

# SAFETY DATA SHEET

Date Printed: 05/09/2024

Date Revised: 01/15/2022

## SECTION 1. IDENTIFICATION

**Product Identifier:** (4N) 99.99% Potassium Permanganate Solution

**Product Code:** K-PMNO-04-SOL

**CAS Number:** 7722-64-7

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word Warning

Hazard statement(s)

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P273 Avoid release to the environment.

P391 Collect spillage.

P501 Dispose of contents/ container to an approved waste disposal plant.

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

---

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

Molecular weight : 158.03 g/mol

Hazardous components

Component Classification Concentration

Potassium permanganate

CAS-No.

EC-No.

Index-No.

7722-64-7

231-760-3

025-002-00-9

Ox. Sol. 2; Acute Tox. 4; Skin

Corr. 1B; Eye Dam. 1; Aquatic

Acute 1; Aquatic Chronic 1;

H272, H302, H314, H410

>= 1 - < 5 %

---

## SECTION 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

General advice

Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

---

## SECTION 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Potassium oxides, Manganese/manganese oxides

### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 5.4 Further information

No data available

---

## SECTION 6. ACCIDENTAL RELEASE MEASURES

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

Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment

must be avoided.

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

Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

---

## SECTION 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

For precautions see section 2.2.

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

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully

resealed and kept upright to prevent leakage.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

---

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Components with workplace control parameters

Component / CAS-No.

Value / Control parameters / Basis

Potassium permanganate 7722-64-7 C

5.000000 mg/m<sup>3</sup> USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

Remarks Ceiling limit is to be determined from breathing-zone air samples.

TWA "0.200000 mg/m<sup>3</sup>" "USA. ACGIH Threshold Limit Values (TLV)"

"Central Nervous System impairment

Adopted values or notations enclosed are those for which changes are proposed in the NIC

See Notice of Intended Changes (NIC)

varies"

TWA 1.000000 mg/m<sup>3</sup> "USA. NIOSH Recommended Exposure Limits"

ST "3.000000 mg/m<sup>3</sup>" "USA. NIOSH Recommended Exposure Limits"

TWA "0.100000 mg/m<sup>3</sup>" "USA. ACGIH Threshold Limit Values (TLV)"

"Central Nervous System impairment 2014 Adoption varies"

TWA "0.020000 mg/m<sup>3</sup>" "USA. ACGIH Threshold Limit Values (TLV)"

"Central Nervous System impairment 2014 Adoption varies"

C 5 mg/m<sup>3</sup> "USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants"

Ceiling limit is to be determined from breathing-zone air samples.

TWA 0.1 mg/m<sup>3</sup> "USA. ACGIH Threshold Limit Values (TLV)"

Central Nervous System impairment varies

TWA 0.02 mg/m<sup>3</sup> "USA. ACGIH Threshold Limit Values (TLV)"

Central Nervous System impairment varies

TWA 1 mg/m<sup>3</sup> "USA. NIOSH Recommended Exposure Limits"

ST 3 mg/m<sup>3</sup> "USA. NIOSH Recommended Exposure Limits"

## 8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as

NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without

touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after

use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Impervious clothing, The type of protective equipment must be selected according to the concentration and

amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN

14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

---

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

a) Appearance Form: liquid

b) Odor No data available

c) Odor Threshold No data available

d) pH No data available

e) Melting point/freezing point

Melting point/range: No data available

f) Initial boiling point and boiling range

No data available

g) Flash point N/A

h) Evaporation rate No data available

i) Flammability (solid, gas) No data available

j) Upper/lower flammability or explosive limits

No data available

k) Vapor pressure No data available

l) Vapor density No data available

m) Relative density 2.710 g/cm<sup>3</sup>

n) Water solubility No data available  
o) Partition coefficient: noctanol/ water  
No data available  
p) Auto-ignition temperature  
No data available  
q) Decomposition temperature  
No data available  
r) Viscosity No data available  
s) Explosive properties No data available  
t) Oxidizing properties The substance or mixture is classified as oxidizing with the category 2.  
9.2 Other safety information  
No data available

---

## **SECTION 10. STABILITY AND REACTIVITY**

10.1 Reactivity  
No data available  
10.2 Chemical stability  
Stable under recommended storage conditions.  
10.3 Possibility of hazardous reactions  
No data available  
10.4 Conditions to avoid  
No data available  
10.5 Incompatible materials  
Zinc, Powdered metals, Peroxides, Copper, Strong reducing agents  
10.6 Hazardous decomposition products  
Other decomposition products - No data available  
In the event of fire: see section 5

---

## **SECTION 11. TOXICOLOGICAL INFORMATION**

11.1 Information on toxicological effects  
Acute toxicity  
No data available  
Inhalation: No data available  
Dermal: No data available  
No data available  
Skin corrosion/irritation  
No data available  
Serious eye damage/eye irritation  
No data available  
Respiratory or skin sensitisation  
No data available  
Germ cell mutagenicity  
No data available  
Carcinogenicity  
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.  
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a

known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: Not available

Men exposed to manganese dusts showed a decrease in fertility. Chronic manganese poisoning primarily involves the

central nervous system. Early symptoms include languor, sleepiness and weakness in the legs. A stolid mask-like

appearance of the face, emotional disturbances such as uncontrollable laughter and a spastic gait with tendency to fall

in walking are findings in more advanced cases. High incidence of pneumonia has been found in workers exposed to

the dust or fume of some manganese compounds., To the best of our knowledge, the chemical, physical, and

toxicological properties have not been thoroughly investigated.

---

## **SECTION 12. ECOLOGICAL INFORMATION**

12.1 Toxicity

No data available

12.2 Persistence and degradability:

No data available

12.3 Bioaccumulative potential:

No data available

12.4 Mobility in soil:

No data available

12.5 Results of PBT and vPvB assessment:

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life

---

## **SECTION 13. DISPOSAL CONSIDERATIONS**

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

---

## SECTION 14. TRANSPORT INFORMATION

DOT (US)

Not dangerous goods

IMDG

UN number: 3082 Class: 9 Packing group: III EMS-No: F-A, S-F

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Potassium permanganate)

Marine pollutant:yes

IATA

UN number: 3082 Class: 9 Packing group: III

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Potassium permanganate)

Further information

EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

---

## SECTION 15. REGULATORY INFORMATION

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Potassium permanganate

CAS-No.

7722-64-7

Revision Date

1993-04-24

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

Potassium permanganate

CAS-No.

7722-64-7

Revision Date

1993-04-24

Pennsylvania Right To Know Components

Water

CAS-No.

7732-18-5

Revision Date

Potassium permanganate 7722-64-7 1993-04-24

New Jersey Right To Know Components

Water

CAS-No.

7732-18-5

Revision Date

Potassium permanganate 7722-64-7 1993-04-24

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth

defects, or any other  
reproductive harm.

---

## **16. OTHER INFORMATION**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.