MATERIAL SAFETY DATA SHEET

Section I – PRODUCT AND COMPANY IDENTIFICATION

Manufacturer’s Name: Technipolymers of Georgia
Address: 207 Brookhollow Industrial Blvd.
Dalton, Georgia 30721
Telephone Number: 866-251-6880
Emergency Telephone Number: 800-424-9300 (CHEMTREC)
Chemical Name/Synonyms: Unsaturated Polyester Resin in Styrene Monomer
CAS Number: None (Mixture)
Trade Name: 235023-625
Shipping Description: Resin Solution, 3, UN 1866, PGIII Marine Pollutant, Contains Styrene

Section II – HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Wt. % (approx.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene</td>
<td>100-42-5</td>
<td>30.1</td>
</tr>
</tbody>
</table>

Section III – PHYSICAL DATA

Boiling Point: >64 °C
Specific Gravity @25°C: 0.75
Solubility in Water: negligible
Percent Volatile by Weight: 30.1
Odor and Appearance: White colored solution-styrene odor

Section IV – FIRE AND EXPLOSION HAZARD DATA

Flash Point: 32 (89.6°F) TCC  OSHA Classification: IC
Flammable Limit % by Volume in Air at 212°F: Lower Explosion Limit: 2.0  Upper Explosion Limit: 12.0
Extinguishing Media: Use foam, carbon dioxide or dry chemical fire fighting apparatus.
Unusual Fire and Explosion Hazards: Keep containers tightly closed. Isolated from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat.
Special Fire Fighting Procedures: This product presents a fire hazard. Liquid quickly evaporates and forms a vapor, which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can set be set on fire by many sources such as welding equipment, pilot lights, electrical motors, and switches. Fire hazard increases with higher liquid temperature. The use of a self-contained breathing apparatus is recommended for fire fighters. Water spray may be used for cooling containers to prevent possible pressure build-up and auto-ignition or explosion when exposed to extreme heat. Avoid spreading burning liquid with water used for cooling.

Section V – HEALTH HAZARD DATA
THRESHOLD LIMIT VALUE: See section II.

Eye Contact: Severe irritation, redness, tearing and blurred vision. Follow good industrial hygiene. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the eyelids. Seek medical attention.

Skin Contact: Prolonged or repeated exposure can cause moderate irritation, defatting, dermatitis, and sensitization. Follow good industrial hygiene. Remove contaminated clothing. Wash affected skin areas thoroughly with soap and water. Seek medical attention if necessary. Wash contaminated clothing before re-use.

Inhalation: Excessive inhalation of vapors can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, and headache. High concentrations may result in narcosis. (Central nervous system depression) Follow good industrial hygiene. If excessive exposure by inhalation is suspected, remove to fresh air. Apply artificial respiration or administer oxygen, if necessary. Seek immediate medical attention.

Ingestion: Can cause gastrointestinal irritation, nausea, vomiting, and diarrhea. Follow good industrial hygiene. If ingested, do not induce vomiting, because aspiration of material into the lungs from vomiting can cause chemical pneumonitis that can be fatal. Seek medical attention.

Chronic exposure may cause damage to the Central Nervous System, Respiratory System, Lungs, Eyes, Skin, Gastrointestinal Tract, Liver, Spleen, and Kidneys.

Acute Oral Effects of Styrene: The oral LD50 in rats is over 5 grams/kg.

Acute Inhalation Effects of Styrene: The 4 hour inhalation LD50 in rats is about 26 mg/liter.

Other Health Effects: Based upon a re-evaluation of previous negative and equivocal data and an increased incidence of lung tumors after oral administration in young adult mice, the International Agency for Research on Cancer (IARC) has listed styrene among those materials for which there is limited evidence for carcinogenicity in animals.

