### Section 1: Identification


1b Common Name | Hydrogen form cation resin

1c Intended use | General use for all hydrogen form ion exchange applications including separate bed and mixed beds.

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 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 or black 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 | This product may alter the pH of any water that contacts it.
Warning (contains hydrogen form cation resin)

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
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 hydrogen form,

3b Ingredients
- Polystyrene sulfonate
  - CAS# 69011-20-7 (40 - 60%)
- Water
  - CAS# 7732-18-5 (40 – 60%)

**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.

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 230° C. Auto ignition can occur above 500° C.
### 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, exposure to strong bases can cause a rapid temperature increase.</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, unlined metal containers not recommended.</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. 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.</th>
</tr>
</thead>
<tbody>
<tr>
<td>7b</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

<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. Not required for normal use. Not required for limited exposure but recommended for extended contact.</td>
</tr>
<tr>
<td></td>
<td>Eye Protection</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Respiratory Protection</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Protective Gloves</td>
<td></td>
</tr>
</tbody>
</table>
Section 9: Physical and Chemical Properties

Appearance: Amber, tan or black 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 when mixed with water

Relative density: Approx 800 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.


10d Incompatible materials: Strong oxidizing agents (such as HNO₃), strong bases (such as NaOH).

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 harmful to plant or animal life.

12b Mobility
Insoluble, acidity 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. However, pH may be below general landfill limits.</th>
</tr>
</thead>
<tbody>
<tr>
<td>13b Disposal Containers</td>
<td>Most plastic and paper containers are suitable. Avoid the use of unlined metal containers.</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 organic amines and toxic vapors when burned.</td>
</tr>
<tr>
<td>13f Precautions for landfills</td>
<td>pH of spent resin may be 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 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></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