Section 1. Product and Company Identification

Product Name: AP-Silane 71T
Chemical Name/Family: γ-Methacryloxypropyl trimethoxy silane
CAS No.: Mixture
Product Use: Coupling Agent
Restrictions: For Industrial Use Only
Company: Advanced Polymer, Inc.
Address: 400 Paterson Plank Road Carlstadt, NJ 07072 U.S.A.
Telephone: 201-933-0600
Fax: 201-933-8442
24 Hour Emergency Number 800-424-9300
24 Hour Chemtrec Number 800-424-9300

Section 2. Hazards Identification

GHS Classification:

Physical Hazards

- Flammable liquids Category 3

Health Hazards

- Acute Toxicity, inhalation Category 4

Environmental Hazards Not Classified

GHS Label:

Pictogram:

Signal Word: Warning

Hazard Classification:

Hazard Statement:

- Flammable liquid and vapor
- Harmful if inhaled

Other Hazard(s):
Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion. This product slowly reacts with water, acids or bases to evolve into methanol.

Potential Health Effects:
Ingestion: Not expected in an industrial setting; however, this product is low ingestion hazard.
Inhalation: Harmful if inhaled.
Skin Contact: No adverse effects due to skin contact are expected.
Eye Contact: Direct contact with eyes may cause temporary irritation.
Precautionary Statement:

Prevention:
- Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
- Keep container tightly closed.
- Ground/Bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lightning and other equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Wear protective gloves/eye protection/face protection.
- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Use only outdoors or in a well-ventilated area.

Response:
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- In case of fire: Use foam, dry chemical CO₂ for extinguination.
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Call a POSION CENTER or doctor/physician if you feel unwell.

Storage:
- Store in a well-ventilated place. Keep cool.

Disposal:
- Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>γ-Methacryloxypropyl trimethoxy silane</td>
<td>Mixture</td>
<td>&gt;98.0</td>
</tr>
</tbody>
</table>

### Section 4. First Aid Measures

<table>
<thead>
<tr>
<th>Skin Contact</th>
<th>Immediately wash skin with soap and water. Wash contaminated clothing before reuse. Get medical attention if irritation develops and persists.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Contact</td>
<td>Immediately flush eyes with plenty of water. Remove contact lenses, if present and easy to do. Seek medical attention.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Immediately remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Please note: Symptoms may be delayed; prompt medical attention may be required. Call a physician.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Rinse mouth. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.</td>
</tr>
</tbody>
</table>
Section 5. Firefighting Measures

- **Fire and Explosion Hazard:** Fire hazard. Vapors or gases may ignite at distant ignition sources and flash back. By heating and fire, harmful vapors/gases may be formed.
- **Fire Extinguishing Media:** Foam, dry chemical powder, CO₂.
- **Unsuitable Extinguishing Media:** None known.
- **Specific Hazards in Case of Fire:** Move container from fire area if it can be done without risk. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products. Cool container with water spray.
- **Special Fire Fighting Information:** Evacuate personnel to a safe area. Wear self-contained breathing apparatus. Wear full protective equipment.

Section 6. Accidental Release Measures

- **Personal Precautions:** Keep unnecessary personnel away. Evacuate personnel to safe areas. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Vapours can accumulate in low areas. Wear appropriate personal protective equipment.
- **Protective Equipment:** Wear appropriate personal protective equipment (e.g. safety goggles, protective gloves, dust respirators).
- **Environmental Precautions:** Prevent further leakage or spillage if safe to do so.
- **Methods and Materials for Containment and Cleaning up:** Turn off ignition sources if this is without risk. Soak up with sand, oil dry or other absorbent material and place in a chemical waste container. Use only non-sparking tools. Dispose in appropriate containers. Prevent entry into waterways, sewer, basements or confined areas.

Section 7. Handling and Storage

- **Handling Conditions:** Do not handle, store or open near an open flame, sources of heat or sources of ignition. When using do not smoke. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Wear appropriate personal protective equipment. Avoid release to the environment. Do not empty into drains. **Agitate contents of container before using**
- **Storage Conditions:** Keep away from heat, sparks and open flame. Store in a well-ventilated place at temperatures below 120°F. Keep container tightly closed, away from direct sunlight. ***Agitate contents of container before using***

Section 8. Exposure Control/Personal Protection

- **Exposure Limits:** Methanol (CAS# 67-56-1)
  - ACGIH:
    - STEL: 250mg/m³; TWA: 200ppm
  - OSHA Table Z-1:
    - PEL: 260mg/m³; 200ppm
  - US NIOSH:
    - STEL: 325mg/m³; 250 ppm
    - TWA: 250ppm; 260mg/m³; 200ppm
- **Appropriate engineering** Explosion-proof general and local exhaust ventilation. Provide an emergency
controls: eye wash fountain and quick drench shower in the immediate work area.

