

Safety Data Sheet

MBEC Assay® Device

Cellulose Coated Pegs

CAS: 9003-53-6, 9004-34-6

1. IDENTIFICATION

Product Identifier/Name(s):

MBEC Assay® Device with cellulose coated pegs (Biofilm Inoculator with Trough Base or 96 Well Base)

Other Means of Identification (Product Family/Synonyms/Molecular Formula):

Polystyrene (C₈H₈)_n, silica(SiO₂); cellulose coating: cotton linters, cellulose microcrystalline powder (20 µm), (C₆H₁₀O₅)_n.

Recommended Uses:

Laboratory device.

Restrictions on Use:

For research or laboratory use only.

Supplier Identifier:

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1-888-670-5445 (North America, English)
1-780-448-0585 (Worldwide, English)

2. HAZARD IDENTIFICATION

Hazard Classification (Class, Category):

Health Hazards:

Polystyrene/silica: Eye Irritation: 1 – Intense or continued, but not necessarily chronic, exposure could cause injury. **Cellulose:** None.

Physical Hazards:

Polystyrene/silica: None. **Cellulose:** Combustible: May form combustible dust concentrations in air.

Label Elements (Symbol Images/Names, Symbol Words, Hazard Statements, Precautionary Statements): None.

Precautionary Statement:

Polystyrene/silica: All ingredients are bound and potential for hazardous exposure as shipped is minimal. However, some vapors may be released upon heating from polystyrene/silica, and the end-user must take the necessary precautions (mechanical ventilation, respiratory protection) to protect employees from exposure. **Cellulose:** May form combustible dust concentrations in air.

Other Hazards:

Not applicable.

NFPA Ratings:

Polystyrene/silica: Health: 1; Flammability: 0; Reactivity: 1; Other: N/A

Cellulose: Health: 0; Flammability: 0; Reactivity: 0; Other: Combustibility: 1

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name:

Polystyrene, cellulose coating.

Common Name(s) and/or Synonyms:

For cellulose: cotton linters, cellulose powder.

Chemical Abstract Service (CAS) Registry Number:

9003-53-6, 9004-34-6.

Unique Identifiers:

$(C_8H_8)_n$; $(C_6H_{10}O_5)_n$.

Concentration of Chemical:

95-99% polystyrene base; ≤100% cellulose coating.

Chemical Names of Impurities, Stabilizing Solvents, and/or Additives:

Silica, amorphous.

Common Names of Impurities, Stabilizing Solvents, and/or Additives:

N/A.

CAS Registry Numbers of Impurities, Stabilizing Solvents, and/or Additives:

7631-86-9.

Unique Identifiers of Impurities, Stabilizing Solvents, and/or Additives:

SiO₂.

Concentrations of Impurities, Stabilizing Solvents, and/or Additives:

1-5% of base.

4. FIRST-AID MEASURES

Inhalation:

Polystyrene/silica: Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. When symptoms persist, or in all cases of doubt, seek medical advice. **Cellulose:** If inhalation occurs, move into fresh air. If not breathing, give artificial respiration and seek medical advice.

Skin Contact:

Polystyrene/silica: Wash any residue off with soap and plenty of water. If skin irritation persists, seek medical attention. **Cellulose:** Immediately remove all contaminated clothing. Rinse skin with water or shower.

Eye Contact:

Polystyrene/silica: If any particles contact the eye, rinse immediately with plenty of water for 15 minutes, including rinsing under the eyelids. If eye irritation persists, seek medical attention. **Cellulose:** Flush eyes with plenty of water as a precaution. Remove contact lenses.

Ingestion:

Polystyrene/silica: Do not induce vomiting without medical advice. When symptoms persist, or in all cases of doubt, seek medical advice. **Cellulose:** Never give anything by mouth to an unconscious person. Have victim drink water (two glasses at most). Consult a physician if feeling unwell.

Most Important Symptoms and Effects (Acute or Delayed):

Resin particles can be mechanically irritating upon inhalation or contact with the eye, and harmful if swallowed.

Situations Where Immediate Medical Attention and/or Special Treatment Are Necessary:

Whenever symptoms are prolonged or severe.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Polystyrene/silica: Carbon dioxide blanket, water spray, dry powder, foam. **Cellulose:** water spray, alcohol-resistant foam, dry chemical (powder) or carbon dioxide.

Unsuitable Extinguishing Media:

None identified.

Specific Hazards Arising from Hazardous Combustion Products:

Polystyrene/silica: Toxic fumes. **Cellulose:** Nature of decomposition products not known. Combustible. Risk of dust explosion. Development of hazardous combustion gases or vapours possible in the event of fire.

Special Procedures, Protective Equipment, and Precautions for Fire-Fighters:

Full face self contained breathing apparatus used in positive pressure mode should be worn to prevent inhalation of airborne contaminants. Prevent fire extinguishing water from contaminating surface water or ground water system.

