SORBTECH
SORBENT TECHNOLOGIES

5955 Peachtree Corners E Suite A Norcross, GA 30071 USA
1.866 SORBTECH | T 770.936.0323 | F 770.936.0326
www.sorbtech.com | info@sorbtech.com

SDS
Safety Data Sheet

Form #: STI-003 Date: revision 005 9/30/2014

Section 1. Product Identification: Fluorescent Indicator, Zinc Orthosilicate: Manganese Activated
Part Nos.: UV-01, UV-05, UV-1

Section 2. Hazards Identification

Emergency Overview: Odorless white powder. Warning: Excessive airborne dust levels may cause mild irritation to eyes and respiratory tract. Manganese compounds have the potential for causing adverse nervous system effects characterized by psychic and neurological disorders. However, the chemical inertness and insolubility of the compound is expected to reduce the potential for systemic manganese poisoning.

Potential Health Effects: Medical conditions aggravated by exposure: Excessive airborne dust levels may cause mild irritation to eyes and respiratory tract.

Routes of Exposure:

Eyes: May cause mild physical irritation from dust.
Skin: May cause irritation with redness. May be harmful if absorbed through the skin.
Ingestion: May be harmful if swallowed.
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Chronic Effects: Chronic manganese poisoning primarily involves the central nervous system.

Carcinogenic Effects: IARC: Not listed NTP: Not listed OSHA: Not regulated

Section 3. Composition / Information on Ingredients

Ingredient	CAS No.	%
Zinc Orthosilicate: Manganese activated (Zn_2SiO_4: Mn)	68611-47-2	100

Synonyms: Fluorescent indicator, UV254, Phosphor 2282, Zinc silicate: manganese-doped

Note: This compound contains 2 wt.% Mn as part of its chemical structure. It is not a mixture.

Section 4. First Aid Measures

Skin: Wash material off skin with soap and water. Seek medical attention if irritation occurs.
Eyes: Flush with copious amounts of water for 15 minutes. Seek medical attention if irritation occurs.
Ingestion: Rinse mouth with water. Seek medical attention.
Inhalation: Remove to fresh air. Seek medical attention if cough or respiratory symptoms develop.

Section 5. Fire Fighting Measures

Flash Point: Not applicable
Non-flammable: Not expected to be a fire hazard.
Flammability Limits in Air: LFL and UFL Not Applicable.
Auto ignition temperature: No data available
General Hazard: Not considered to be a fire hazard.
Fire Fighting Instructions: Isolate large fires and allow to burn out. Extinguish fire using water fog, fine water spray, carbon dioxide or foam. Avoid stirring up dust clouds.
Fire Fighting Equipment Fire fighting personnel should wear full protective equipment, including self-contained breathing apparatus (SCBA) for all inside fires and large outdoor fires.
Hazardous Combustion Products: Under certain conditions, any airborne dust be an explosion hazard. Hazard greater as fineness increases.
Special Fire Hazard: Not applicable
NFPA rating: Health: 2, Flammability: 0, Reactivity: 0

Section 6. Accidental Release Measures

If a Spill or Leak Occurs: Clean up spills in a manner that does not disperse dust into the air. Handle in accordance with industrial hygiene and safety practices. These practices include avoiding unnecessary exposure, and removal from eyes, skin, and clothing. Prevent product from entering drains. Avoid breathing dust. Ensure adequate ventilation.

Disposal Method: Sweep up and shovel into suitable contains for disposal. Dispose in a facility for non-hazardous wastes. Spent should be disposed of in accordance with State and Federal laws.

Container Disposal: Do not reuse empty bags or drums. Dispose of used bags in facility permitted for non-hazardous wastes.

Section 7. Handling and Storage

Handling: Avoid prolonged contact with eyes and skin. Do not breath dust. Keep away from ignition sources. Use in well ventilated areas. Protect containers from physical damage. Wash hands after handling.

Storage: Store in cool, dry, ventilated area and in closed containers. This material is hygroscopic Keep away form oxidizers, heat or flames. Store away form ignition sources.

Section 8. Exposure Controls / Personal Protection

Engineering Controls: Use local exhaust to control emissions near the source. Ventilation systems should be configured to prevent exceeding the recommended or regulated exposure limits (i.e. OSHA PELs).

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

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

Respiratory Protection: Keep dust exposure to a minimum with engineering and administrative controls. Use appropriate NIOSH/MSHA approved particulate respirators if necessary. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer.

