Section 1: Identification

Product Identifier on the Label: Triethylene glycol dimethacrylate  
Product Number: M-199  
CAS#: 109-16-0  
Chemical Family: Methacrylic ester  
Molecular Formula: C₁₄H₂₂O₆  
Synonyms: N/A  

Relevant Identified Uses of the Substances or Mixture and Uses Advised Against:

Identified Uses: Paints, adhesives and/or sealants, coatings

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party:

Scientific Polymer Products, Inc.
6265 Dean Parkway, Ontario, NY 14519

Information Telephone#: 585-265-0413  
(8 AM to 5 PM, EST, Monday to Friday)  
Information Fax#: 585-265-1390  
(8 AM to 5 PM, EST, Monday to Friday)

24 Hr. Emergency Telephone#: Chem Tel (Day or Night) 800-255-3924

Section 2: Hazards Identification

Classification of the Substance or Mixture:

H317 Skin sensitization, Category 1B

For the full text of the H-Statements mentioned in this Section, see Section 16

GHS Label Elements, including Precautionary Statements:

Pictogram:

Signal Word: Warning

Hazard Statement(s):

H317 May cause an allergic skin reaction

Supplemental Hazard Statements:

Processing may release vapors and/or fumes which cause eye, skin and respiratory tract irritation.

Precautionary Statement(s):

Prevention:
P261 Avoid breathing gas/mist/vapors/spray
P272 Contaminated work clothing should not be allowed out of the workplace
P280 Wear protective gloves

Response(s):
P302+P352 IF ON SKIN: Wash with plenty of soap and water
P333+P313 If skin irritation or rash occurs, get medical advice/attention
P363 Wash contaminated clothing before reuse

Disposal:
P501 Dispose of contents/container to an approved waste disposal plant
Supplemental Information:
Potential Health Effects: Effects due to processing releases: Irritating to eyes, respiratory system and skin. Prolonged or repeated exposure may cause headache, drowsiness, nausea, weakness, (severity of effects depends on extent of exposure).

Other: This product may release fume and/or vapor of variable composition depending on processing time and temperature. Possible cross sensitization with other acrylates and methacrylates.

Section 3: Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Concentration (%)</th>
<th>GHS Classification*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triethylene glycol dimethacrylate</td>
<td>109-16-0</td>
<td>100</td>
<td>H317</td>
</tr>
</tbody>
</table>

*For the full text of the H-Statements mentioned in this Sections, see Section 16

Section 4: First Aid Measures

Inhalation: If inhaled, remove victim to fresh air.

Skin Contact: In case of contact, immediately flush skin with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact: Immediately flush eye(s) with plenty of water.

Ingestion: If swallowed, DO NOT induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

Section 5: Fire-Fighting Measures

Extinguishing Media: Water spray, carbon dioxide (CO2), foam, dry chemical

Protective Equipment: Fire-fighters and others who may be exposed to products of combustion should wear full fire-fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand/NIOSH approved or equivalent).

Further Firefighting Advice: Fight fire from a protected location. Cool closed containers exposed to fire with water spray. Closed containers of this material may explode when subjected to heat from surrounding fire. Firefighting equipment should be thoroughly decontaminated after use.

Fire and Explosion Hazards: When burned, the following hazardous products of combustion can occur: Carbon oxides, hazardous organic compounds. Polymerization is exothermic and can degenerate into an uncontrolled reaction.

Section 6: Accidental Release Measures

In Case of Spill or Leak: Prevent further leakage or spillage if you can do so without risk. Ventilate the area. Avoid dust formation and dispersal of dust in the air. Sweep or scoop up using non-sparking tools and place into suitable properly labeled containers for prompt disposal. The sweepings should be wetted down with water. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.
### Section 7: Handling and Storage

**Handling:**

**General Information on Handling:**
Avoid breathing processing vapor or mist. Avoid prolonged or repeated contact with skin. Wash thoroughly after handling. Emptied container retains produce residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

**Storage**

**General Information on Storage Conditions:**
Keep in a dry, cool place. Store in closed containers, in a secure area to prevent container damage and subsequent spillage. Store out or direct sunlight in a cool well-ventilated place. Keep stabilizer levels constant to avoid explosive polymerization. An air space is required above the liquid in all containers; avoid storage under an oxygen-free atmosphere.

**Storage Stability Remarks:** Inhibitor levels should be maintained. The typical shelf-life for this product is 6 months.

**Storage Incompatibility – General:**
Store separate from strong oxidizing/reducing agents, free radical generators, inert gas, oxygen scavenger, peroxides.

**Temperature Tolerance – Do not store below:** 32°F (0°C)

**Temperature Tolerance – Do not store above:** 100°F (38°C)

### Section 8: Exposure Controls/Personal Protection

**Airborne Exposure Guidelines:**

**Engineering Controls:**
Investigate engineering techniques to reduce exposures below airborne exposure limits or to otherwise reduce exposures. Provide ventilation if necessary to minimize exposures or to control exposure levels to below airborne exposure limits (if applicable see above). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

**Respiratory Protection:**
Avoid breathing processing vapor or mist. Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for a give application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR 1910.134.

**Skin Protection:**
Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for give application. Avoid natural rubber gloves. Rinse immediately if skin is contaminated. Wash contaminated clothing and clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash thoroughly after handling.

