Section 1: Identification

1a Product Name
ResinTech BSM-50

1b Common Name
Strong base anion resin in the borate form impregnated with hydrated iron oxide.

1c Intended use
Antimony and silica removal.

1d Manufacturer
ResinTech, Inc.
Address
160 Cooper Road,
West Berlin, NJ 08091 USA

Phone
856-768-9600
Email
ixresin@resintech.com

Section 2: Hazard Identification

2a OSHA Hazard classification
Not hazardous or dangerous

<table>
<thead>
<tr>
<th>Product Hazard Rating</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health = 0</td>
<td>0 = Negligible</td>
</tr>
<tr>
<td>Fire = 1</td>
<td>1 = Slight</td>
</tr>
<tr>
<td>Reactivity = 0</td>
<td>2 = Moderate</td>
</tr>
<tr>
<td>Special – N/A</td>
<td>3 = High</td>
</tr>
<tr>
<td></td>
<td>4 = Extreme</td>
</tr>
</tbody>
</table>

2b Product description
Black or red colored solid beads approximately 0.6 mm diameter with little or no odor.

2c Precautions for use
Safety glasses and gloves recommended. Slipping hazard if spilled.

2c Potential health effects
Will cause eye irritation. Will cause skin skin irritation. Ingestion is not likely to pose a health risk.

2d Environmental effects
This product may alter the pH of any water that contacts it.
Section 2A: Hazard classification UN OSHA globally harmonized system

WARNING

(contains ion exchange resin)

H320: Causes eye irritation (Category 2B)

Precautionary Statements

P264: Wash hands thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
P333+313: If skin irritation or a rash occurs: Get medical advice/attention.
P337+313: If eye irritation persists get medical advice/attention.
P403+233: Store in a well-ventilated place. Keep container tightly closed.
P411: Store at temperatures not exceeding 50 °C/ 122 °F.

Please refer to the safety data sheet for additional information regarding this product

ResinTech, Inc.
160 Cooper Road
West Berlin, NJ 08091-9234
856 768-9600
lxresin@resintech.com
**Section 3: Composition/ Information on Ingredients**

3a Chemical name  
Trimethylamine functionalized chloromethylated copolymer of polystyrene in the borate form impregnated with hydrated iron oxide.

3b Ingredients  
Trimethylamine functionalized  
CAS# 60177-39-1 (35 - 50%)  
Chloromethlyated copolymer of Styrene and divinylbenzene in the Chloride form  
CAS# 20344-49-4 (10 – 20%)  
Ferric Hydroxide  
CAS# 10043-35-3 (5 – 10%)  
Boric Acid  
CAS# 7732-18-5 (30 – 45%)  
Water

**Section 4: First Aid Measures**

4a Inhalation  
No adverse effects expected - normal use of product does not produce odors or vapors.

4b Skin  
Wash with soap and water - seek medical attention if a rash develops.

4c Eye contact  
Wash immediately with water - seek attention if discomfort continues.

4d Ingestion  
No adverse effects expected for small amounts, larger amounts can cause stomach irritation. Seek medical attention if discomfort occurs.

**Section 5: Fire Fighting Measures**

5a Flammability  
NFPA Fire rating = 1

5b Extinguishing media  
Water, CO2, foam, dry powder

5c Fire fighting Procedures  
Follow general fire fighting procedures indicated in the work place. Seek medical attention if discomfort continues.

5d Protective Equipment  
MSHA/NIOSH approved self-contained breathing gear, full protective clothing.

5e Combustion Products  
Carbon oxides and other toxic gasses and vapors.
### Section 6: Accidental Release Measures

<table>
<thead>
<tr>
<th>6a</th>
<th>Personal Precautions</th>
<th>Keep people away, spilled resin can be a slipping hazard, wear gloves and safety glasses to minimize skin or eye contact.</th>
</tr>
</thead>
<tbody>
<tr>
<td>6b</td>
<td>Incompatible Chemicals</td>
<td>Strong oxidants can create risk of combustion products similar to burning.</td>
</tr>
<tr>
<td>6c</td>
<td>Environmental Precautions</td>
<td>Keep out of public sewers and waterways.</td>
</tr>
<tr>
<td>6d</td>
<td>Containment Materials</td>
<td>Use plastic or paper containers.</td>
</tr>
<tr>
<td>6e</td>
<td>Methods of Clean-up</td>
<td>Sweep up material and transfer to containers.</td>
</tr>
</tbody>
</table>

