1. MATERIAL IDENTIFICATION

Product Name: **TIGA 901 RESIN**

EMERGENCY PHONE: For product emergency involving spill, leak, fire, exposure, or accident call CHEMTREC at (800) 424-9300. For all other inquires please call Resin Technology Group, LLC at (508) 230-8070.

2. COMPOSITION

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>CAS NO.</th>
<th>PERCENT</th>
<th>ACGIH TLV-TWA</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver (Metal)</td>
<td>7440-22-4</td>
<td>&lt; 80</td>
<td>0.1 mg/m³</td>
<td>0.01 mg/m³</td>
</tr>
<tr>
<td>Epoxy Resin</td>
<td>Proprietary</td>
<td>&lt; 20</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
</tbody>
</table>

Note: Due to this product’s physical composition, the release or generation of dust is not expected to occur under normal conditions of use. Abbreviations: N.E.: Not Established; RF: Respirable Fraction; TP: Total Particulate

3. HEALTH HAZARDS IDENTIFICATION

Routes of Exposure:

- Eyes: Yes
- Skin: Yes
- Inhalation: No

**Eye Contact:** May cause slight irritation to the eye. Contact with product at elevated temperatures can result in thermal burns.

**Skin Contact:** Contact can cause moderate irritation. Contact with product at elevated temperatures can result in thermal burns.

**Inhalation:** Because of its low volatility this product is not likely to be an inhalation hazard.

**Ingestion:** Based on product testing product is considered to have a low order of acute or toxicity.

4. FIRST AID MEASURES

**Eyes:** Flush eyes with plenty of water for 15 minutes while holding eyelids open. Obtain prompt medical attention.

**Skin:** Wash of in flowing water or shower.

**Inhalation:** If vapor is inhaled, remove to fresh air. Give artificial respiration if breathing has stopped. Obtain medical attention.

**Ingestion:** DO NOT induce vomiting. However, get medical advice.
5. FIRE FIGHTING MEASURES

**FLAMMABLE PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>390 °F (PMCC)</td>
</tr>
<tr>
<td>Explosive Limits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-Ignition Temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Hazardous Combustion Products</td>
<td>Decomposition and combustion products may be toxic.</td>
</tr>
</tbody>
</table>

**Fire Fighting Instructions:** Fire fighters and others who may be exposed to the products of combustion should be equipped with NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.

**Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

May burn although not readily ignitable. Wear respirator and protective clothing as appropriate. Soak up residue with an absorbent such as clay, sand or other suitable material; dispose of properly. Flush area with water to remove trace residue.

7. HANDLING and STORAGE

Store in a cool, dry, well-ventilated area. Keep away from open flames and high temperatures.

8. EXPOSURE CONTROLS and PERSONNEL PROTECTION

**Engineering Controls:** Maintain airborne concentrations below the established exposure limits. General ventilation may be acceptable, however, enclosure and local exhaust may be required to control exposure when generating vapors or mists. An eye wash facility should be readily available.

**Respiratory Protection:** Where exposure exceeds established airborne limits, use a NIOSH approved respirator, or a self-contained breathing apparatus, or a supplied air respirator as necessary to control exposure. Use an organic chemical cartridge respirator if needed.

**Skin Protection:** Wear impervious gloves and protective clothing as necessary to prevent skin contact.

**Eye Protection:** Wear chemical splash goggles or safety glasses with side shields.

9. PHYSICAL and CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Silver liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Faint epoxy odor</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>&gt;500 °F</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>10.5</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Negligible</td>
</tr>
</tbody>
</table>
10. STABILITY and REACTIVITY

Chemical Stability: Stable under normal conditions and use.

Conditions and material to Avoid: Elevated temperatures.

Hazardous Combustion or Decomposition Products: Carbon monoxide, carbon dioxide, aldehydes.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

This section provides toxicological information with regard to the pure form of the components indicated. This information can be subject to misinterpretation. It is therefore suggested that persons trained in its evaluation interpret this information.

Epoxy Resin:

LD₅₀ Acute Oral Rat: 11.4 g/kg
LD₅₀ Acute Dermal Rabbit: > 20 ml/kg
Eye Irritation: Driaze – 2 Rabbit
Skin Irritation: Driaze – 1.6 Rabbit

Note: Due to this product’s physical composition, the release or generation of dust is not expected to occur under normal conditions of use.

