



**WATER SPECIALIST SUPPLY CO.,LTD.**

Call : 034-440-851-3, 095-367-5790

Sales : 089-695-8181, 083-705-1000, 089-160-6121

## MATERIAL SAFETY DATA SHEET

### POTASSIUM PERMANGANETE

#### PRODUCT: POTASSIUM PERMANGANETE

#### SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**WATER SPECIALIST SUPPLY CO.,LTD.**

78/7 Moo4 Khae Rai, Krathum Baen, Samut Sakhon 74110

Call (+66) 34-440-851 to 3 , (+66) 95-367-5790

Fax (+66) 34-440-851 to 3 ext.105

Email : Water\_wss@hotmail.com

PREPARED BY..... Water Specialist Supply CO.,LTD

PREPARATION DATE..... 23/August/16

PRODUCT NAME.....Potassium Permanganate.

CHEMICAL FORMULA.....KMnO<sub>4</sub>.

OTHER NAME.....Chameleon mineral,Condy's crystals  
Permanganate of potash,Hypermangan

MOLECULAR WEIGHT.....158.034 g/mol

CHEMICAL FAMILY.....Inorganic Chemical Compound.

PRODUCT USE.....Oxidant, Bleaching agent, Reagent  
Disinfectant,Deodorizer,Algicide  
Dyestuff/pigment: component  
Medicine, Laboratory chemical  
Food industry: additive Insecticide  
Germicide

EMERGENCY PHONE NO.....(+66)34-440-851 to 3 or (+66)95-367-5790

## SECTION 02 : COMPOSITION/INFORMATION ON INGREDIENT

Content Ingredients %	Hazardous	C.A.S.#
Potassium Permanganate 100%	YES	7722-64-7

Toxicological Data on Ingredients: Potassium permanganate,  
Biotech: ORAL (LD50): Acute: 1090 mg/kg [Rat]. 2157 mg/kg [Mouse].

## SECTION 03: HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

**Danger! Strong oxidizer.** Contact with other material may cause a fire. May be harmful if swallowed. May cause severe respiratory tract irritation with possible burns. May cause severe digestive tract irritation with possible burns. Causes severe eye and skin irritation with possible burns. Target Organs: Central nervous system, lungs, respiratory system, gastrointestinal system, eyes, skin.

#### **Potential Health Effects**

##### **Eye Contact:**

Causes severe eye irritation and possible burns. May cause chemical conjunctivitis and corneal damage.

##### **Skin Contact:**

Causes skin irritation and possible burns.

##### **Ingestion:**

May cause liver and kidney damage. May cause perforation of the digestive tract. May cause central nervous system effects. In high doses, manganese may increase anemia by interfering with iron absorption.

##### **Inhalation:**

early effects on the CNS and the lungs may occur is still unknown. However, once neurological signs are present, they tend to continue and worsen after exposure ends. Extreme exposures could result in a build-up of fluid in the lungs (pulmonary edema) that might be fatal in severe cases.

##### **Chronic :**

Chronic inhalation or ingestion may result in manganism characterized by neurological symptoms such as Chronic: headache, apathy, and weakness of the legs, followed by psychosis and neurological symptoms similar to those of Parkinson's disease. Other chronic effects from inhaling high amounts of manganese include an increased incidence of cough and bronchitis and susceptibility to infectious lung disease.

## SECTION 04 : FIRST AID MEASURES

### **Eye contact:**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

### **Skin Contact:**

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse. NOTE: Contaminated clothing may be a fire hazard.

### **Ingestion :**

If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

### **Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**NOTE:** Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

## SECTION 05 : FIRE FIGHTING MEASURES

### **General Information:**

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Water runoff can cause environmental damage. Dike and collect water used to fight fire. Strong oxidizer. Contact with other material may cause fire. Some oxidizers may react explosively with hydrocarbons (fuel). May accelerate burning if involved in a fire. Containers may explode when heated.

### **Extinguishing Media:**

Use large quantities of water. Do not use dry chemicals, CO<sub>2</sub>, Halon or foams.

**Autoignition Temperature:** Not applicable. **Flash Point Explosion:** Not applicable.  
**Explosion Limits: Lower:** Not available. **Explosion Limits: Upper:** Not available.  
**NFPA Rating:** ; instability: OX

## SECTION 06 : ACCIDENTAL RELEASE MEASURES

### General Information:

Use proper personal protective equipment as indicated in Section 8.

### Spills/Leaks:

Vacuum or sweep up material and place into a suitable disposal container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Do not use combustible materials such as paper towels to clean up spill.

## SECTION 07 : HANDLING AND STORAGE

### Storage :

Do not store near combustible materials. Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from strong acids. Keep away from flammable liquids. Keep away from reducing agents. Avoid storage on wood floors.

### Handling :

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Keep from contact with clothing and other combustible materials. Discard contaminated shoes. Do not breathe dust. Do not breathe spray or mist. Inform laundry personnel of contaminant's hazards.