Fire Hazards Associated with Material:

None.

Explosion Hazards Associated with Material:

None.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Wear appropriate personal protection during cleanup, such as impervious gloves, boots, and coveralls. Avoid dust formation. Avoid breathing vapours, mist, gas, or dust.

Protective Equipment:

Use appropriate exhaust ventilation.

Emergency Procedures:

The product/residue from the product should not be released into the environment. The product/residue from the product should not be allowed to enter drains, water courses, or the soil.

Methods and Materials for Containment and Cleaning Up:

Clean up product/residue from the product without creating dust. Sweep up and shovel. Package all material in suitable closed containers for disposal. **Cellulose:** Do not let product enter drains. Cover drains. Collect, bind, and pump off spills. Observe any material restrictions. Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts. Refer to Section 13 of this SDS for proper disposal methods.

7. HANDLING AND STORAGE

Precautions for Safe Handling:

Take measures to prevent the buildup of electrostatic charge. Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation where dust can be formed. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. Change contaminated clothing. Wash hands after working with substance.

Conditions for Safe Storage (Temperature, Conditions, Chemicals to Avoid):

Store product dry and in tightly sealed containers to avoid moisture and contamination. Keep in a dry cool place.

Incompatible Materials:

Strong acids and oxidizing agents.

Avoid Contact With (Body Parts):

Eyes, skin.

Should Skin Be Washed After Working With the Chemical?

Yes.

Any Special Working Environments or Personal Protective Equipment to be Used:

Safety glasses with side-shields, protective gloves, long sleeved clothing, safety shoes.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters:

Airborne exposure limits: **Silica, amorphous** – 20 mppcf Permissible Exposure Limit (PEL). Exposure type: total dust. List: OSHA, Z3. **Cellulose** – TWA/TWAEV 10 mg/m³ (Alberta, OHS code; British Columbia OEL, Québec, USA ACGIH TLV).

Engineering Controls:

Heat only in areas with appropriate exhaust ventilation. Provide appropriate exhaust ventilation at equipment. Wash hands before breaks, and at the end of every workday. Change contaminated clothing. Do not let product enter drains.

Individual Protection Measures:

Eyes:

Safety glasses with side-shields. 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:

Protective gloves*, long sleeved clothing, safety shoes. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. *Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface). 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: 0.11mm; breakthrough time: 480 min; material tested: Dermatril®. Splash contact – material: nitrile rubber; minimum layer thickness: 0.11 mm; breakthrough time: 480 min; material tested: Dermatril®.

Respiratory:

No personal respiratory protective equipment normally required. Where protection due to generation of dusts, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (Physical State, Color, etc.):

Polystyrene/silica: Solid, transparent. **Cellulose:** crystalline, powder, white.

Odor:

Polystyrene/silica: Very faint. **Cellulose:** Unknown.

Odor Threshold:

Unknown.

pH:

Not applicable/unknown.

Melting Point/Freezing Point:

Unknown.

Initial Boiling Point/Boiling Range:

Polystyrene/silica: Not applicable (decomposes on heating). **Cellulose:** Unknown.

Flash Point:

Not applicable.

Evaporation Rate:

Not applicable/unknown.

Flammability (Solid or Gas):

Polystyrene/silica: Unknown. **Cellulose:** May form combustible dust concentrations in air.

Lower Flammable/Explosive Limit:

Not applicable/unknown.

Upper Flammable/Explosive Limit:

Not applicable/unknown.

Vapor Pressure:

Not applicable/unknown.

Vapor Density:

Not applicable/unknown.

Relative Density:

Polystyrene/silica: Unknown. **Cellulose:** 0.600 g/cm³.

Solubility:

Polystyrene/silica: Insoluble. **Cellulose:** Unknown.

Partition Coefficient – n-octanol/water:

Unknown/not applicable.

Auto-Ignition Temperature:

Not applicable/unknown.

Decomposition Temperature:

Unknown.

Viscosity:

Not applicable/unknown.

10. STABILITY AND REACTIVITY

Reactivity:

Polystyrene/silica: Stable. **Cellulose:** The following applies in general to flammable organic substances and mixtures: In correspondingly fine distribution, when whirled up, a dust explosion may generally be assumed.

Chemical Stability:

Stable under recommended storage conditions, such as under standard ambient conditions (room temperature).

Possibility of Hazardous Reactions:

May occur if contacted with incompatibles.

Conditions to Avoid:

Keep away from oxidizing agents and open flame. To avoid thermal decomposition, do not overheat.

Incompatible Materials:

Incompatible with strong acids and oxidizing agents.

Hazardous Decomposition Products:

Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen, other hazardous materials, and smoke are all possible.

Hazardous Polymerization:

Will not occur.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:

Ingestion:

Yes (residue).

Dermal:

Yes (residue).

Inhalation:

Yes (residue).

Eye Contact:

Yes (residue).

