



HI-VALLEY CHEMICAL

LABORATORY PRODUCTS

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Manganese Dioxide

1 PRODUCT AND COMPANY IDENTIFICATION

Supplier Details: High Valley Products, Inc.
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2 HAZARDS IDENTIFICATION

Classification of Substance

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):
Health, Acute toxicity, 4 Inhalation

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **WARNING**

GHS Hazard Pictograms:



GHS Hazard Statements:

H332 - Harmful if inhaled

GHS Precautionary Statements:

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P271 - Use only outdoors or in a well-ventilated area.
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 - Call a POISON CENTER or doctor/ physician if you feel unwell.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Ingredients		
CAS#	%	Chemical Name
1313-13-9	100%	Manganese oxide (MnO2)

4 FIRST AID MEASURES

Inhalation: If inhaled, remove to fresh air and call a physician for instructions. In case of difficulty breathing, use oxygen assistance. Get medical attention if condition is critical.

Skin Contact: Wash with soap and water. Consult a physician.

Eye Contact: Flush eyes with water as a precaution.

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

5 FIRE FIGHTING 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
No data available

Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

Further information
No data

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Wear respiratory protection. Avoid dust formation. Avoid breathing dust, vapours, mist or gas. Ensure adequate ventilation.

Environmental precautions:

Do not let product enter drains.

Methods and materials for containment and cleaning up:

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7 HANDLING AND STORAGE

Handling Precautions: Avoid contact with eyes, skin, or clothing. Avoid breathing vapors or mist. 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.

Storage Requirements: Keep container tightly closed. Store in cool/dry area.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal Protective Equipment: Manganese oxide (MnO₂) cas#:(1313-13-9) [100%]
Personal protective equipment

Eye/face protection: Safety glasses with side-shields conforming to EN166 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 gloves 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 according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. 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.

Manganese oxide (MnO₂) cas#:(1313-13-9) [100%]

Components with workplace control parameters

CEIL 5 mg/m³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

C 5 mg/m³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

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

C 5 mg/m³ USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000

TWA 0.2 mg/m³ 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 mg/m³ USA. NIOSH Recommended Exposure Limits

ST 3 mg/m³ USA. NIOSH Recommended Exposure Limits

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Powder	Odor:	No data available
Odor Threshold:	No data available	Solubility:	No data available
Particle Size:	No data available	Softening Point:	No data available
Specific Gravity or Density:	5.026 g/cm ³	Freezing or Melting Point:	535 °C (995 °F) - dec
Viscosity:	No data available	Flash Point:	No data available
Boiling Point:	No data available	Volatile organic compound:	No data available
Flammability:	No data available	Upper Flammability Limit and Lower Flammability Limit:	No data available
Partition Coefficient:	No data available		
Potentia Hydrogenii:	No data available		
Evaporation Rate:	No data available		

10 STABILITY AND REACTIVITY

Reactivity:	No data available
Chemical Stability:	Stable under recommended storage conditions.
Conditions to Avoid identification:	No data available
Materials to Avoid identification:	Strong Acids; Strong reducing agents, Organic materials

Manganese oxide (MnO₂) cas#:(1313-13-9) [100%]

Information on toxicological effects

Acute toxicity:

LD50 Oral - rat - > 3,478 mg/kg

Inhalation: no data available

Dermal: 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

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: OP0350000

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.

Liver - Irregularities - Based on Human Evidence

Manganese oxide (MnO₂) cas#:(1313-13-9) [100%]

Information on ecological effects

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: no data available

13 **DISPOSAL CONSIDERATIONS**

Dispose of in accordance with local regulations.

14 **TRANSPORT INFORMATION**

Non DOT regulated

15 **REGULATORY INFORMATION**

Component (CAS#) [%] - CODES

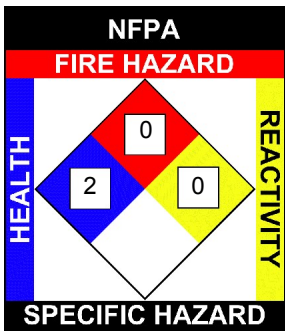
Manganese oxide (MnO₂) (1313-13-9) [100%] TSCA

Regulatory CODE Descriptions

TSCA = Toxic Substances Control Act

16 **OTHER INFORMATION**

NFPA: Health = 2, Fire = 0, Reactivity = 0, Specific Hazard = n/a
HMIS III: Health = 2(Chronic), Fire = 0, Physical Hazard = 0



HMIS	
HEALTH	<input checked="" type="checkbox"/> 2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	<input type="checkbox"/>

Disclaimer:

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