APS-P35 Adhesion Promoter

Section 1. Product and Company Identification

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>APS-P35 Adhesion Promoter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name/Family:</td>
<td>Silane/Siloxane Alkoxyl Oligomer</td>
</tr>
<tr>
<td>CAS No.:</td>
<td>Proprietary</td>
</tr>
<tr>
<td>Product Use:</td>
<td>Adhesion Promoter</td>
</tr>
<tr>
<td>Restrictions:</td>
<td>For Industrial Use Only</td>
</tr>
<tr>
<td>Company:</td>
<td>Advanced Polymer, Inc.</td>
</tr>
<tr>
<td>Address:</td>
<td>400 Paterson Plank Road Carlstadt, NJ 07072 U.S.A.</td>
</tr>
<tr>
<td>Telephone:</td>
<td>201-933-0600</td>
</tr>
<tr>
<td>Fax:</td>
<td>201-933-8442</td>
</tr>
<tr>
<td>24 Hour Emergency Number</td>
<td>800-424-9300</td>
</tr>
<tr>
<td>24 Hour Chemtrec Number</td>
<td>800-424-9300</td>
</tr>
</tbody>
</table>

Section 2. Hazards Identification

GHS Classification:

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Hazards</td>
<td></td>
</tr>
<tr>
<td>Flammable liquids</td>
<td>Category 2</td>
</tr>
<tr>
<td>Health Hazards</td>
<td></td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
</tr>
<tr>
<td>Acute toxicity, inhalation</td>
<td>Category 4</td>
</tr>
<tr>
<td>Environmental Hazards</td>
<td></td>
</tr>
<tr>
<td>Hazardous to the aquatic environment, acute toxicity</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

GHS Label:

Symbol:

Signal Word: Danger
Hazard Classification:

Hazard Statement:
- Highly flammable liquid and vapour
- May cause an allergic skin reaction
- Causes serious eye damage
- Harmful if inhaled
- Toxic to aquatic life

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/lighting equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Contaminated work clothing should not be allowed out of the workplace.
- Use only outdoors or in a well-ventilated area.
- Avoid release to the environment

Response
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- In case of fire: Use water fog, foam, dry chemical powder or carbon dioxide (CO2) for extinction.
- IF ON SKIN: Wash with plenty of soap and water.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Immediately call a POISON CENTER or doctor/physician.
- Call a POISON 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>Silane/Siloxane Alkoxy Oligomer</td>
<td>Mixture</td>
<td>90.0 – 100.0</td>
</tr>
<tr>
<td>Methanol (Impurity)</td>
<td>67-56-1</td>
<td>&lt;1.0</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

Skin Contact: Remove/take off immediately all contaminated clothing and wash before reuse. Rinse skin with water/shower. Wash with plenty of soap and water. Get medical advice/attention.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5. Firefighting Measures

Specific Hazards in Case of Fire: Highly flammable liquid and vapor. By heating and fire, harmful vapors/gases may be formed.

Fire Extinguishing Media: Foam or carbon dioxide (CO2).

Unsuitable Extinguishing Media: Water.

Special Protective Equipment and Precaution for Firefighters: Evacuate personnel to a safe area. Wear self-contained breathing apparatus. Wear full protective equipment. In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Water runoff can cause environmental damage.

Unusual Fire & Explosion Hazards: No information available

Section 6. Accidental Release Measures

Personal Precautions: Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Ventilate closed spaces before entering them.

Protective Equipment: Wear appropriate protective equipment.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Shut off all sources of ignition.

Methods and Materials for Containment and Cleaning up: Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Section 7. Handling and Storage

Handling Conditions: Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. 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. Vapors may form explosive mixtures with air. Provide adequate ventilation. Avoid contact with water or moisture. Avoid release to the environment. Do not empty into drains. Avoid contact with eyes, skin and clothing. Wear suitable gloves and eye/face protection.

Storage Conditions: Keep container tightly closed in a dry and well-ventilated place. Keep away from heat, sparks and flame. Do not lay the container on its side. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Do not puncture or cut this container, and do not weld on or near this container. Keep out of reach of children.

Section 8. Exposure Control/Personal Protection

Exposure Limits: Methanol, CAS #: 67-56-1 (Impurity)
ACGIH TLV-TWA : 200 ppm; STEL : 250 ppm
OSHA PEL : 260 mg/m3, 200 ppm
NIOSH STEL : 325 mg/m3, 250 ppm ; TWA : 260 mg/m3, 200 ppm

Appropriate engineering controls: Explosion-proof general and local exhaust ventilation. Provide eyewash station.