## SECTION 08 : EXPOSE CONTROL/PERSONAL PROTECTION

### OSHA Vacated PELs: Potassium permanganate: None listed Engineering Controls:

Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

### Exposure Limits

### Personal Protective Equipment

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

**Skin:** Wear appropriate protective gloves to prevent skin exposure.



Clothing:Wear appropriate protective clothing to prevent skin exposure.

Respirators:A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Potassium permanganate	0.2 mg/m <sup>3</sup> TWA (as Mn) (listed under Manganese,inorganic compounds).	1 mg/m <sup>3</sup> TWA (as Mn) (listed under Manganese compounds,n.o.s.). 500 mg/m <sup>3</sup> IDLH (as Mn) (listed under   Manganese compounds,n.o.s.).	5 mg/m <sup>3</sup> Ceiling (as Mn) (listed under Manganese compounds,n.o.s.).

## SECTION 09 :PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	Crystals
<b>Colour:</b>	dark purple - bronze
<b>Odor:</b>	odorless
<b>pH:</b>	7-9 (20 g/l H <sub>2</sub> O)
<b>Vapor Pressure:</b>	Negligible
<b>Vapor Density:</b>	Not available
<b>Evaporation Rate:</b>	Not available
<b>Viscosity:</b>	Not available
<b>Boiling Point:</b>	Not applicable
<b>Melting Point:</b>	240 °C (464 °F; 513 K) (decomposes)
<b>Solubility in water:</b>	6.4 g/100 ml @ 20 °C
<b>Specific Gravity/Density:</b>	2.700 g/cm <sup>3</sup>
<b>Molecular Formula:</b>	KMnO <sub>4</sub>
<b>Molecular Weight:</b>	158.03

## SECTION 10:STABILITY AND REACTIVITY

### **Stability:**

Stable at normal temperatures and pressure.

### **Conditions to Avoid :**

Dust generation, temperatures above 150°C.

### **Incompatibilities :**

Strong reducing agents, strong acids, alcohols, formaldehyde, peroxides, arsenites, mercurous salts, hypophosphites, combustible organics, sulfites, bromides, hydrochloric acid, charcoal, iodides, metal powders, ethylene glycol, organic materials, some metals, ferrous salts.

### **Hazardous Decomposition:**

Oxygen, oxides of potassium, oxides of manganese.

### **Hazardous Polymerization :**

Will not occur.

## SECTION 11 : TOXICOLOGICAL INFORMATION

### **RTECS#:**

CAS# 7722-64-7: SD6475000

RTECS:

**CAS# 7722-64-7:** Oral, mouse: LD50 = 2157 mg/kg;

### **LD50/LC50:**

Oral, rat: LD50 = 750 mg/kg;Other: The estimated lethal human dose by ingestion is 10 grams, with death being delayed by up to one month: Oral, rat: LD50 = 1090 mg/kg.  
Oral, human: LDLo = 143 mg/kg.

### **Carcinogenicity:**

Potassium permanganate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

**Other:** See actual entry in RTECS for complete information.

## SECTION 12 : ECOLOGICAL CONSIDERATION

### Ecotoxicity Data

### Fish Toxicity

Fish: Channel catfish: LC50 = 0.75 mg/L; 96 Hr; Unspecified

Fish: Goldfish: LC50 = 3.6 mg/L; 24 Hr; Unspecified

Fish: Striped bass: LC50 = 1.5-5.0 mg/L; 24 Hr; Static bioassay

### Other Ecological Information :

Harmful to aquatic life in very low concentrations.

## SECTION 13 : DISPOSAL CONSIDERATION

Dispose of in a manner consistent with federal, state, and local regulations.

## SECTION 14 : TRANSPORT INFORMATION

### US DOT

**Shipping Name:** POTASSIUM PERMANGANATE

**Hazard Class:** 5.1

**UN Number:** UN1490

**Packing Group:** II

### Canada TDG

**Shipping Name:** POTASSIUM PERMANGANATE

**Hazard Class:** 5.1

**UN Number:** UN1490

**Packing Group:** II

**USA RQ:** CAS# 7722-64-7: 100 lb final RQ; 45.4 kg final RQ

## SECTION 15 :REGULATORY INFORMATION

### European/International Regulations

#### European Labeling in Accordance with EC Directives

**Hazard Symbols:** XN O N

**Risk Phrases:**

R 22 Harmful if swallowed.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R 8 Contact with combustible material may cause fire.

**Safety Phrases:**

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

**WGK (Water Danger/Protection) CAS# 7722-64-7: 2**

#### Canada

CAS# 7722-64-7 is listed on Canada's DSL List Canadian WHMIS Classifications: C, E, D1B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 7722-64-7 is listed on Canada's Ingredient Disclosure List

#### US Federal TSCA

CAS# 7722-64-7 is listed on the TSCA Inventory.

## SECTION 16 :OTHER INFORMATION

### Disclaimer :

**Water Specialist Supply(WSS THAILAND) CO.,Ltd provide information contained here in good faith but make no representation as to its comprehensiveness or accuracy.This document is intended only as a guide to the appropriate precautionary handing of the material by a properly trained person using this product.Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.**