Personal protective equipment:
Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH when airborne concentrations are above the applicable exposure limits.
Hand Protection: Chemical resistant gloves.
Eye Protection: Safety glasses with side shields should be worn.
Skin and Body Protection: Wear appropriate chemical resistant clothing.
Hygiene Measures: Wash hands thoroughly after handling.

Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Light straw, transparent</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight odor</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>N.A.</td>
</tr>
<tr>
<td>Specific Gravity (77°F)</td>
<td>0.97</td>
</tr>
<tr>
<td>% Volatile by Weight</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>~32°C (89.6°F) – Cleveland Open Cup</td>
</tr>
<tr>
<td>Evaporation Rate (BuAc=1)</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Flammability</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Pressure (mmHg)</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Density (Air=1)</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water (Hydrolyzed with water)</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>No information available</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No information available</td>
</tr>
</tbody>
</table>

Section 10. Stability and Reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Stability</td>
<td>Stable at normal temperatures and pressure.</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>May not occur.</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Avoid heat, flames, sparks and other sources of ignition. Avoid extreme temperature and direct sunlight. Hydrolyzed with water but no hazard.</td>
</tr>
<tr>
<td>Incompatible Materials</td>
<td>Strong oxidizing agents, water, acids or alkalis.</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Thermal decomposition products: Oxides of carbon and silicone.</td>
</tr>
</tbody>
</table>

Section 11. Toxicological Information

<table>
<thead>
<tr>
<th>Route of Entry</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye</td>
<td>Yes</td>
</tr>
<tr>
<td>Skin</td>
<td>Yes</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Yes</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Signs and Symptoms of Exposures: No information available. In the event of direct contact of the liquid on skin, eyes, or in the lungs, seek medical attention.

Acute Toxicity: No information available.
Chronic Toxicity: No information available.
Respiratory or Skin Sensitization: No information available
Mutagenicity: No information available
Carcinogenicity:

<table>
<thead>
<tr>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Section 12. Ecological Information

Ecotoxicity (Aquatic and Terrestrial): No information available
Bioaccumulative Potential: No information available
Mobility in Soil: No information available
PBT and vPvB Assessment: No information available
Other Adverse Effects: No information available

Section 13. Disposal Considerations

Product: Can be burned in chemical incinerator equipped with afterburner and scrubber but exert extra care in igniting as this product is very flammable. Do not dump into sewers, on the ground or into any body of water. Do not dispose unlawfully. Observe all federal, state, and local laws.

Disposing of Contaminated Packaging: Do not dispose of the emptied container unless the contents have been completely removed and container has been flushed with a clean neutral solvent and then dried up. Contact a licensed professional waste disposal service to dispose of this material.

Section 14. Transport Information

Land Transport (DOT):
UN Number: UN1993
UN Proper Shipping Name: Flammable Liquids, N.O.S. (contains trimethoxyvinylsilane)
Transport Hazard Class: 3
Packing Group: III

Sea Transport (IMDG):
UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (contains trimethoxyvinylsilane)
Transport Hazard Class: 3
Packing Group: III

Air Transport (IATA):
UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (contains trimethoxyvinylsilane)
Transport Hazard Class: 3
Packing Group: III

Environmental Hazards (e.g., Marine pollutant): None
Section 15. Regulatory Information

International Inventories:
- TSCA (USA): Listed
- DSL (Canada): No information available
- ENCS (Japan): No information available
- EINECS (Europe): Listed
- IECSC (China): No information available
- KECL (Korea): No information available
- PICCS (Philippines): No information available
- AICS (Australia): No information available
- ERMA (New Zealand): No information available

Federal Regulations:
- SARA 313: None
- SARA 311/312: Fire Hazard
- Clean Water Act: No information available
- Clean Air Act, Section 112 HAPs (See 40CFR61): No information available

State Regulations:
- Massachusetts Right to Know Components: No information available
- New Jersey Right to Know Components: No information available
- Pennsylvania Right to Know Components: No information available
- California Proposition 65: None

Section 16. Other Information

WHMIS Classification: No information available

HMIS Rating:
- Health Hazard: 2
- Flammability: 3
- Physical Hazard: 0
- Personal Protection Equipment: X

NFPA Rating
- Health Hazard: 2
- Fire Hazard: 3
- Reactivity Hazard: 0

Date Prepared ......................... June 11, 2015
Prepared By .......................... Advanced Polymer, Inc.
Date Revised .......................... December 28, 2016
Revised By .............................. Advanced Polymer, Inc.

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