Airborne Exposure Guidelines:

COMPONENT	OSHA PEL	ACGIH TLV
Zinc Orthosilicate: Manganese activated , 68611-47-2	5 mg/m3 TWA	5 mg/m3 TWA

PEL is the Permissible Exposure Limits established by OSHA.

TLV is the Threshold Limit Value a term ACGIH uses to express the maximum airborne concentration of a material to which most workers can be exposed during a normal daily and weekly work schedule without adverse effects.

Section 9. Physical and Chemical Properties

Physical State: Solid
Appearance and odor: White to light gray powder with no odor
pH: Not applicable
Vapor Pressure: Not applicable
Vapor Density: Not applicable
Evaporation Rate: Negligible
Freezing Point: Not applicable
Volatiles %: 0
Specific Gravity: 4.1 (Water = 1)
Solubility: Insoluble in water
Molecular Formula: Zn_2SiO_4: Mn (Generic)
Molecular weight: 226

Section 10. Stability and Reactivity

Stability: This product is stable under the specified conditions of storage, shipment and use. Avoid storing at high temperatures or in direct sunlight.

Incompatibility: Avoid contact with strong oxidizers, hydrogen fluoride, and strong acids.

Hazardous Decomposition Products: Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Polymerization: Does not occur.

Section 11. Toxicological Information

Acute Toxicity LD50/LC50: No information found relating to normal routes of occupational exposure.
Carcinogenicity: CAS# 68611-47-2: IARC: Not listed NTP: Not listed OSHA: Not regulated ACGIH: Not listed
Target Organs or System: Eyes, skin and upper respiratory system.
Signs and Symptoms of Exposure: Central nervous system depression, pneumonia. Men exposed to manganese dust 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-like appearance of the face, emotional disturbances such as uncontrollable laughter and spastic gait with tendency to fall in walking are findings in more advanced cases.
Skin: May cause irritation and redness. Eyes: Dust may cause mechanical eye irritation. Inhalation: May harmful if inhaled. May be irritating to mucous membranes and upper respiratory tract.
Ingestion: May be harmful if swallowed.

Section 12. Ecological Information

Ecotoxicity: Not determined on the finished product
Persistence/ Degradability: Not determined on the finished product
Bioaccumulation/Accumulation: Not determined on the finished product
Mobility in Environmental Media: Not determined on the finished product
Aquatic Toxicity: No information found.

Section 13. Disposal Considerations

This product is not considered a hazardous waste. Vacuum or shovel material into a closed container for reuse or disposal. Storage and disposal should be in accordance with applicable local state and federal laws and regulations. Local regulations may be more stringent than state or federal requirements.
RCRA P-Series: None listed
RCRA U-Series: None listed

Section 14. Transport Information

Land: US DOT: Not regulated
Water: IMO/IMDG: Not regulated
Air: IACO/IATA: Not regulated

Section 15. Regulatory Information

US Federal

TSCA**:** CAS# 68611-47-2 is listed on the TSCA inventory
CERCLA Hazardous Substances and Corresponding RQs: None of the chemicals in this material have an RQ.
SARA Section 302 Extremely Hazardous Substances: None of the chemicals in this product have a TPQ.
SARA Codes: CAS# 68611-47-2: Acute and Chronic Health Hazard
SARA Section 313: Listed
Silicic acid, zinc salt (1:2), manganese-doped CAS # 68611-47-2
Clean Air Act:
This material does not contain any hazardous air pollutants, Class 1 Ozone depletors or Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances, Priority Pollutants or Toxic Pollutants under the CWA.

States

CAS# 68611-47-2
California Prop 65: Not listed.
Massachusetts: Not listed
New Jersey Right to Know: Listed
Pennsylvania: Listed
Florida: Not listed
Rhode Island: Not listed
Illinois: Not listed
Connecticut - Hazardous Air pollutants: Not listed

Canadian Classification
WHMIS: D2B Toxic
DSL : Listed, CAS# 68611-47-2

EEC Council Directives relating to the classification, packaging, and labeling of dangerous substances and preparations.
Risk and Safety Phrases: S24/25: Avoid contact with skin and eyes.

Section 16. Additional Information

Typical Use: Used for thin layer chromatography.

HMIS Rating (USA):
Health Hazard: 2
Fire Hazard: 0
Reactivity: 0
Personal Protection: E (safety glasses, gloves, dust respirator)

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SDS REVISION SUMMARY: revision 005 replaces revision 004 dated 1/31/14.