12. ECOLOGICAL INFORMATION

No data found.

13. DISPOSAL CONSIDERATIONS

Disposal must be made in accordance with applicable governmental regulations.

14. TRANSPORT INFORMATION

D.O.T. Classification: Not Regulated
Hazard Class: None      UN #: None      PG: None      ERG #: None      Hazard Labels: None

I.A.T.A. Classification: Not Regulated
Hazard Class: None      UN #: None      PG: None      ERG #: None      Hazard Labels: None
15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA:
The chemical components of this product are contained on section 8(B) of the chemical substance inventory list (40CFR710).

SARA Title III Information

Section 313 - Toxic Chemicals:
Pursuant to section 313 of SARA Title III, this product does not contain a toxic chemical in a concentration in excess of 1 percent of the mixture, or 0.1 percent if a carcinogen.

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver (Metal)</td>
<td>7440-22-4</td>
<td>81</td>
</tr>
</tbody>
</table>

Section 311 / 312 - Hazard Categories
Pursuant to section 311/312 of SARA title III, the physical and health hazard categories for this product are identified as follows:

- Fire Hazard: No
- Immediate (Acute) Health Hazard: Yes
- Sudden Release of Pressure Hazard: No
- Delayed (Chronic) Health Hazard: No
- Reactivity Hazard: No

STATE REGULATIONS / RIGHT TO KNOW

California Proposition 65: This product contains a chemical or chemicals known to the State of California to cause cancer and/or other reproductive toxicity.

16. OTHER INFORMATION

HMIS Hazards:
- Health: 2
- Flammability: 1
- Reactivity: 1

NFPA Hazards:
- Health: 2
- Flammability: 1
- Reactivity: 1

This information is intended solely for the use of individuals trained in the use of this particular system.

Resin Technology Group, LLC urges each customer or recipient of this MSDS to study it carefully in order to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals that are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate in order to use and understand the data contained in this MSDS.

To promote safe handling, each customer or recipient should: 1 - notify its employees, agents, contractors, and others whom it knows or believes will use this material or the information in this MSDS and any other information regarding hazards or safety. 2 - furnish this same information to each of its customers for the product. 3 - request its customers to notify their employees, customers, and other users of the product of this information.

The information contained herein is based on the data available to us and is believed to be correct. However, Resin Technology Group, LLC makes no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Resin Technology Group, LLC assumes no responsibility for injury from the use of the product described herein.
**1. MATERIAL IDENTIFICATION**

**Product Name:** TIGA 901 HARDENER

**EMERGENCY PHONE:** For product emergency involving spill, leak, fire, exposure, or accident call CHEMTREC at (800) 424-9300. For all other inquiries please call Resin Technology Group, LLC at (508) 230-8070.

**2. COMPOSITION**

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>CAS NO.</th>
<th>PERCENT</th>
<th>ACGIH TLV-TWA</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aliphatic Amine Mixture</td>
<td>Proprietary</td>
<td>&lt; 90</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>Ethanol, 2-Amino-</td>
<td>141-43-5</td>
<td>&lt; 10</td>
<td>3 ppm</td>
<td>3 ppm</td>
</tr>
</tbody>
</table>

Abbreviations: N.E.: Not Established; RF: Respirable Fraction; TP: Total Particulate

**3. HEALTH HAZARDS IDENTIFICATION**

**Routes of Exposure:**

- **Eyes:** Yes
- **Skin:** Yes
- **Inhalation:** No

**Eye Contact:** Eye contact may result in burns and permanent injury.

**Skin Contact:** Skin contact with the liquid may result in dermatitis and deep burns. May cause skin sensitization.

**Inhalation:** Moderate respiratory tract irritant.

**Ingestion:** May result in severe gastric disturbances and corrosive damage.

**4. FIRST AID MEASURES**

**Eyes:** Flush eyes with plenty of water for 15 minutes while holding eyelids open. Obtain prompt medical attention.

**Skin:** Wash affected areas with water while removing contaminated clothing. Get immediate medical attention. Launder contaminated clothing prior to reuse.