Additional Toxicology Information: This product contains styrene. Styrene can be absorbed through the skin. Repeated prolonged skin exposure may result in absorption of harmful amounts. Symptoms of dermal overexposure are similar to those of inhalation overexposure. Over exposure to material has apparently been found to cause the following effects in laboratory animals: liver abnormalities, kidney damage, and lung damage.

Styrene has been shown to cause probable hearing loss in rats exposed for at least six hours per day for three to thirteen week at 800 ppm of styrene in air. No effects were observed in rats exposed at 200 ppm for 13 weeks. Based on animal studies and human experience, no significant risk of hearing loss is expected in occupationally exposed people.

Styrene did not cause birth defects in orally dosed rats or rats, mice, rabbits, and hamsters exposed by inhalation. Styrene given by inhalation for six hours a day during organ development has been shown to be toxic to fetal mice at 250 ppm and to fetal hamsters at 1000 ppm. Information from human experience and the result of animal studies suggest no significant risk of birth defects or reproductive toxicity of styrene to humans.

The International Agency for Research on Cancer (IARC) has classified styrene in Group 2B, possibly carcinogenic to humans. IARC has based this classification on the increased cases of cancer observed in a few cases in which rats and mice were given styrene by inhalation or by ingestion for their lifetimes. IARC considers the combined results of these cancer studies to provide “limited evidence” of carcinogenicity. Other scientists consider the results of these studies inadequate to assess human carcinogenicity because these studies had either negative or statistically inconclusive results or had serious problems such as poor study design or very high mortality. IARC also relied on styrene oxide being a metabolite of styrene in humans and on the results of two studies demonstrating stomach tumors in rats fed styrene oxide for their lifetimes. Several epidemiology studies involving workers in the styrene, polystyrene or reinforced plastics industries have been conducted. Together these studies show no increased cancer risk for occupational exposure to styrene. We believe that the data presently available for styrene does not support an increased risk of cancer or other adverse health effects when the precautions outlined in this document are followed.

Recent data does not support the change in the classification by IARC of styrene to be a suspected carcinogen: At the conclusion of a major notice and comment rulemaking revising its air contaminants regulations, OSHA concluded that the “current evidence on styrene’s carcinogenicity does not support its classification in the final rule as a carcinogen.” 54 Fed. Reg. 2430 (Jan. 19, 1989); see also 54 Fed. Reg. at 2364. In the same rulemaking, the National Institute for Occupational Safety and Health (NIOSH) commented that there “seems to be little basis from the experimental animal investigations or epidemiological studies to conclude at this time that styrene is carcinogenic.” Moreover, other scientists have independently concluded that styrene does not present a carcinogenic risk to humans. I. C. Munro, et al. “A Review of Styrene Pharmacokinetics and Carcinogenicity” (July 21, 1989) (CanTox Inc.) (U.S. EPA Safe Drinking Water Docket No. IID, Document III J2.86, Attachment C).
**Section VI – STABILITY AND REACTIVITY DATA**

**Stability:** Stable under normal conditions. Avoid exposure to excessive heat.

**Incompatibility (Materials to avoid):** Avoid contact with mineral acids, peroxides, and polymerization catalysts.

**Hazardous Polymerization:** Can occur.

**Hazardous Decomposition Products:** Thermal decomposition may yield carbon dioxide and/or monoxide.

**California SCAQMD Rule 443.1:** This product contains photo chemically reactive volatile organic compounds(s). Refer to section II and III.

**Section VII – SPILL OR LEAK PROCEDURES**

**Steps to be taken in case material is released or spilled:** Evacuate all non-essential personnel. Remove all sources of ignition. Ventilate the area. Equip employees with appropriate protection equipment (See Section VIII). Dike around spilled material. Cover spill with inert absorbent material and shovel with non-sparking tools into container. Remove containers to a safe area and seal.

**Waste Disposal:** Waste material must be disposed of in accordance with federal, state, and local environmental regulatory controls.