Symptoms Related to the Physical, Chemical, and Toxicological Characteristics:

Mechanically irritating upon inhalation or eye contact. Harmful if swallowed.

Delayed Effects from Short-Term Exposure:

Ingestion:

Unknown.

Dermal:

Unknown.

Inhalation:

Unknown.

Eye Contact:

Unknown.

Delayed Effects from Long-Term Exposure:

Ingestion:

Unknown.

Dermal:

Unknown.

Inhalation:

Unknown.

Eye Contact:

Unknown.

Immediate Effects from Short-Term Exposure:

Ingestion:

Harmful if swallowed.

Dermal:

No hazard from routine handling.

Inhalation:

Mechanically irritating.

Eye Contact:

Mechanically irritating.

Immediate Effects from Long-Term Exposure:

Ingestion:

Unknown.

Dermal:

Unknown.

Inhalation:

Unknown.

Eye Contact:

Unknown.

Chronic Effects from Short-Term Exposure:

Ingestion:

Unknown.

Dermal:

Unknown.

Inhalation:

Unknown.

Eye Contact:

Unknown.

Chronic Effects from Long-Term Exposure:

Ingestion:

Unknown.

Dermal:

Unknown.

Inhalation:

Unknown.

Eye Contact:

Unknown.

Irritancy:

Mechanically irritating if inhaled or contacted to the eye.

Sensitization:

Experience shows no unusual dermatitis hazard from routine handling.

Carcinogenicity:

Unknown.

Reproductive Toxicity:

Unknown.

Teratogenicity:

Unknown.

Mutagenicity:

Unknown.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Chemicals are not readily available as they are bound within the matrix of the polymer.

Persistence and Degradability:

Not readily biodegradable.

Bioaccumulative Potential:

Chemicals are not readily available as they are bound within the matrix of the polymer.

Mobility in Soil:

Chemicals are not readily available as they are bound within the matrix of the polymer.

Other Adverse Effects:

Unknown.

13. DISPOSAL CONSIDERATIONS

Safe Handling for Disposal:

Handle following all safety precautions and use personal protective equipment as listed in this SDS.

Methods of Disposal (Including Contaminated Packaging):

Contact a licensed professional waste disposal service to dispose of this material. Dispose of contaminated packaging as per unused product. Leave in original container. Do not mix with other waste. The generator of waste material has the responsibility for proper waste classification, transportation, and disposal in accordance with applicable federal, state/provincial, and local regulations.

Methods for Neutralization of Material:

Neutralization not necessary prior to disposal.

Disposal should be in accordance with municipal, provincial/state, and federal laws and regulations.

14. TRANSPORTATION INFORMATION

UN Number:

As of 2018 not classified as a hazardous good.

UN Proper Shipping Name:

As of 2018 not classified as a hazardous good.

Transport Hazard Class(es):

As of 2018 not classified as a hazardous good.

Packing Group:

As of 2018 not classified as a hazardous good.

Environmental Hazards:

As of 2018 not classified as a hazardous good.

Transport in Bulk:

As of 2018 not classified as a hazardous good. Fragile, ship according to Fragile requirements.

Special Precautions:

As of 2018 not classified as a hazardous good. Fragile, ship according to Fragile requirements.

USA Department of Transportation (DOT) Number:

Not regulated for transportation.

Domestic Transportation Information:

Not regulated for transportation.

International Transportation Information:

Not regulated for transportation.

15. REGULATORY INFORMATION

Safety Regulations:

US – OSHA Status: Classified as hazardous based on components.

Health Regulations:

US – TSCA Status: All components of this product are listed on the TSCA inventory or are exempt.

Environmental Regulations:

US EPA CERCLA Hazardous Substances (40 CFR 302): Not applicable. California Proposition: This product does not contain a substance listed by California Prop 65.65.

WHMIS Class:

Canadian Regulations – WHMIS Classification: Not controlled. DSL: Listed.

Regulatory Agencies Which Have Classified This Product as Hazardous:

National Inventories: Australia AICS – Listed; China IECS – Listed; Europe EINECS – Not Determined; Japan ENCS – Not Determined; Korea KECI – Listed; Philippines PICCS – Listed.

This SDS was created according to Canadian legislation.

16. OTHER INFORMATION

Date of the Last Review of the SDS:

**/05/2022

Date of the Latest Revision of the SDS:

**/05/2022

Date of the Next Review of the SDS:

**/05/2024

Date of Issue of the SDS:

**/05/2022

The current version of the SDS replaces all previous versions.

Innovotech, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Innovotech, Inc. makes no representations or warranties, either express or implied, including, without limitation, any warranties of merchantability or fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, Innovotech, Inc. will not be responsible for damages resulting from use of or reliance upon this information.

Precautions About the Compound – Know This:

Residue is mechanically irritating if inhaled or contacted to the eye. Toxic vapors may be released upon heating.