**Inhalation:** If vapor is inhaled, remove to fresh air. Administer oxygen if there is difficulty breathing. Give artificial respiration if breathing has stopped. Obtain medical attention.

**Ingestion:** DO NOT induce vomiting. Dilute with water or milk and get immediate attention.
5. FIRE FIGHTING MEASURES

**FLAMMABLE PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>&gt; 139 °F (PMCC)</td>
</tr>
<tr>
<td>Explosive Limits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-Ignition Temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Hazardous Combustion Products</td>
<td>Carbon monoxide, aldehydes, acids, and other organic substances may be formed during combustion or elevated (&gt; 500 °F) temperature degradation.</td>
</tr>
</tbody>
</table>

**Fire Fighting Instructions:** Fire fighters and others who may be exposed to the products of combustion should be equipped with NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.

**Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Wear respirator and protective clothing as appropriate. Shut off source of leak if safe to do so. Soak up residue with an absorbent such as clay, sand or other suitable material; dispose of properly. Flush area with water to remove trace residue.

7. HANDLING and STORAGE

Keep containers closed. Store in a cool, dry, well-ventilated area. Keep away from oxidizers, acids and acid forming substances as well as open flames and high temperatures.

8. EXPOSURE CONTROLS and PERSONNEL PROTECTION

**Engineering Controls:** Maintain airborne concentrations below the established exposure limits. General ventilation may be acceptable, however, enclosure and local exhaust may be required to control exposure when generating vapors or mists. An eye wash facility should be readily available.

**Respiratory Protection:** Where exposure exceeds established airborne limits, use an organic vapor respirator approved by NIOSH, or a self-contained breathing apparatus, or a supplied air respirator as necessary to control exposure.

**Skin Protection:** Wear impervious gloves and protective clothing, as necessary to prevent skin contact, like nitrile gloves.

**Eye Protection:** Wear chemical splash goggles or safety glasses with side shields.

9. PHYSICAL and CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Amber viscous liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild odor</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.17</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Negligible</td>
</tr>
</tbody>
</table>
10. STABILITY and REACTIVITY

Chemical Stability: Stable under normal conditions and use.

Conditions and Materials to Avoid: Mineral Acids

Hazardous Decomposition Products: CO, CO₂ and NOₓ

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

This section provides toxicological information with regard to the pure form of the components indicated. This information can be subject to misinterpretation. It is therefore suggested that persons trained in its evaluation interpret this information.

Aliphatic Amine Mixture:

- LD₅₀ Acute Oral Rat: 3160 mg/kg
- LD₅₀ Acute Dermal Rabbit: 2500 mg/kg
- LC₅₀ Acute Inhalation: Not Determined

Moderately irritating to the eyes and skin. May cause skin sensitization.

Note: Due to this product’s physical composition, the release or generation of dust is not expected to occur under normal conditions of use.

12. ECOLOGICAL INFORMATION

No data found.

13. DISPOSAL CONSIDERATIONS

Disposal must be made in accordance with applicable governmental regulations.

14. TRANSPORT INFORMATION

DOT Proper Shipping Name: Amines, Liquid, Corrosive, N.O.S., (Substituted Polyamine)
Class: 8         UN #: UN2735   PG: II   ERG #: 153  Hazard Label: Corrosive

IATA Proper Shipping Name: Amines, Liquid, Corrosive, N.O.S., (Substituted Polyamine)
Class: 8         UN #: UN2735   PG: II   ERG #: 153  Hazard Label: Corrosive
15. REGULATORY INFORMATION

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- Immediate (Acute) Health Hazard: Yes
- Sudden Release of Pressure Hazard: No
- Delayed (Chronic) Health Hazard: No
- Reactivity Hazard: No

STATE REGULATIONS / RIGHT TO KNOW
The following chemicals are listed by individual states; other product specific health and data in other sections of this MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>Percent</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol, 2-Amino-</td>
<td>141-43-5</td>
<td>&lt; 10</td>
<td>MA</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

HMIS Hazards:  
Health: 2  
Flammability: 1  
Reactivity: 0

NFPA Hazards:  
Health: 2  
Flammability: 1  
Reactivity: 0

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