

Material Safety Data Sheet

SECTION 1 – CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: Greensand

Part Number: multiple

Chemical Family: mixture

Manufacturer's Name: Siemens Industry, Inc. - Water Technologies Business Unit

Address: 4669 Shepherd Trail, Rockford, IL 61103

Product/Technical Information Phone Number: (815) 877-3041

Medical/Handling Emergency Phone Number: Call CHEMTREC at (800) 424-9300
24 hours a day

Transportation Emergency Phone Number: Call CHEMTREC at (800) 424-9300
24 hours a day

Issue Date: May 15, 2000

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SECTION 2 – COMPOSITION INFORMATION

<u>Chemical Name</u>	<u>Percent by Weight</u>	<u>CAS#</u>
Manganese oxide*	0.5	1313-13-9

*No other ingredients are considered hazardous per OSHA's Hazard Communication Standard (29CFR1900.1200).

SECTION 3 – HAZARDS IDENTIFICATION

Appearance & Odor: Black granular sand-like; no odor

Emergency Overview: Dust may cause irritation to the eyes and respiratory tract.

Fire & Explosion Hazards: There are no known fire or explosion hazards.

Primary Route(s) of Exposure: skin and eye contact, inhalation

Inhalation – Acute Effects: Dust may be irritating to the respiratory tract and cause coughing or sneezing.

Skin Contact – Acute Effects: No adverse effects expected.

Eye Contact – Acute Effects: Dust that contacts eyes may be irritating or cause mechanical injury.

Ingestion – Acute Effects: Ingestion may be irritating to the gastrointestinal tract.

SECTION 4 – FIRST AID MEASURES

Inhalation First Aid: Remove affected person from area to fresh air and provide oxygen if breathing is difficult. Give artificial respiration ONLY if breathing has stopped and give CPR ONLY if there is no breathing and no pulse. Obtain medical attention.

Skin Contact First Aid: Immediately remove clothing from affected area and wash skin vigorously with flowing water and soap. Clothing should be washed before reuse.

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Eye Contact First Aid: Immediately irrigate eyes with flowing water continuously for 15 minutes while holding eyes open. Contacts should be removed before or during flushing. Seek medical assistance if irritation develops. DO NOT instruct person to neutralize.

Ingestion First Aid: If victim is alert and not convulsing rinse mouth with water and give plenty of water to drink. If spontaneous vomiting occurs, have affected person lean forward with head down to avoid breathing in of vomitus. Rinse mouth again and give more water to drink. Obtain medical attention.

Medical Conditions Aggravated: Persons with impaired respiratory function, psychiatric or neurological disturbances, and nutritional deficiencies may be more susceptible to the effect of Manganese oxide.

Note to Physician: Treat patient symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

Flash Point/Method: Non flammable.

Auto Ignition Temperature: Not applicable.

Upper/Lower Explosion Limits: Not applicable.

Extinguishing Media: Use media appropriate for surrounding fire.

Fire Fighting Procedures: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Fire & Explosion Hazards: There are no known fire or explosion hazards.

Hazardous Products of Decomposition and/or Combustion: Toxic metal fumes may form when heated to decomposition.

NFPA Ratings:

HEALTH- 1 FLAMMABILITY- 0 REACTIVITY- 0 OTHER- none

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Clean up spills in a manner that does not disperse dust into the air. Sweep up and place material in a suitable container for reclamation or disposal. Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure, and removal of material from eyes, skin, and clothing.

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State, Local and Provincial laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

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SECTION 7 – HANDLING AND STORAGE

Handling: Avoid dispersion into air. Follow good handling and housekeeping practices to minimize spills, generation of airborne dusts, and accumulation of dusts on exposed surfaces. Use with adequate exhaust ventilation to draw dust away from workers' breathing zones. Prevent or minimize exposures to dusts by using appropriate respirators, gloves, and eye protection. Wash exposed skin areas thoroughly with soap and water.

Storage: Keep in a tightly closed container. Store in a cool, dry, ventilated area.

General Comments: Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

SECTION 8 –PERSONAL PROTECTION/ EXPOSURE CONTROL

Respiratory Protection: Use NIOSH/MSHA approved respiratory protection equipment appropriate to the material and/or its concentration where airborne exposure is likely. If exposures cannot be kept to a minimum with engineering controls, consult manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer.

