

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifier:** (5N) 99.999% Silver Permanganate

**Product Code:** AG-PMNO-05

**CAS Number:** 7783-98-4

**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

Hazard Pictograms:



Signal Word: Warning

Hazard Category:

Acute tox, dermal Cat 5

Skin corrosion/irritation Cat 3

Serious eye damage/eye irritation Cat 3

Acute tox, inh. Cat 4

Hazard Statements:

H313: May be harmful in contact w/ skin

H316: Causes mild skin irritation

H320: Causes eye irritation

H332: Harmful if inhaled

Precautionary Statements:

P260: Do not breathe dust/fume/gas/mist/vapors/spray

P264: Wash thoroughly after handling

P270: Do not eat, drink or smoke when using this product

P272: Contaminated work clothing should not be allowed out of the workplace P280: Wear protective gloves/protective clothing/eye protection/face protection P284: Wear respiratory protection

P271: Use only outdoors or in a well-ventilated area

Hazards not otherwise classified:

Chronic/Carcinogenicity Effects:

Long term exposure to silver and silver salts can lead to the condition known as argyria-a general gray pigmentation of the skin and mucous membranes.

Conditions Aggravated By Exposure:

May cause argyria (a slate-gray or bluish discoloration of the skin and deep tissues due to the deposit of insoluble albuminate of silver). May be irritating to skin, eyes and respiratory tract.

Conditions Aggravated By Overexposure:

Symptoms include skin rash, running nose, headache, and irritation of mucous membranes. Silver may discolor the skin. To the best of our knowledge, the chemical, the physical, and toxicological properties of this compound have not been thoroughly investigated.

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous substance (name): Silver Permanganate

Chemical Name: Silver Permanganate

Chemical Formula:  $\text{AgMnO}_4$

Chemical Family: Metal Manganese Compound

Hazard Category: Irritant

CAS#: 7783-98-4

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## SECTION 4. FIRST AID MEASURES

General Info:

Consult a Physician. Show this safety data sheet to the doctor in attendance.

Notable Exposure symptoms: Irritation to skin, eyes and areas of contact. If discomfort occurs or persists, contact a physician

If ingested: Not expected to be a problem in industry. However if swallowed and discomfort occurs, contact a physician.

If inhaled: Remove the victim from the contaminated area while protecting yourself from exposure by wearing an appropriate respirator. Put a similar respirator on the victim if possible. Get medical attention immediately.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do.

Skin contact: Flush area for 15 minutes with water and wash with soap and water. Remove contaminated clothing and shoes and wash before reuse.

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## SECTION 5. FIREFIGHTING MEASURES

General Info: Use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Do not direct a solid stream of water or foam into burning molten material; this may cause spattering and spread the fire.

Extinguishing Method / Equipment: Use carbon dioxide, dry chemical powder, or appropriate foam.

Hazardous Decomposition Info: Can decompose to emit toxic fumes under fire conditions. May accelerate combustion. Contact with other material may cause fire.

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and procedures:

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate respiratory protective equipment and clothing during clean-up. Avoid breathing dust. Ventilate area if easy to do so, Contact local authorities if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Containment Equipment and Procedures:

Large Spills: Contain actively spilling material if safe and easy to do so. Do not let product enter drains. Sweep up and placed in a proper vessel for recovery or disposal. Avoid raising dust. Ventilate and wash spill site after cleanup is complete. Spills can be mixed with Sodium Carbonate or ground limestone and swept up..

Small Spills: Sweep or soak up and place in sealed container. Taking care to avoid dusting. Spills can be mixed with Sodium Carbonate or ground limestone and swept up.

Cleanup Procedures:

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.

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## SECTION 7. HANDLING AND STORAGE

Safe Handling Precautions:

Do not handle until all safety precautions have been read and understood. Keep containers tightly closed Ensure adequate ventilation. Avoid creating and breathing dust/vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment and wash thoroughly after handling. Keep away from ignition sources.

