Section 1: Identification


1b Common Name: Mixed Bed ion exchange resin

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

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 = 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>
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</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.
160 Cooper Road
West Berlin, NJ 08091-9234
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.
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

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 (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 45º 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-octonol/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, e.g. nitric acid (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 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

12a Eco toxicity  
Not 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

13a General considerations  
Material is non-hazardous.

13b Disposal Containers  
Most plastic and paper containers are suitable. Avoid use of unlined metal containers.

13c Disposal methods  
No specific method necessary.

13d Sewage Disposal  
Not recommended.

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

13f Precautions for landfills  
pH of spent resin may be high or low. 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
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<thead>
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<tbody>
<tr>
<td>15c</td>
<td>Clean Air act</td>
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<tr>
<td>15d</td>
<td>Clean Water Act</td>
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<td>15e</td>
<td>TSCA</td>
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<tr>
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</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 31 March 2015