

# Material Safety Data Sheet

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## Section 1: Chemical Product and Company Identification

Date Prepared: 02/27/2003  
Product: **Superparamagnetic Polymer Particles**  
Supplier: Bangs Laboratories, Inc.  
9025 Technology Drive  
Fishers, Indiana 46038

## Section 2: Composition, Information or Ingredients

Iron oxide dispersed in a polymeric matrix suspended in an aqueous solution.

## Section 3: Hazard Identification

Eyes: mild irritation  
Skin Contact: short exposure: no irritation; repeated prolonged exposure (especially if confined): mild irritation, possibly a mild superficial burn.  
Skin Absorption: not likely to be absorbed in toxic amounts; possibly weak sensitizer  
Ingestion: low single dose toxicity  
Inhalation: no guide established; considered to be low in 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: 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 Procedures: not applicable  
Unusual Fire & Explosion Hazards: The dried resin is flammable similar to wood. Burning dry resin emits dense, black smoke. Suspended material is not flammable.

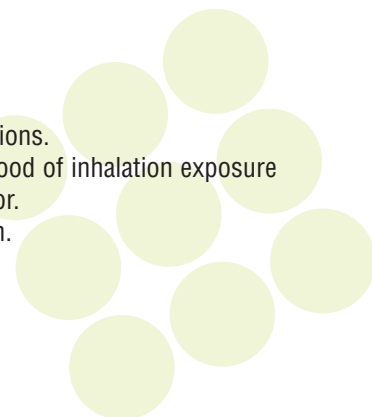
## Section 6: Accidental Release Measures

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 a NIOSH approved dust respirator.  
Storage: Store at 2-8°C. Do not freeze. No safety problems known.



### **Section 8: Exposure Controls and Personal Protection**

Respiratory Protection: None normally needed. See Section 7.  
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: softens at ~90°C  
Glass Transition Temp: N/A  
Density: 1 - 2.3 g/cc  
Solubility: suspended in water; dispersible in water  
Appearance & Odor: brown liquid suspension; faint or non-detectable odor

### **Section 10: Stability and Reactivity**

Stability: Stable under ordinary conditions or use and storage. See Section 7.  
Incompatibilities: May irreversibly aggregate if frozen at 0°C / 32°F. Addition of chemicals may cause coagulation.  
Hazardous Combustion or Decomposition Products: Dried resin is combustible. If burned, produces a dense, black smoke and noxious gases (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. Flush sewers with large amounts of water.

### **Section 14: Transport Information**

no data

### **Section 15: Regulatory Information**

no data

### **Section 16: Other Information**

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**END OF MSDS**