**Eye Protection:** Use good industrial practice to avoid eye contact.

### Section 9: Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance:</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Mw:</strong></td>
<td>286.33</td>
</tr>
<tr>
<td><strong>Refractive Index:</strong></td>
<td>nₒ^25 1.4580</td>
</tr>
<tr>
<td><strong>Viscosity:</strong></td>
<td>11 cp (20°C)</td>
</tr>
<tr>
<td><strong>pH:</strong></td>
<td>~7</td>
</tr>
<tr>
<td><strong>Odor:</strong></td>
<td>Acrylates (slight)</td>
</tr>
<tr>
<td><strong>Specific Gravity:</strong></td>
<td>1.070 (25°C)</td>
</tr>
<tr>
<td><strong>Bp:</strong></td>
<td>162°C (15 mm)</td>
</tr>
<tr>
<td><strong>Fp:</strong></td>
<td>146°F</td>
</tr>
<tr>
<td><strong>Solubility in Water:</strong></td>
<td>Negligible</td>
</tr>
</tbody>
</table>
Section 10: Stability and Reactivity

Stability: This material is chemically stable under normal and anticipated storage, handling and processing conditions. However, this material can undergo hazardous polymerization.

Hazardous Reactions: Hazardous polymerization may occur. Polymerization is exothermic and can degenerate into an uncontrolled reaction.

Materials to Avoid: Strong oxidizing/reducing agents, free radical generators, inert gas, oxygen scavenger, peroxides

Conditions/Hazards to Avoid: This material polymerizes exothermically in the presence of heat, contamination, oxygen free atmosphere, free radicals, peroxides and inhibitor depletion liberating heat. Avoid direct sunlight. Do NOT expose to ultraviolet light.

Hazardous Decomposition Products: Thermal decomposition giving flammable and toxic products: carbon oxides, acrylates, hazardous organic compounds.

Section 11: Toxicological Information

Acute Toxicity:
Oral: Practically non-toxic (Rat) LD50 >10,000 mg/kg
Inhalation: 4 h Acute toxicity estimate >40 mg/l
Skin Irritation: Not irritating (Rabbit)
Eye Irritation: Not irritating (Rabbit)

Skin Sensitization: May cause allergic skin reaction. Guinea pig maximization test. Skin allergy was observed.

Repeated Dose Toxicity: Sub-chronic dermal administration to Rat/signs: changes in body weight, changes in organ weights/No adverse systemic effects reported.
Repeated oral administration to Rat/signs: changes in body weight, changes in organ weights/No adverse systemic effects reported.

Genotoxicity: Assessment in Vitro: No genetic changes were observed in a laboratory test using: bacteria
Genetic changes were observed in a laboratory test using: animal cells

Developmental Toxicity: Reproductive/Developmental Effects Screening Assay. Oral (Rat)/No toxicity to reproduction.
Reproduction test. Oral (Mouse)/Effects on fertility and offspring/(No birth defects were observed, toxic effects also observed in the parental animals at these doses, males not exposed to test substance)

Other Information: Cross sensitization reactions may occur with related materials.

Human Experience: Skin Contact: Skin allergy was observed in some, but not all, cases. Possible cross sensitization with other acrylates and methacrylates. Non-irritating, dilute solutions (studied using human volunteers)

Section 12: Ecological Information

Chemical Fate and Pathway: Data on this material and/or a similar material are summarized below.

Biodegradation: Readily biodegradable (28 d) biodegradation 84%
Octanol Water Partition Coefficient: log Pow 0.96 – 2.3
Ecotoxicology: Data on this material and/or a similar material are summarized below.

Aquatic Toxicity Data: Harmful. Danio rerio (Zebra fish) 96 h LC50 16.4 mg/l

Algae: Practically non-toxic. Pseudokirchneriella subcapitata (Green algae) 72 h EC50 (Growth inhibition) >100 mg/l

Chronic Toxicity to Aquatic Invertebrates: Daphnia magna (Water flea) 21 d EC10 (reproduction) 30.2 mg/l

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

US DOT:

<table>
<thead>
<tr>
<th>Proper Shipping Name:</th>
<th>Not regulated</th>
<th>Hazard Class:</th>
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<tbody>
<tr>
<td>Packing Group:</td>
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<td>UN#:</td>
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IATA:

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<tbody>
<tr>
<td>Packing Group:</td>
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Section 15: Regulatory Information

Chemical Inventory Status:

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<tbody>
<tr>
<td>EINECS</td>
<td>TSCA</td>
<td>AICS</td>
<td>DSL</td>
<td>ENCS (JP)</td>
<td>KECI (KR)</td>
<td>PICCS (PH)</td>
<td>IECSC (CN)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Conforms to</td>
<td>This product contains one or several components listed in the Canadian NDSL list. All other components are on the DSL list.</td>
<td>Conforms to</td>
<td>Conforms to</td>
<td>Conforms to</td>
<td>Conforms to</td>
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</tbody>
</table>

United States – Federal Regulations

SARA Title III-Section 302 Extremely Hazardous Chemicals: The components in this product are either not SARA Section 302 regulated or regulated but present in negligible concentrations.

SARA Title III-Section 311/312 Hazard Categories: Reactivity Hazard, Acute Health hazard

SARA Title III-Section 313 Toxic Chemicals: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)-Reportable Quantity (RQ): The components in this product are either not CERCLA regulated, regulated but present in negligible concentrations, or regulated with no assigned reportable quantity.
United States – State Regulations:
New Jersey Right-to-Know: No components are subject to the New Jersey Right-to-Know Act
Pennsylvania Right-to-Know: Triethylene glycol dimethacrylate, CAS# 109-16-0

California Proposition 65: WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
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<tbody>
<tr>
<td>Benzene, methyl-</td>
<td>108-88-3</td>
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</table>

Section 16: Other Information

Full text of H-Statements referred to under Sections 2 and 3.
H317 May cause an allergic skin reaction

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.

<table>
<thead>
<tr>
<th>NFPA</th>
<th>HMIS</th>
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<tbody>
<tr>
<td>Health</td>
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<td>Instability</td>
<td>Physical Hazards</td>
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