Recommendations for Storage:

Store in cool, dry area in a tightly closed product container away from sources of ignition or flame or combustible material. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Incompatibilities:

Oxidizers, fulminates, ammonia and active metal

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

General / Engineering Controls:

Ventilation: Local Exhaust: Required in handling area

Mechanical: Desirable to insure concentration of material below TLV/TWA levels

Other: Closed Ventilation system - Dust (Laboratory Fume Hood)

Work Clothing:

Protective work clothing which covers skin and prevents exposures.

Eye/face protection:

Wear safety glasses with side shields or goggles or face shield.

Skin Protection:

Wear chemical resistant gloves.

Respiratory Protection:

NIOSH approved chemical cartridge respirator for particulates and dust or self-contained breathing apparatus with full face shield.

Additional Information:

Observe good chemical hygiene practices. Do not smoke or eat while using this product. Wash

hands or exposed skin after using the product.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

State: Powder  
Melting Point: N/A  
Freezing Point: N/A  
Color: Grey  
Boiling Point/Range: N/A  
pH: N/A  
Molecular Wt.: 226.81  
Odor: None  
Water Solubility: N/A  
Specific Gravity: 6.37  
Flash Point: N/A  
Part. Coeff (n octanol/water): N/A  
Upper Flam Limits: N/A  
Lower Flam Limits: N/A  
Vapor Density: N/A  
VOC Content (lbs/gal): N/A  
Viscosity: N/A  
Autoignition Temp: N/A

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## SECTION 10. STABILITY AND REACTIVITY

General:

This product is stable and non-reactive under normal conditions of use. Product is not subject to hazardous polymerization. Avoid open flame and ignition sources.

Stability: Stable

Conditions to Avoid:

Exposure to heat, light, and moisture

Incompatible materials:

Organic materials, finely divided metals, aluminum, steel

Decomposition products:

Nature of decomposition is unknown

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## SECTION 11. TOXICOLOGICAL INFORMATION

General Information:

May cause argyria, a slate gray or bluish discoloration of the skin and deep tissues due to the deposit of insoluble albuminate or silver. Causes eye irritation

To the best of our knowledge the chemical, physical, and toxicological effects of this compound have not been thoroughly investigated.

Toxicological Information (product):

No data available

Likely Routes of Exposure:

Eye Contact

Skin Contact

Inhalation

Ingestion - possible, but considered unlikely.

Toxicological Information (contained substances):

Carcinogenicity or mutagenicity:

To the best of our knowledge the chemical, physical, and toxicological effects of this compound have not been thoroughly investigated.

Sensitization:

Product is not expected to be a sensitizer

Other Notes:

None

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## **SECTION 12. ECOLOGICAL INFORMATION**

General information: No specific data available.

Aquatic toxicity: No specific data available.

Degradation / Mobility info: No specific data available.

Bioaccumulative potential: No specific data available.

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Product disposal:

Place in a sealed container. Consult Federal EPA, State and local regulations for proper disposal/recycle/reclamation

NOTE: Chemical additions, processing, or otherwise altering this material may make the waste management information presented above incomplete, inaccurate, or otherwise inappropriate.

Container disposal:

Treat empty containers with extra care. Consult waste contractor.

Other considerations:

No further information.

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## **SECTION 14. TRANSPORT INFORMATION**

DOT:

Proper Shipping Name:

Permanganates, inorganic, n.o.s.

UN#: 1482

Class: 5.1

Packing Group II

Hazard Label: Oxidizer

PIH: Not PIH

IMO/IMDG:

No data available

IATA:

Same as DOT 49 CFR regulations. Consult IATA before shipping

Comments:

None

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## **SECTION 15. REGULATORY INFORMATION**

TSCA:

This product is TSCA listed.

**SARA:**

This product does not contain any ingredients regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372.

**Canadian DSL:**

All ingredients of this product comply with the New Substances Notification requirements of the Canadian Environmental Protection Act (CEPA).

**European Union (EU) Regulatory Information:**

R8-20/21/22-36 -- Contact with combustible material may cause fire. Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin S16-26-36/37/39.

Avoid contact with skin and eyes S36/37

Wear suitable protective clothing and gloves

**Other International Regulations:**

None

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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.