



<a href="#">Sodium Permanganate Monohydrate</a>		<a href="#">Pricing &gt;</a>
Linear Formula	NaMnO <sub>4</sub> •H <sub>2</sub> O	
Pubchem CID	16211609	
MDL Number	MFCD00149165	
EC No.	233-251-1	
IUPAC Name	permanganic acid; sodium; hydrate	
Beilstein/Reaxys No.	N/A	
SMILES	[Na+].[O-][Mn](=O)(=O)=O.O	
Inchl Identifier	InChI=1S/Mn.Na .H2O.4O/h;;1H2;;;/q;+1;;;;;-1	
Inchl Key	DJKJCISMVZLEDS-UHFFFAOYSA-N	
Signal Word	Danger	
Hazard Statements	H272-H314	
Hazard Codes	O, C	
Risk Codes	8-34	
Safety Statements	17-26-36/37/39-45	
RTECS Number	N/A	
Transport Information	UN 1503 5.1/PG II	
WGK Germany	3	
GHS Pictograms	<p><a href="#">GHS03</a> <a href="#">Oxidizer</a></p>  <p><a href="#">GHS05</a> <a href="#">Corrosive</a></p> 	

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## SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #79048-36-5

**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:  
Domestic, North America +1 800-424-9300  
International +1 703-527-3887

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## 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), H272  
Skin corrosion (Category 1B), H314  
Serious eye damage (Category 1), H318  
2.2 GHS Label elements, including precautionary statements  
Pictogram



Signal word Danger  
Hazard statement(s)  
H272 May intensify fire; oxidizer.  
H314 Causes severe skin burns and eye damage.  
Precautionary statement(s)  
P210 Keep away from heat.  
P220 Keep/Store away from clothing/ combustible materials.  
P221 Take any precaution to avoid mixing with combustibles.  
P260 Do not breathe dust or mist.  
P264 Wash skin thoroughly after handling.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.  
P305 + P351 + P338 + P310  
IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.  
P363 Wash contaminated clothing before reuse.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.  
P405 Store locked up.  
P501 Dispose of contents/ container to an approved waste disposal plant.  
2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Mixtures  
Formula:  $\text{MnNaO}_4 \cdot \text{H}_2\text{O}$   
Molecular weight: 159.94 g/mol  
Hazardous components  
Sodium permanganate  
CAS No. 79048-36-5  
EC No. 233-251-1

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### **SECTION 4. FIRST AID MEASURES**

4.1 Description of first aid measures  
General advice  
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.  
If inhaled  
If breathed in, move person into fresh air. If not breathing, give artificial respiration.  
Consult a physician.  
In case of skin contact  
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

Do NOT induce vomiting. 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) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

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## **SECTION 5. FIREFIGHTING MEASURES**

5.1 Extinguishing media

Suitable extinguishing media

Dry powder Dry sand

5.2 Special hazards arising from the substance or mixture

Sodium oxides, Manganese/manganese oxides  
Combustible.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in

container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

#### 6.4 Reference to other sections

For disposal see section 13.

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## **SECTION 7. HANDLING AND STORAGE**

### 7.1 Precautions for safe handling

Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition.

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.

hygroscopic Handle under nitrogen, protect from moisture. Moisture sensitive.

Storage class (TRGS 510): 5.1B: Oxidizing hazardous materials

### 7.3 Specific end use(s)

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

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### 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

Face shield and safety glasses 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

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Control of environmental exposure

Do not let product enter drains.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

a) Appearance Form: crystalline

Colour: dark brown

b) Odour No data available

c) Odour Threshold No data available

d) pH No data available

e) Melting

point/freezing point

No data available

f) Initial boiling point

and boiling range

No data available

g) Flash point ( )Not applicable

h) Evaporation rate No data available

i) Flammability (solid, gas)

The product is not flammable.

j) Upper/lower

flammability or

explosive limits

No data available

k) Vapour pressure No data available

l) Vapour density No data available

m) Relative density No data available  
n) Water solubility No data available  
o) Partition coefficient:  
n-octanol/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

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## **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  
Strong reducing agents, Powdered metals, Strong  
acids, Organic materials  
10.6 Hazardous decomposition products  
Hazardous decomposition products formed under fire  
conditions. - Sodium oxides,  
Manganese/manganese oxides  
Other decomposition products - No data available  
In the event of fire: see section 5

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## **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.  
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 on OSHA's list of regulated carcinogens.  
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., Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache  
Stomach - Irregularities - Based on Human Evidence  
Stomach - Irregularities - Based on Human Evidence

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## **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  
No data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

13.1 Waste treatment methods  
Product  
Offer surplus and non-recyclable solutions to a  
licensed disposal company. Burn in a  
chemical incinerator equipped with an afterburner and  
scrubber but exert extra care in  
igniting as this material is highly flammable. Contact a  
licensed professional waste  
disposal service to dispose of this material. Dissolve  
or mix the material with a  
combustible solvent and burn in a chemical  
incinerator equipped with an afterburner and  
scrubber.  
Contaminated packaging  
Dispose of as unused product.

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## **SECTION 14. TRANSPORT INFORMATION**

DOT (US)  
UN number: 1503 Class: 5.1 Packing group: II  
Proper shipping name: Sodium permanganate  
Reportable Quantity (RQ):  
Poison Inhalation Hazard: No  
IMDG  
UN number: 1503 Class: 5.1 Packing group: II EMS-  
No: F-H, S-Q  
Proper shipping name: SODIUM PERMANGANATE  
IATA  
UN number: 1503 Class: 5.1 Packing group: II  
Proper shipping name: Sodium permanganate

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## **SECTION 15. REGULATORY INFORMATION**

SARA 302 Components  
This material does not contain any components with a

section 302 EHS TPQ.  
SARA 313 Components  
The following components are subject to reporting  
levels established by SARA Title III,  
Section 313:  
Sodium permanganate  
CAS-No.  
79048-36-5  
Revision Date  
1994-07-31  
SARA 311/312 Hazards  
Reactivity Hazard, Acute Health Hazard, Chronic  
Health Hazard  
Massachusetts Right To Know Components  
No components are subject to the Massachusetts  
Right to Know Act.

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## **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.

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