### Section 7: Handling and Storage

<table>
<thead>
<tr>
<th>7a</th>
<th>Handling</th>
<th>Avoid prolonged skin contact. Keep resin moist and avoid allowing resin to completely dry.</th>
</tr>
</thead>
<tbody>
<tr>
<td>7b</td>
<td>Storage</td>
<td>Store in a cool dry place (0º to 45º C) in the original shipping container. This product is thermally sensitive and will have reduced shelf life if subjected to extended periods of time at temperatures exceeding 50º C. Although freezing does not usually damage ion exchange resins, avoid repeated freeze thaw cycles.</td>
</tr>
<tr>
<td>7c</td>
<td>TSCA considerations</td>
<td>Ion exchange resins should be listed on the TSCA Inventory in compliance with State and Federal Regulations.</td>
</tr>
</tbody>
</table>

### Section 8: Exposure Controls/Personal Protection

<table>
<thead>
<tr>
<th>8a</th>
<th>OSHA exposure limits</th>
<th>None noted.</th>
</tr>
</thead>
<tbody>
<tr>
<td>8b</td>
<td>Engineering Controls</td>
<td>Provide adequate ventilation.</td>
</tr>
<tr>
<td>8c</td>
<td>Personal Protection Measures</td>
<td>Safety glasses or goggles.</td>
</tr>
<tr>
<td></td>
<td>Eye Protection</td>
<td>Not required for normal use.</td>
</tr>
<tr>
<td></td>
<td>Respiratory Protection</td>
<td>Recommended for extended contact.</td>
</tr>
<tr>
<td></td>
<td>Protective Gloves</td>
<td></td>
</tr>
</tbody>
</table>

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Section 6: Unusual Hazards

Product is not combustible until moisture is removed. Resin begins to burn at approximately 230º C. Auto ignition can occur above 500º C.
### Section 9: Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Amber, yellow, or red beads approx. 0.6 mm diameter.</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td>Flammable above 500º C</td>
</tr>
<tr>
<td>Odor</td>
<td>Little or no odor</td>
</tr>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Near neutral (6 to 8 typical)</td>
</tr>
<tr>
<td>Relative density</td>
<td>Approx 800 grams/Liter</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>Does not melt, freezes at approx. 0 C</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water and most solvents</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Does not boil</td>
</tr>
<tr>
<td>Flash point</td>
<td>Approx 500º C</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Does not evaporate</td>
</tr>
<tr>
<td>Partition Coefficient (n-octanol/water)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Approx 500º C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Above 230º C</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### Section 10: Stability and Reactivity

10a Stability                      | Stable under normal conditions.                  |
10b Conditions to Avoid            | Heat, exposure to strong oxidants.               |
10c Hazardous by-products          | Trimethylamine, charred polystyrene, aromatic acids and hydrocarbons, organic amines, nitrogen oxides, carbon oxides, chlorinated hydrocarbons. |
10d Incompatible materials         | Strong oxidizing agents (such as HNO₃)           |
10e Hazardous Polymerization       | Does not occur                                   |
Section 11: Toxicological Information

11a Likely Routes of Exposure
Oral, skin or eye contact.

11b Effects of exposure
- Delayed
  None known.
- Immediate (acute)
  None known.
- Chronic
  None known.

11c Toxicity Measures
- Skin Adsorption
  Unlikely.
- Ingestion
  Oral toxicity believed to be low but no LD50 has been established.
- Inhalation
  Unknown, vapors are very unlikely due to physical properties (insoluble solid).

11d Toxicity Symptoms
- Skin Adsorption
  Mild rash.
- Ingestion
  Indigestion or general malaise.
- Inhalation
  None known.

11e Carcinogenicity
None known

Section 12: Ecological information

12a Eco toxicity
Not acutely harmful to plant or animal life.

12b Mobility
Insoluble.

12c Biodegradability
Not biodegradable.

12d Bioaccumulation
Insignificant.

12e Other adverse effects
Not Harmful to the environment.

Section 13: Disposal Considerations

13a General considerations
Material is non-hazardous.

13b Disposal Containers
Most plastic and paper containers are suitable.

13c Disposal methods
No specific method necessary.

13d Sewage Disposal
Not recommended.

13e Precautions for incineration
May release trimethylamine and toxic vapors when burned.
Precautions for landfills

Resins used to remove hazardous materials may then become hazardous mixtures.

**Section 14: Transportation Information**

14a Transportation Class
Not classified as a dangerous good for transport by land, sea, or air.

14b TDG
Not regulated.

14c IATA
Not regulated.

14d DOT (49 CFR 172.101)
Not Regulated.

**Section 15: Regulatory Information**

15a CERCLA
Not regulated

15b SARA Title III
Not regulated

15c Clean Air act
Not regulated

15d Clean Water Act
Not regulated

15e TSCA
Not regulated

15f Canadian Regulations
   WHMIS
   Not a controlled product
   TDG
   Not regulated

15g Mexican Regulations
Not Dangerous

**Section 16: Other Information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer’s responsibility to ensure that their activities comply with federal, state, and local laws.

16a Date of Revision
31 March 2015