**Section VIII – SPECIAL PROTECTION EQUIPMENT**

**Respiratory Protection:** Avoid breathing vapors or mist. If exposure may or does exceed the occupational exposure limits (SEC IV) use a NIOSH approved respirator to prevent overexposure. In accordance with 29CFR 1910.134 use either a full-face, atmosphere-supplying respirator or an air-purifying respirator for organic vapors.

**Ventilation:** Local exhaust must be sufficient to keep airborne vapor concentrations below the TLV limit. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

**Protective Gloves:** Polyvinyl alcohol gloves.

**Eye Protection:** Splash Goggles.

**Other Protective Equipment:** Polyvinyl alcohol apron. Eye bath and safety shower. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

**Section IX – SPECIAL PRECAUTIONS**

**Storage and Handling:**
- **Drums:** Protect against physical damage. Outside or detached storage is preferred.
- **Bulk:** Storage should be in standard flammable liquid storage tanks.

**Other Precautions:** All equipment should be grounded and bonded to reduce static electricity hazard. Use non-sparking tools. Do not use or store near flame, sparks, or hot surfaces. Use only in well ventilated areas. Keep containers closed. Do not weld, heat or drill container. Replace cap or bung. Emptied containers still contain hazardous or explosive vapor or liquid. Inspect tank vents periodically. Styrene may polymerize in vents or flame arrestors of storage tanks. Minimize storage time.

**Other comments:** We recommend that containers be either professionally reconditioned for reuse by certified firms or properly disposed of by certified firms to help reduce the possibility of an accident. Disposal of containers should be in accordance with applicable federal, state, and local laws and regulations. “Empty” drums should not be given to individuals.

**Section X – TRANSPORT INFORMATION**

<table>
<thead>
<tr>
<th>DOT Shipping Name</th>
<th>Resin Solution, Flammable Liquid, UN1866</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Hazard Classification</td>
<td>3 (Flammable)</td>
</tr>
<tr>
<td>DOT Identification Number</td>
<td>UN1866</td>
</tr>
<tr>
<td>DOT Label Required</td>
<td>Flammable Liquid'</td>
</tr>
<tr>
<td>DOT Placard required</td>
<td>3 Flammable Liquid</td>
</tr>
<tr>
<td>Bill of Lading Description</td>
<td>Resin Solution, Flammable Liquid, UN 1866</td>
</tr>
<tr>
<td>UN/NA Code</td>
<td>UN1866</td>
</tr>
<tr>
<td>Reportable Quantity</td>
<td>Styrene 1297 kg</td>
</tr>
</tbody>
</table>

**Section XI – ECOLOGICAL INFORMATION**
This material is toxic to aquatic organisms and should be kept out of sewage and drainage systems and all bodies of water.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsaturated Polyester Resin</td>
<td>Mixture</td>
<td>100.0</td>
</tr>
<tr>
<td>Styrene</td>
<td>100-42-5</td>
<td>30.1</td>
</tr>
</tbody>
</table>

SARA Title III Section 302/304 Extremely Hazardous Substances: This product does contain extremely hazardous substances subject to the reporting requirements of Section 302 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 355.

SARA Title III Section 311 and 312 Health and Physical Hazard Categories per 40 CFR 370.2:

<table>
<thead>
<tr>
<th>Immediate</th>
<th>Delayed</th>
<th>Fire</th>
<th>Pressure</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

SARA Section 313 Notification: This product does contain toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

TSCA: The polymer and all components of this product are present on the United States Toxic Substances Control Act (TSCA) chemical substances inventory.

Section XIII – DISCLAIMER

The information contained in this Material Safety Data Sheet is believed to be reliable. No guarantee is implied or expressed regarding the accuracy of this information. No warranty (whether for fitness for use or for merchant ability or otherwise) is given. Nothing contained herein should be construed as a recommendation to use this product in conflict with existing patents covering any material or its use. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer’s responsibility to ensure that all activities comply with Federal, State, and Local laws. The conditions of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. For this reason and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage or disposal of the product.

Revised Date: June 2012