SAFETY DATA SHEET

Date Printed: 05/08/2024
Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifier: (3N) 99.9% Sodium Permanganate Solution

Product Code: NA-PMNO-03-SOL

CAS Number: 10101-50-5

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:
+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

,Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Oxidizing liquids (Category 2), H272
Acute toxicity, Oral (Category 4), H302
Skin corrosion (Category 1B), H314
Serious eye damage (Category 1), H318
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.,

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

,Mixtures
Formula: MnNaO4
Molecular weight: 141.93 g/mol
Hazardous components
Sodium permanganate
CAS No. 10101-50-5
EC No. 233-251-1

Ox. Sol. 2; Acute Tox.4; Skin Corr. 1B; Eye Dam.1; Aquatic Acute1; Aquatic Chronic 1; H272, H302, H314, H410
Concentration: <100%,

SECTION 4. FIRST AID MEASURES

,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.
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
Indication of any immediate medical attention and special treatment needed
No data available,

SECTION 5. FIREFIGHTING MEASURES

,Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special hazards arising from the substance or mixture
Sodium oxides, Manganese/manganese oxides
Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.
Further information
Use water spray to cool unopened containers.,

SECTION 6. ACCIDENTAL RELEASE MEASURES

,Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
Evacuate personnel to safe areas.
For personal protection see section 8.
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.
Methods and materials for containment and cleaning up

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).
Reference to other sections
For disposal see section 13,

SECTION 7. HANDLING AND STORAGE

,Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition.
For precautions see section 2.2.
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.
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

,Components with workplace control parameters
Sodium permanganate
CAS-No. 10101-50-5
Value: C
Control Parameters: 5.000000 mg/m3
Basis: USA. Occupational Exposure Limits (OSHA) -Table Z-1 Limits for Air Contaminants
Remarks: Ceiling limit is to be determined from breathing-zone air samples.
Value: TWA
Control Parameters: 0.200000 mg/m3
Basis: USA. ACGIH Threshold Limit Values (TLV)
Remarks: 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
Value: TWA
Control Parameters: 1.000000 mg/m3
Basis: USA. NIOSH Recommended Exposure Limits
Value: ST
Control Parameters: 3.000000 mg/m3
Basis: USA. NIOSH Recommended Exposure Limits
Value: TWA
Control Parameters: 0.100000 mg/m3
Basis: USA. ACGIH Threshold Limit Values (TLV)
Remarks: Central Nervous System impairment 2015 Adoption varies
Value: C
Contol Parameters: 5 mg/m3
Basis: USA. Occupational Exposure Limits (OSHA) -Table Z-1 Limits for Air Contaminants
Remarks: Ceiling limit is to be determined from breathing-zone air samples.
Value: TWA
Control Parameters: 0.1 mg/m3
Basis: USA. ACGIH Threshold Limit Values (TLV)
Remarks: Central Nervous System impairment Not classifiable as a human carcinogen varies

Value: TWA
Control Parameters: 0.02 mg/m3
Basis: USA. ACGIH Threshold Limit Values (TLV)
Remarks: Central Nervous System impairment Not classifiable as a human carcinogen varies
Value: TWA
Control Parameters: 1 mg/m3
Basis: USA. NIOSH Recommended Exposure Limits
Value: ST
Control Parameters: 3 mg/m3
Basis: USA. NIOSH Recommended Exposure Limits
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
Tightly fitting safety goggles. Faceshield (8-inch minimum). 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.
Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)
data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected ac cording 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 full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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 - 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

,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
No data available
f)Initial boiling point and boiling range
100 °C (212 °F)
g)Flash point
No data available
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 - 1.391 g/cm3
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
No data available
Other safety information
No data available,

SECTION 10. STABILITY AND REACTIVITY

,Reactivity
No data available
Chemical stability
Stable under recommended storage conditions.
Possibility of hazardous reactions

No data available
Conditions to avoid
No data available
Incompatible materials
Powdered metals, Strong oxidizing agents, Strong acids, Organic materials, Strong reducing agents
Hazardous decomposition products
Other decomposition products-No data available
In the event of fire: see section 5,

SECTION 11. TOXICOLOGICAL INFORMATION

,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 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., Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache
Stomach-Irregularities-Based on Human Evidence
Stomach-Irregularities-Based on Human Evidence (Sodium permanganate),

---

SECTION 12. ECOLOGICAL INFORMATION

,Toxicity
No data available
Persistence and degradability:
No data available
Bioaccumulative potential:
No data available
Mobility in soil:
No data available
Results of PBT and vPvB assessment:
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.,

SECTION 13. DISPOSAL CONSIDERATIONS

,Waste treatment methods
Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this
material is highly flammable.
Offer surplus and non-recyclable solutions to a licensed disposal company.
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.,

SECTION 14. TRANSPORT INFORMATION

,DOT (US)
UN number: 3214 Class: 5.1 Packing group: II
Proper shipping name: Permanganates, inorganic, aqueous solution, n.o.s.(Sodium permanganate)
Reportable Quantity (RQ):
Poison Inhalation Hazard: No
IMDG
UN number: 3214 Class: 5.1 Packing group: II
EMS-No: F-H, S-Q
Proper shipping name: PERMANGANATES, INORGANIC, AQUEOUS SOLUTION, N.O.S. (Sodium permanganate)
Marine pollutant: yes

IATA
UN number: 3214
Class: 5.1 Packing group: II
Proper shipping name: Permanganates, inorganic, aqueous solution, n.o.s. (Sodium permanganate)
,

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:
Sodium permanganate
CAS-No. 10101-50-5
Revision Date
2007-07-01
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.
Pennsylvania Right To Know
Components
Water
CAS-No.7732-18-5
Revision Date 2007-07-01
Sodium permanganate
CAS-No. 10101-50-5
New Jersey Right To Know Components
Water
CAS-No. 7732-18-5
Revision Date 2007-07-01
Sodium permanganate
CAS-No. 10101-50-5
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.