Skin Protection: Avoid contact with the skin. Wear appropriate dust resistant clothing. Wash contaminated clothing and clean protective equipment before reuse. Wash skin thoroughly after handling.

Eye Protection: Safety glasses with side shields are recommended for any type of handling. Where eye contact or dusty conditions may be likely, dust tight goggles are recommended. Have eye flushing equipment available.

Ventilation Protection: Normal room ventilation is acceptable.

Other Protection: Safety showers, with quick opening valves which stay open, and eye wash fountains, or other means of washing the eyes with a gentle flow of cool to tepid tap water, should be readily available in all areas where this material is handled or stored. Water should be supplied through insulated and heat-traced lines to prevent freeze-ups in cold weather.

Exposure Limits:

OSHA PEL-CEIL: 5 mg/m³ for manganese compounds as Mn

ACGIH TLV-TWA: 0.2 mg/ m³ for elemental and inorganic compounds as Mn

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor: Black granular sand-like; no odor.

Vapor Pressure: N/A*

Vapor Density (Air=1): N/A

Boiling Point: N/A

Melting Point: N/A

Specific Gravity: 2.65

Solubility in Water: 0%

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Volatile Percentage: 0%

pH: N/A

Flash Point/method: Non flammable

Auto Ignition Temperature: N/A

Upper/Lower Explosion Limits: N/A

Other: none

*N/A=Not applicable

SECTION 10 – STABILITY AND REACTIVITY

Stability: This product is considered stable under the specified conditions of storage, shipment and use.

Incompatibilities: Reacts with hydrochloric acid to form corrosive chlorine gas. Contains an oxidizer which can react with easily oxidizable materials.

Polymerization: Will not occur.

Decomposition: Toxic metal fumes may form when heated to decomposition.

Conditions to Avoid: Avoid contact with concentrated hydrochloric acid.

SECTION 11 – TOXICOLOGICAL INFORMATION

Inhalation – Acute: Dust may be irritating to the respiratory tract and cause coughing or sneezing.

Inhalation – Chronic: Excessive inhalation of manganese oxide can cause chronic manganese poisoning which impairs the central nervous system.

Skin Contact – Acute: No adverse effects expected.

Skin Contact – Chronic: There are no known chronic dermal effects.

Eye Contact – Acute: Dust that contacts eyes may be irritating or cause mechanical injury.

Ingestion – Acute: Ingestion may be irritating to the gastrointestinal tract.

Ingestion – Chronic: Excessive ingestion of manganese oxide can cause chronic manganese poisoning which impairs the central nervous system.

Carcinogenicity/Mutagenicity: There are no known carcinogenic/mutagenic effects.

Reproductive Effects: Manganese metal may damage the reproductive system and has shown teratogenic effects in laboratory animals.

Neurotoxicity: Excessive inhalation or ingestion of manganese oxide can cause chronic manganese poisoning which impairs the central nervous system.

Other Effects: Chronic exposure to manganese oxide can cause kidney effects, lung damage, blood changes and manganese psychosis.

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Target Organs: See "Other Effects" above.

SECTION 12 – ECOLOGICAL INFORMATION

The environmental fate and ecological toxicity are not known.

SECTION 13 – DISPOSAL CONSIDERATIONS

Material that cannot be used or chemically reprocessed and empty containers should be disposed of in accordance with all applicable regulations. Product containers should be thoroughly emptied before disposal. Generators of waste material are required to evaluate all waste for compliance with RCRA and any local disposal procedures and regulations. NOTE: State and local regulations may be more stringent than federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

DOT Shipping Description: not regulated by DOT

SECTION 15 – REGULATORY INFORMATION

CERCLA SECTION 103 (40CFR302.4): no RQ: none

SARA SECTION 302 (40CFR355.30): no

SARA SECTION 304 (40CFR355.40): no

SARA SECTION 313 (40CFR372.65): no

OSHA PROCESS SAFETY (29CFR1910.119): no

CALIFORNIA PROPOSITION 65: no

SECTION 16 – OTHER INFORMATION

Disclaimer: The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the user thereof. It is the buyer's responsibility to ensure that its activities comply with federal, state, provincial and local laws.

Revision Indicator: April 2011, Revised Section 1 (Updated manufacturer's name)