Section 1: Identification

1a Product Name  ResinTech RSM-50
1b Common Name  Radium selective cation resin.
1c Intended use  Radium removal from potable water supplies.
1d Manufacturer
   Address  ResinTech, Inc.
            1801 Federal Street
            Camden, NJ 08105 USA
   Phone  856-768-9600
   Email  ixresin@resintech.com

Section 2: Hazard Identification

2a 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  Tan 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.
                            May cause mild skin irritation.
                            Ingestion is not likely to pose a health risk.

2d Environmental effects  Little or none.
Warning (contains ion exchange resin)

H320: Causes eye irritation

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.
1801 Federal Street,
Camden, NJ 08105 USA
856 768-9600
Ixresin@resintech.com
Section 3: Composition/ Information on Ingredients

3a Chemical name
Polystyrene sulfonate in the sodium form, impregnated with barium sulfate.

3b Ingredients
- Polystyrene sulfonate in the sodium form: CAS# 69011-22-9 (30 - 50%)
- Barium sulfate: CAS# 7727-43-7 (15 - 25%)
- Water: CAS# 7732-18-5 (25 – 45%)

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.

5f 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 6: Accidental Release Measures

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

### Section 7: Handling and Storage

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>7a</strong></td>
<td>Handling</td>
<td>Avoid prolonged skin contact. Avoid contact with salts or with salty water to prevent premature exhaustion of the resin. Keep resin moist and avoid allowing resin to completely dry.</td>
</tr>
<tr>
<td><strong>7b</strong></td>
<td>Storage</td>
<td>Store in a cool dry place (0° to 45° 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 50° C. Although freezing does not usually damage ion exchange resins, avoid repeated freeze thaw cycles.</td>
</tr>
</tbody>
</table>

### Section 8: Exposure Controls/Personal Protection

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>8a</strong></td>
<td>OSHA exposure limits</td>
<td>None noted.</td>
</tr>
<tr>
<td><strong>8b</strong></td>
<td>Engineering Controls</td>
<td>Provide adequate ventilation.</td>
</tr>
<tr>
<td><strong>8c</strong></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>Not required for limited exposure but recommended for extended contact.</td>
</tr>
<tr>
<td></td>
<td>Protective Gloves</td>
<td></td>
</tr>
</tbody>
</table>
**Section 9: Physical and Chemical Properties**

- **Appearance**: Tan beads approx. 0.6 mm diameter.
- **Flammability or explosive limits**: Flammable above 500° C
- **Odor**: None
- **Physical State**: Solid
- **Vapor pressure**: Not available
- **Odor threshold**: Not available
- **Vapor density**: Not available
- **pH**: Near neutral
- **Relative density**: Approx 950 grams/Liter
- **Melting point/freezing point**: Does not melt, freezes at approx. 0 C
- **Solubility**: Insoluble in water and most solvents
- **Boiling point**: Does not boil
- **Flash point**: Approx 500° C
- **Evaporation rate**: Does not evaporate
- **Partition Coefficient (n-octanol/water)**: Not applicable
- **Auto-ignition temperature**: Approx 500° C
- **Decomposition temperature**: Above 230° C
- **Viscosity**: Not applicable

**Section 10: Stability and Reactivity**

10a **Stability**: Stable under normal conditions.

10b **Conditions to Avoid**: Heat, exposure to strong oxidants.

10c **Hazardous by-products**: Organic sulfonates, 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): Rash or burn caused by acidity.
- Chronic: None known.

11c Toxicity Measures

- Skin Adsorption: Unlikely, some transfer of acidity is possible.
- 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: Rash or burn.
- Ingestion: Indigestion or general malaise.
- Inhalation: Unknown.

11e Carcinogenicity

None known

### Section 12: Ecological information

12a Eco toxicity

Not acutely harmful to plant or animal life.

12b Mobility

Insoluble, acidity or causticity may escape if wet.

12c Biodegradability

Not biodegradable.

12d Bioaccumulation

Insignificant.

12e Other adverse effects

Not Harmful to the environment.
### Section 13: Disposal Considerations

<table>
<thead>
<tr>
<th>13a General considerations</th>
<th>Material is non-hazardous.</th>
</tr>
</thead>
<tbody>
<tr>
<td>13b Disposal Containers</td>
<td>Most plastic and paper containers are suitable.</td>
</tr>
<tr>
<td>13c Disposal methods</td>
<td>No specific method necessary</td>
</tr>
<tr>
<td>13d Sewage Disposal</td>
<td>Not recommended</td>
</tr>
<tr>
<td>13e Precautions for incineration</td>
<td>May release toxic vapors when burned</td>
</tr>
<tr>
<td>13f Precautions for landfills</td>
<td>Resins used to remove hazardous materials may then become hazardous mixtures.</td>
</tr>
</tbody>
</table>

### Section 14: Transportation Information

<table>
<thead>
<tr>
<th>14a Transportation Class</th>
<th>Not classified as a dangerous good for transport by land, sea, or air.</th>
</tr>
</thead>
<tbody>
<tr>
<td>14b TDG</td>
<td>Not regulated.</td>
</tr>
<tr>
<td>14c IATA</td>
<td>Not regulated.</td>
</tr>
</tbody>
</table>

### Section 15: Regulatory Information

<table>
<thead>
<tr>
<th>15a CERCLA</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>15b SARA Title III</td>
<td>Not regulated</td>
</tr>
<tr>
<td>15c Clean Air act</td>
<td>Not regulated</td>
</tr>
<tr>
<td>15d Clean Water Act</td>
<td>Not regulated</td>
</tr>
<tr>
<td>15e TSCA</td>
<td>Not regulated</td>
</tr>
<tr>
<td>15f Canadian Regulations</td>
<td>Not a controlled product</td>
</tr>
<tr>
<td>WHMIS</td>
<td>Not regulated</td>
</tr>
<tr>
<td>TDG</td>
<td>Not regulated</td>
</tr>
<tr>
<td>15g Mexican Regulations</td>
<td>Not Dangerous</td>
</tr>
</tbody>
</table>
Section 16: Other Information

The information provided in this safety data sheet is presented in good faith and believed to be accurate as of the effective data shown above. However, no warranty or guarantee of accuracy, express or implied is given. 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  10 January 2020