Section 1: Identification

1a Product Names

1b Common Name
Mixed Bed ion exchange resin

1c Intended use
All applications where deionized water is needed.

1d Manufacturer
ResinTech, Inc.

Address
1801 Federal Street
Camden, NJ 08105 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 = 1</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
Amber, tan, dark brown, or black cation beads blended with white, yellow, orange, or red anion beads, all approx. 0.6 mm diameter.

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

WARNING

H315: Causes skin irritation (Category 2)
H319: Causes serious eye irritation (Category 2A)

Precautionary Statements
P264: Wash hands thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection
P284: In case of inadequate ventilation wear respiratory 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
lxresin@resintech.com
Section 3: Composition/Information on Ingredients

3a Chemical name
Mixture of polystyrene sulfonate in the hydrogen form and trimethylamine functionalized chloromethylated copolymer of polystyrene in the hydroxide form.

3b Ingredients
- Polystyrene sulfonate in the hydrogen form: CAS# 69011-20-7 (10 - 30%)
- Trimethylamine functionalized chloromethylated copolymer of polystyrene in the hydroxide form: CAS# 69011-18-3 (20 - 50%)
- Water: CAS# 7732-18-5 (40 – 70%)

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

6a Personal Precautions  
Keep people away, spilled resin can be a slipping hazard, wear gloves and safety glasses to minimize skin or eye contact.

6b Incompatible Chemicals  
Strong oxidants can create risk of combustion products similar to burning, exposure to strong bases can cause a rapid temperature increase.

6c Environmental Precautions  
Keep out of public sewers and waterways.

6d Containment Materials  
Use plastic or paper containers, unlined metal containers not recommended.

6e Methods of Clean-up  
Sweep up material and transfer to containers.

Section 7: Handling and Storage

7a Handling  
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.

7b Storage  
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 45° C. Although freezing does not usually damage ion exchange resins, avoid repeated freeze thaw cycles.
Section 8: Exposure Controls/Personal Protection

8a OSHA exposure limits
None noted.

8b Engineering Controls
Provide adequate ventilation.

8c Personal Protection Measures
Eye Protection
Safety glasses or goggles.
Respiratory Protection
Not required for normal use.
Protective Gloves
Not required for limited exposure but recommended for extended contact.

Section 9: Physical and Chemical Properties

- Appearance
  Solid beads approx 0.6 mm diameter
- Flammability or explosive limits
  Flammable above 500º C
- Odor
  None
- Physical State
  Solid
- Vapor pressure
  Not available
- Odor threshold
  Not available
- Vapor density
  Not available
- pH
  Acidic or basic when mixed with water
- Relative density
  Approx 700 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 500º C
- Evaporation rate
  Does not evaporate
- Partition Coefficient (n-octanol/water)
  Not applicable
- Auto-ignition temperature
  Approx 500º C
- Decomposition temperature
  Above 230º 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, amines, charred polystyrene, aromatic acids and hydrocarbons, organic amines, nitrogen oxides, carbon oxides, chlorinated hydrocarbons.

10d Incompatible materials  
Strong oxidizing agents (such as HNO₃), strong bases (such as NaOH), strong acids (such as HCl and H₂SO₄)

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 or causticity.
   - 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  
     Rash or burn.
   - Ingestion  
     Indigestion or general malaise.
   - Inhalation  
     Unknown.

11e Carcinogenicity  
None known
### Section 12: Ecological information

<table>
<thead>
<tr>
<th>12a</th>
<th>Eco toxicity</th>
<th>Not harmful to plant or animal life.</th>
</tr>
</thead>
<tbody>
<tr>
<td>12b</td>
<td>Mobility</td>
<td>Insoluble, acidity or causticity may escape if wet.</td>
</tr>
<tr>
<td>12c</td>
<td>Biodegradability</td>
<td>Not biodegradable.</td>
</tr>
<tr>
<td>12d</td>
<td>Bioaccumulation</td>
<td>Insignificant.</td>
</tr>
<tr>
<td>12e</td>
<td>Other adverse effects</td>
<td>Not Harmful to the environment.</td>
</tr>
</tbody>
</table>

### Section 13: Disposal Considerations

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

### Section 14: Transportation Information

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

### Section 15: Regulatory Information

<table>
<thead>
<tr>
<th>15a</th>
<th>CERCLA</th>
<th>Not regulated</th>
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</thead>
<tbody>
<tr>
<td>15b</td>
<td>SARA Title III</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>
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 10 January 2020