

## SAFETY DATA SHEET

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers

Product name Potassium permanganate

CAS number 7722-64-7

Synonyms Potassium Manganate

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses Reagent, oxidizing agent, laboratory chemicals

#### 1.3 Details of the supplier of the safety data sheet

Company Lab Alley, LLC  
12501 Pauls Valley Road  
Austin, Texas 78737  
U.S.A.

Telephone 512-668-9918

Fax 512-886-4008

#### 1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Oxidizing solids	Category 2
Acute oral toxicity	Category 4
Skin Corrosion/Irritation	Category 1C
Serious Eye Damage/Eye Irritation	Category 1C
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system, Central nervous system (CNS).	

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

May intensify fire; oxidizer. Harmful if swallowed. May cause respiratory irritation. Cause severe skin burns and eye damage.

Precautionary statements:

Prevention

Wash face, hand and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep/Store away from clothing/other combustible materials. Take any precaution to avoid mixing with combustibles. Wear protective gloves/protective clothing/eye protection/face protection.

Response

Get medical attention/advice if you feel unwell.

Inhalation

IF INHALE: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you unwell. Rinse mouth.

Fire

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction.

Storage

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal

Dispose of contents/container to an approved waste disposal plant.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Very toxic to aquatic life with long lasting effects.

## SECTION 3: Composition/information on ingredients

### 3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Potassium permanganate	Potassium manganate	7722-64-7	>95%

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

General advice

<b>If inhaled</b>	Move to fresh air. If breathing is difficult, give oxygen. Call a physician or Poison Control Center immediately. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induct artificial respiration with a respiratory medical device.
<b>In case of skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.
<b>In case of eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing.
<b>If swallowed</b>	Immediate medical attention is required. Do not induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.

#### 4.2 Most important symptoms and effects, both acute and delayed

Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes sever swelling, sever damage to the delicate tissue and danger of perforation.

#### 4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

**Suitable extinguishing media** CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam

**Unsuitable extinguishing media** No information available.

#### 5.2 Specific hazards arising from the substance or mixture

The product causes burns of eyes, skin and mucous membranes. Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc). Potassium oxides, heavy metal oxides.

#### 5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

#### 5.4 Further information

**Flash Point** No information available.

**Autoignition Temperature** No information available.

**Explosion limits**

<b>Upper</b>	No data available.
<b>Lower</b>	No data available.
<b>Sensitivity to Mechanical Impact</b>	No information available.
<b>Sensitivity to Static Discharge</b>	No information available.

**NFPA**

Health	Flammability	Instability	Physical hazards
3	0	2	OX

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Evacuate personnel to safe areas. Avoid contact with skin, eyes and clothing.

### 6.2 Environmental precautions

Should not be released into the environment. Do not allow material to contaminate ground water system. See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

### 6.3 Methods and materials for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal.

### 6.4 Reference to other sections

See section 2 for full list of hazard and precaution statements.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Precautions on safe handling

Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe dust. Do not ingest. Keep away from clothing and other combustible materials.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Do not store near combustible materials.

#### Incompatibilities

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Potassium permanganate	PEL	5 mg/m <sup>3</sup>

#### US. ACGIH Threshold Limit Values

Component	Type	Value
Potassium permanganate	TWA	0.02 mg/m <sup>3</sup>
	TWA	0.1 mg/m <sup>3</sup>

#### US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Potassium permanganate	IDLH	500 mg/m <sup>3</sup>
	TWA	1 mg/m <sup>3</sup>
	STEL	3 mg/m <sup>3</sup>

#### Biological occupational exposure limits

No information available.

### 8.2 Exposure controls

#### Appropriate engineering controls

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

#### Personal protective equipment

##### Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as describes by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

##### Skin and body protection

Long sleeved clothing.

##### Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or symptoms are experienced.

##### Control of environmental exposure

No information available.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical State	Solid Powder
Appearance	Dark brown
Odor	Odorless
Odor Threshold	No information available.
pH	8 (16 g/l @ 20 °C)
Melting Point/Range	240 °C / 464 °F
Boiling Point/Range	No information available.
Evaporation Rate	No information available.
Flammability (solid)	No information available.
Flammability or explosive limit	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Density	No information available
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No information available
Decomposition Temp	240 °C
Viscosity	Not applicable
Molecular Formula	KMnO4
Molecular Weight	158.04
VOC Content(%)	No information available
Oxidizing properties	Oxidizer

### 9.2 Other safety information

No information available.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Yes

### 10.2 Chemical stability

Stable under normal conditions. Oxidizer. Contact with combustible/organic material may cause fire.

