7	2000 mg/kg (Rat)	2000 mg/kg (Rat)	-

Information on toxicological effects

Symptoms Contact with this material will cause burns to the skin, eyes and mucous membranes. Permanent eye damage including blindness could result.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization Skin contact may cause an allergic reaction.
Serious eye damage/eye irritation Causes serious eye damage.
Skin corrosion/irritation Causes severe skin burns.
Carcinogenicity Not classified.
Reproductive toxicity In animal studies, active ingredient did not interfere with reproduction.
STOT - single exposure Causes damage to organs (respiratory system).
STOT - repeated exposure Causes damage to organs (respiratory system, central nervous system) through prolonged or repeated exposure.
Acute toxicity Harmful if swallowed.
Chronic effects May cause damage to respiratory system. Prolonged exposure, usually over many years, to manganese oxide fume/dust can lead to chronic manganese poisoning, chiefly affecting the central nervous system.

Aspiration hazard Not classified.
Carcinogenicity Suspected of causing cancer.
IARC Monographs, Overall Evaluation of Carcinogenicity
Silicon dioxide (Quartz) (CAS 14808-60-7) Carcinogenic to humans.
NTP Report on Carcinogens
Silicon dioxide (Quartz) (CAS 14808-60-7) Known to be human carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Persistence and degradability Expected to be readily converted by oxidizable materials to insoluble manganese oxide.

Bioaccumulative potential Potential to bioaccumulate is low.

Mobility in soil The product is miscible with water. May spread in water systems.

Other adverse effects None known.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazardous waste code	D001: Ignitable waste. The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues/unused products	Do not allow this material to drain into sewers/water supplies.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Rinse container at least three times to an absence of pink color before disposing. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

DOT

UN/ID No.	UN1479
Proper Shipping Name	Oxidizing Solid, n.o.s. (Potassium permanganate)
Transport hazard class	5.1
Subsidiary risk	II
Environmental hazards	
Marine pollutant	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB8, IP2, IP4, T3, TP33
Packaging exceptions	152
Packaging non bulk	212
Packaging bulk	240

IATA UN1479

Proper Shipping Name	Oxidizing Solid, n.o.s. (Potassium permanganate)
Transport hazard class	5.1
Subsidiary risk	5.1
Label(s	II
Packing group	Yes
Environmental hazards	5L
ERG Code	
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN/NA ID No.	UN1479
Proper Shipping Name	Oxidizing Solid, n.o.s. (Potassium permanganate)
Transport hazard class	5.1
Label(s)	II
Environmental Class	
Marine Pollutant	Yes
EmS	F-H, S-Q
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of Marpol 73/78 and IBC Code	Not applicable.

15. REGULATORY INFORMATION

International Inventories
Australia, Canada, China, Europe, Japan, Korea, New Zealand, Philippines, Puerto Rico and United States – Complies.

US Federal Regulations

This product is a "hazardous chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the US EPA TSCA Inventory List. This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. California OSH Hazardous Substance List: Listed.

Drug Enforcement Administration (DEA) (21 CFR 1310.02(b) 8: List II chemical.

Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (6 CFR 28, Appendix A): Listed.

TSCA Section 12 (b) Export Notification (40 CFR 707, Supt.d) Not regulated.
US OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) Not listed.
CERCLA Hazardous Substance Lit (40 CFR 302.4) Potassium permanganate (CAS 7722-64-7) Listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA).

SARA Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazard chemical
Yes

SARA 313 (TRI reporting)
Potassium permanganate, 7722-64-7 - >97.5% of weight.

CWA (Clean Water Act) Section 112(r) (40 CFR 68.130)
Hazardous substance.

Safe Drinking Water Act (SDWA)
Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number – Potassium permanganate (7722-64-7) 6579

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12 (c)) Potassium permanganate (7722-64-7) – 15% wt.

DEA Exempt Chemical Mixtures Code Number – Potassium permanganate (7722-64-7) – 6479

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Potassium permanganate (7722-64-7)

Clean Air Act (CAA) Section 112 (r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

US State Regulations

California Proposition 65
US – California Proposition 65 – Carcinogens & Reproductive Toxicity (CRT): Listed substance. Not Listed.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania/Rhode Island
Potassium Permanganate 7722-64-7	X	X	X X

16. OTHER INFORMATION

NFPA	**Health hazards** 3	**Flammability** 0	**Instability** 0	**Physical and Chemical Properties** -
HMIS	**Health hazards** 3	**Flammability** 0	**Physical hazards** 0	**Personal protection** E

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No Information available

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