Personal protective equipment:
Respiratory Protection: NIOSH approved respirator as needed
Hand Protection: Rubber or plastic gloves should be worn
Eye Protection: Face shield or protective goggles should be worn
Skin and Body Protection: Rubber apron
Other Protective Equipment: Eye wash equipment and safety shower should be available.
Hygiene Measures: Avoid breathing vapor. Avoid contact with eyes and skin. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Section 9. Physical and Chemical Properties

Physical State: Liquid
Color: Colorless, transparent
Odor: Slight odor
Odor Threshold: No information available
% Non-volatile by Weight: No information available
pH: No information available
Specific Gravity (77°F): 0.94
% Volatile by Weight: No information available
Melting Point: No information available
Freezing Point: No information available
Boiling point: >102°C
Flash Point: > 46.4 °F (8 °C) Closed Cup
Evaporation Rate (BuAc=1): No information available
Flammability: No information available
Explosion Limits: No information available
Vapor Pressure (mmHg): No information available
Vapor Density (Air=1): No information available
Solubility: Not soluble (Reacts with water)
Partition Coefficient: No information available
Auto-ignition Temperature: No information available
Viscosity: No information available
Decomposition Temperature: No information available

Section 10. Stability and Reactivity

Chemical Stability: Stable at normal conditions. Slowly reacts with water, acids or bases.
Hazardous Polymerization: May not occur
Conditions to Avoid: Store in a well-ventilated place at temperatures below 120°F.
Incompatible Materials: Strong oxidizing agents. Water, acids or alkalis.
Hazardous Decomposition Products: This product slowly reacts with water, acids or bases to evolve following compounds: Methanol
Thermal breakdown of this product during fire or very high heat condition may evolve the following hazardous decomposition product: Carbon oxides and traces of incompletely burned carbon compounds.
Silicon dioxide.

Section 11. Toxicological Information

Potential Health Effects:
Inhalation: Harmful if inhaled.
Ingestion: Although ingestion is unlikely, liquid may irritate upper digestive tract if swallowed.
Skin: Causes skin irritation. May cause an allergic skin reaction
Eyes: Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Acute Toxicity: Methanol, CAS#: 67-56-1 (Impurity)
  Dermal LD50 (Rabbit) : 15800 mg/kg
  Inhalation LC50 (Rat) : 64000 ppm, 4 Hours ; 87.5 mg/l, 6 Hours
  Oral : LD50 Mouse : 7300 mg/kg
        Rabbit : 14.4 g/kg
        Rat : 5628 mg/kg

Chronic Toxicity: No information available.
Respiratory Sensitization: No information available.
Skin Sensitization: Positive (Guinea pig)
Specific target organ toxicity - single exposure: May cause damage to the following organs:
Optic nerves. Central nervous system. [methanol]
Specific target organ toxicity - repeated exposure: No information available.
Mutagenicity: Negative (Ames test, Chromosome analysis, Micronucleus test)
Carcinogenicity:

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

Section 12. Ecological Information

Ecotoxicity (Aquatic and Terrestrial): Methanol, CAS # 67-56-1 (Impurity)
- Crustacea EC50 Water flea (Daphnia magna) > 10000 mg/l, 48 hours
- Fish LC50 Fathead minnow (Pimephales promelas) > 100 mg/l, 96 hours

Bioaccumulative Potential: No information available
Mobility in Soil: No information available
PBT and vPvB Assessment: No information available
Other Adverse Effects: Easily causes hydrolysis in water or atmosphere.

Section 13. Disposal Considerations

Product: Dispose of according to State, Local and EPA regulations. Can be burned in a chemical incinerator equipped with an afterburner and scrubber.

Disposing of Contaminated Packaging: Do not dispose if unopened. Do not disposed emptied container unless the contents have been completely removed and container has been flushed with a clean neutral solvent and then dried up. Do not dispose the emptied container unlawfully. Observe all federal state and local laws.

Section 14. Transport Information

Land Transport (DOT):
- UN Number: UN1993
- UN Proper Shipping Name: Flammable liquid N.O.S. (Methyltrimethoxysilane)
- Transport Hazard Class: 3
- Packing Group: II

Sea Transport (IMDG/IMO):
- UN Number: UN1993
- UN Proper Shipping Name: Flammable liquid N.O.S. (Methyltrimethoxysilane)
- Transport Hazard Class: 3
- Packing Group: II

Air Transport (IATA):
- UN Number: UN1993
- UN Proper Shipping Name: Flammable liquid N.O.S. (Methyltrimethoxysilane)
- Transport Hazard Class: 3
- Packing Group: II

Environmental Hazards (e.g., Marine pollutant): Contains organosilane

Section 15. Regulatory Information

International Inventories:
- TSCA (USA): Listed
- DSL (Canada): Listed
- ENCS (Japan): Listed
EINECS (Europe): Listed
IECSC (China): Listed
KECL (Korea): Listed
PICCS (Philippines): Listed
AICS (Australia): Listed
ERMA (New Zealand): Listed

**Federal Regulations:**
- **SARA 313:** Methanol, CAS # 67-56-1 (Impurity)
- **SARA 311/312:** No information available
- **Clean Water Act:** No information available
- **Clean Air Act, Section 112 HAPs (See 40CFR61):** No information available

**State Regulations:**
- **Massachusetts Right to Know Components:** Methanol, CAS # 67-56-1 (Impurity)
- **New Jersey Right to Know Components:** Methanol, CAS # 67-56-1 (Impurity)
- **Pennsylvania Right to Know Components:** Methanol, CAS # 67-56-1 (Impurity)
- **California Proposition 65:** Methanol, CAS # 67-56-1 (Impurity)

## Section 16. Other Information

**WHMIS Classification:** No information available

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

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

Date Prepared: March 20, 2015
Prepared By: Advanced Polymer, Inc.
Date Revised: November 11, 2016
Revised By: Advanced Polymer, Inc.

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