

Material Safety Data Sheet

Section 1: Chemical Product and Company Identification

Part Name: Polystyrene Nanospheres (between 100nm and 1µm) – aqueous emulsion

Supplier: Phosphorex, Inc., 106 South Street, Hopkinton, MA 01748

Section 2: Composition / Information on Ingredients

Plain polystyrene suspended in water.

Section 3: Hazards Identification

Eyes: mild irritation

Skin Contact: short exposure - no irritation; repeated prolonged exposure (especially if confined) - mild irritation, possibly a mild superficial burn.

Skin Adsorption: not likely to be absorbed in toxic amounts; possibly weak sensitizer

Ingestion: low single dose toxicity

Inhalation: no guide established; considered to be low hazard from inhalation

Systemic & Other Effects: none known

Section 4: First Aid Measures

Eyes: Flushing the eye immediately with water for 15 minutes is a good safety practice. Physician should stain for evidence of corneal injury.

Skin: Contact may cause slight irritation. Wash off in flowing water or shower. Wash clothing before reuse. Treat as any contact dermatitis. If burn is present, treat as any thermal burn.

Ingestion: Low in toxicity. Induce vomiting if large amounts are ingested.

Inhalation: Remove to fresh air if effects occur. Consult medical personnel.

Systemic & Other Effects: Human effects not established. No specific antidote. Treatment based on sound judgment of physician and the individual reactions of the patient.

Section 5: Fire Fighting Measures

Extinguishing Media: water fog

Special Firefighting Methods: not applicable

Unusual Fire & Exploding Hazards: The dried resin is flammable similar to wood. Burning dry resin emits dense, black smoke. Suspended material is not flammable.

Section 6: Accidental Release Measures

Any information listed below is to be considered in addition to internal guidelines for isolation of spill, containment of spill, removal of ignition sources from immediate area, and collection for disposal of spill by trained, properly protected clean up personnel.

Flush area with water immediately. Avoid unnecessary exposure and contact.

Section 7: Handling and Storage

Ventilation: Good room ventilation usually adequate for most operations.

Respiratory Protection: None normally needed. In cases where there is a likelihood of inhalation exposure to dried particles, wear NIOSH approved dust respirator.

Storage: Keep from freezing. Store at 2-8°C. Material may develop bacteria odor on long- term storage. No safety problems known.

Section 8: Exposure Controls / Personal Protection

Respiratory Protection: None normally needed. In cases where there is a likelihood of inhalation exposure to dried particles, wear a NIOSH approved dust respirator.

Wash / Hygienic Practices: Wash with soap and water when leaving work area and before eating, smoking, and using restroom facilities.

Section 9: Physical and Chemical Properties

Boiling Point: 100°C / 212°F

Glass Transition Temperature: 95°C

Density: 0.95 - 1.05 g/cc

Solubility: emulsion

Appearance: milky white liquid emulsion

Section 10: Stability and Reactivity

Stability: Stable under normal conditions. See Section 7.

Incompatibility: May irreversibly aggregate if frozen at 0°C / 32°F. Addition of chemicals may cause coagulation.

Hazardous Combustion or Dried resin is combustible. If burned, produces a dense, black smoke and noxious Decomposition Products: gasses (carbon monoxide and hydrocarbons).

Section 11: Toxicological Information

no data

Section 12: Ecological Information

no data

Section 13: Disposal Considerations

In large amounts, will color streams and rivers. Has practically no biological oxygen demand, but will settle out and form sludge or film. Large amounts may plug up sanitary sewers. Divert to pond or burn solid waste in an adequate incinerator.

Section 14: Transportation Data

no data

Section 15: Regulatory Information

no data

Section 16: Other Information

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