### 10.3 Possibility of hazardous reactions

None under normal processing.

### 10.4 Conditions to avoid

Incompatible products. Excess heat. Combustible material.

### 10.5 Incompatible materials

Reducing agents, strong acids, strong reducing agents, combustible material

## 10.6 Hazardous decomposition products

Potassium oxides, heavy metal oxides

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Product Information, Component Information

##### Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium permanganate	750 mg/kg (rat)	Not listed	Not listed

##### Skin corrosion/irritation

Causes severe irritation and or burns.

##### Serious eye damage/eye irritation

No information available

##### Respiratory or skin sensitization

No information available.

##### Germ cell mutagenicity

No information available.

##### Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Potassium permanganate	7722-64-7	Not listed	Not listed	Not listed	Not listed	Not listed

##### Specific target organ toxicity - single exposure

Respiratory system, Central nervous system (CNS)

##### Specific target organ toxicity - repeated exposure

None known

##### Reproductive toxicity

No information available

##### Chronic effects

No information available.

### 11.2 Additional Information

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, sever damage to the delicate tissue and danger of perforation.

## SECTION 12: Ecological information

## 12.1 Toxicity

Product		Species	Test Results
Potassium permanganate	LC50	Freshwater Fish	2.97 - 3.11 mg/L 96 h 3.16 - 3.77 mg/L 96 h 3.3 - 3.93 mg/L 96 h 2.3 mg/L mg/L 96 h 0.769 - 1.27 mg/L 96 h 1.08 - 1.38 mg/L 96 h 1.8 - 5.6 mg/L 96 h 2.7 mg/L 96 h

## 12.2 Persistence and degradability

May persist based on information available.

## 12.3 Bio accumulative potential

No information available.

## 12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility.

## 12.5 Results of PBT and vPvB assessment

No information available

## 12.6 Endocrine disrupting properties

No information available.

## 12.7 Other adverse effects

See actual entry in RTECS for complete information.

## SECTION 13: Disposal considerations

### 13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## SECTION 14: Transport information

### DOT (US)

UN-No

UN1490

Proper Shipping Name

POTASSIUM PERMANGANATE

Hazard Class

5.1

Packing Group

II

### IMDG



**UN-No** UN1490  
**Proper Shipping Name** POTASSIUM PERMANGANATE  
**Hazard Class** 5.1  
**Packing Group** II

**IATA**

**UN-No** UN1490  
**Proper Shipping Name** POTASSIUM PERMANGANATE  
**Hazard Class** 5.1  
**Packing Group** II

**SECTION 15: Regulatory information**

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not listed

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Listed (POTASSIUM PERMANGANATE (7722-64-7)) 100lb

**SARA 304 Emergency release notification**

Not regulated

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous**

Listed (POTASSIUM PERMANGANATE (7722-64-7))

Acute Health Hazard

Reactive Hazard

**SARA 313 (TRI reporting)**

Listed (POTASSIUM PERMANGANATE (7722-64-7))

Weight: >95%

Threshold Values%: 1.0

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Listed (POTASSIUM PERMANGANATE (7722-64-7))

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act**

Listed (POTASSIUM PERMANGANATE (7722-64-7)) 100lb

**FEMA Priority Substances Respiratory Health and Safety in the Flavor  
Manufacturing Workplace**

Not listed

**US state regulations**

**US. Massachusetts RTK - Substance List**

Listed (POTASSIUM PERMANGANATE (7722-64-7))

**US. New Jersey Worker and Community Right-to-Know Act**

Listed (POTASSIUM PERMANGANATE (7722-64-7))

**US. Pennsylvania Worker and Community Right-to-Know Law**

Listed (POTASSIUM PERMANGANATE (7722-64-7))

**California Proposition 65**

Not listed

**SECTION 16: Other information**

Issue date: 10/23/2009

Revision 1: 07/20/2022

Revision 2: 07/17/2024

**SECTION 17: Disclaimer**

The information provided on 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 a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.