Section 1: Chemical Product and Company Identification

Product Name: Styrene/maleic anhydride copolymer, partial methyl ester
Catalog Number: 049
CAS#: 31959-78-1
TSCA: Listed
Molecular Formula: \((C_8H_8.C_5H_6O_4.C_4H_2O_3)x\)

Contact Information:
Scientific Polymer Products, Inc.
6265 Dean Parkway
Ontario, NY 14519
Sales: 585-265-0413
Fax: 585-265-1390
Website: www.scipoly.com

Section 2: Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Concentration (%)</th>
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<td>Styrene/maleic anhydride copolymer, partial methyl ester</td>
<td>31959-78-1</td>
<td>&gt;99</td>
</tr>
<tr>
<td>Styrene</td>
<td>100-42-5</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

Section 3: Hazards Identification

Emergency Overview: WARNING!!! Static charges generated by emptying package in or near flammable vapors may cause flash fire. May form flammable dust-air mixtures.

Potential Health Effects: May cause eye and skin irritation by mechanical abrasion. Inhalation may cause respiratory tract irritation. This material contains styrene monomer which IARC has determined to be a possible human carcinogen (Group 2B).

Section 4: First Aid Measures

Inhalation: Remove to fresh air. Get medical attention if nasal, throat or lung irritation develops.
Skin: Wash thoroughly with soap and water. Get medical attention if irritation develops or persists.

Ingestion: No adverse health effects are expected from accidental ingestion of small amounts of this product. For ingestion of large amounts do NOT induce vomiting. Get immediate medical attention.

Eyes: Remove contact lenses. Hold eyelids apart. Immediately flush with plenty of low-pressure water for at least 15 minutes. Get medical attention if irritation persists.

Section 5: Fire and Explosion Data

Flash Point: N/A
Auto-ignition Temperature: N/A

Extinguishing Media: Water spray, dry chemical, foam, carbon dioxide or clean extinguishing agents may be used on fires involving this product.
Fire-Fighting Procedures: Wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear when fighting fires involving this product. Cool containers with water to prevent rupture.

Unusual Fire Hazards: None listed

Hazardous Combustion Products: If heated to combustion, the following substances may be formed: carbon monoxide, carbon dioxide, alcohols and smoke.

Section 6: Accidental Release Measures

Ventilate area. Extinguish all sources of ignition. Avoid creating dust clouds since material can form an explosive mixture when dispersed in air. Do not blow material. Use vacuum equipment designed especially for handling combustible dust. Keep out of streams and waterways.

Section 7: Handling and Storage

General Measures: Ground all equipment. Blanket vessel with inert gas when emptying bags where flammable vapors may be present. Ground operator and pour material slowly into conductive, grounded chute. Store in a dry, well-ventilated area. Keep container closed when not in use.

Section 8: Exposure Controls/Personal Protection

Exposure Limits:
ACGIH-Threshold Limits Values-Short Term Exposure Limits (TLV-STEL): Styrene – 40 ppm STEL
ACGIH-Threshold Limits Values-Time Weight Averages (TLV-TWA): Styrene – 20 ppm TWA
OSHA-Vacated PELs—STELs (Short Term Exposure Limits): Styrene – 100ppm STEL; 425 mg/m3 STEL
OSHA-Vacated PELs-TWAs: Styrene – 50 ppm; 215 mg/m3 TWA

Engineering Measures: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Discharge from the ventilation system should comply with applicable air pollution control regulations.

Respiratory Protection: Appropriate respiratory protection is required when exposure to airborne contaminants may exceed acceptable limits. Respirators should be selected and used in accordance with OSHA, Subpart I (29 CFR 1910.134) and manufacturers recommendations.

Eye/Face Protection: Chemical goggles
Skin Protection: Impervious gloves and appropriate protective clothing

Section 9: Physical and Chemical Properties

Appearance: Powder
Styrene Content (%): 75 mole
Approximate Mw: 350,000
Softening Point: 220°C
Solubility in Water: Insoluble
Odor: Slightly aromatic
Monomethyl Ester Content (%): 10-15
Specific Gravity: 1.27
Acid Number: 460

Section 10: Stability and Reactivity

Stability: Stable under normal or recommended handling and storage
Hazardous Polymerization: Will not occur
Conditions to Avoid: None known
Materials to Avoid: None known
Section 11: Toxicological Information

Carcinogenicity Information: Not listed as a carcinogen by NTP. Not regulated as a carcinogen by OSHA. Not evaluated by IARC.
Component: Styrene: IARC 2B, possible human carcinogen

Reported Human Effects: No human toxicity studies have been carried out with this product. Due to the physical nature of this material, may cause eye, skin and respiratory irritation. SIMILAR PRODUCT: Not a primary or cumulative skin irritant, or a skin sensitizer in human patch test.

Component: Styrene: Workers exposed to 200-700 ppm experienced drowsiness, nausea, headache, fatigue and dizziness.

Reported Animals Effects: SIMILAR PRODUCT: Oral LD50 (Rat): >10,000 mg/kg; Dermal LD50 (Rabbit): >10,000 mg/kg. Slightly irritating to rabbit eyes (4.2/110, 24-hr exposure); non-irritating to rabbit skin (0.0/8.0, 24-hr. exposure).
Component: Styrene: Oral LD40 (Rat): 5 g/kg; Inhalation LC50 (rat, 2 hrs): 5,000 ppm, and (mice, 4 hrs): 2,800 ppm. Styrene reported to have caused hearing loss in laboratory animals upon exposure at 800 ppm. Female rats exposed at 1,000 ppm for up to 2 years had a slight increase in liver weight and possible increased rate of tumors of the lymphatic and blood-forming systems. Embryotoxic in rats at exposure levels that were toxic to mothers.

Mutagenicity/Genotoxicity Information: Not mutagenic based on bacterial tests of this or a similar product.
Component: Styrene: Mutagenic in Ames assays only with metabolic activation. There are indications of chromosome aberrations and breakage in animal and human studies.

Section 12: Ecological Information

No information available

Section 13: Disposal Considerations

Do not dump into any sewers, on the ground, or into any body of water. All disposal practices must be in compliance with all Federal, State/Provincial and Local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility SOLELY of the waste generator. Scientific Polymer Products, Inc. has no control over the management practices or manufacturing processes of parties handling or using this material. The information presented here pertains ONLY to the product as shipped in its intended condition described in Section 2.

Section 14: Transport Information

<table>
<thead>
<tr>
<th>US DOT:</th>
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<tr>
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</tbody>
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Section 15: Regulatory Information

Chemical Inventories:
U.S. TSCA: The components of this product are included on the TSCA Inventory.

SARA Title III – Sections 302/304: This product is not an Extremely Hazardous Substance subject to reporting under 40 CFR 355.

SARA Title III – Sections 311 and 312:
HC-2: Chronic health hazard
HC-3: Fire hazard
CERCLA/SARA – Hazardous Substances and their Reportable Quantities:
Styrene – 1,000 lb final RQ; 454 kg final RQ

RCRA: This product is not a hazardous waste listed in 40 CFR 261.33. It does not exhibit any of the hazardous characteristics listed in 40 CFR 261, Subpart C.

Section 16: Other Information

This material is intended for laboratory use ONLY. It is not sold or intended for drug, household or other uses. The information represents the most accurate and complete data available to us. However, we make NO warranty, express or implied, with respect to such information, and we assure no liability resulting from its use.

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