AP-Silane 33

Section 1. Product and Company Identification

Product Name: AP-Silane 33
Chemical Name/Family: 3-aminopropyltriethoxy silane
CAS No.: 919-30-2
Product Use: Coupling Agent, Surface Treatment 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:
- Acute toxicity, oral Category 4
- Skin corrosion/irritation Category 1B
- Serious eye damage/eye irritation Category 1
- Sensitization, skin Category 1

GHS Label:

Symbol:

Signal Word: Danger

Hazard Classification:

Hazard Statement:
- Harmful if swallowed
- Causes severe skin burns and eye damage
- Causes serious eye damage
- May cause allergic skin reaction

Precautionary Statement:

Prevention
- Wash hands and contaminated skin thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wear protective gloves/eye protection/face protection.
- Contaminated work clothing should not be allowed out of the workplace.
Response

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before use.
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.
Specific treatment (see supplemental first aid instructions on this label).
IF IN EYES: Rinse cautiously with water for several minute. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.

Storage

Store in a well-ventilated place. Keep cool.
Store locked up.

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>3-aminopropyltriethoxy silane</td>
<td>919-30-2</td>
<td>95-100%</td>
</tr>
</tbody>
</table>

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Section 4. First Aid Measures

Skin Contact: Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of soap and water. Wash contaminated clothing before use. If skin irritation or rash occurs: Get medical advice/attention.

Eye Contact: Rinse cautiously with water for several minute. Remove contact lenses, if present and easy to do. Continue rinsing.

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

Ingestion: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.

Section 5. Firefighting Measures

Specific Hazards in Case of Fire: By heating and fire, harmful vapors/gases may be formed. Nitrogen oxides (corrosive).

Fire Extinguishing Media: Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable Extinguishing Media: Water.

Special Protective Equipment and Precaution for Firefighters: Do not release runoff from fire control methods to sewers or waterways. Under fire conditions, material may decompose to form flammable
and/or explosive mixtures in air. Use waterspray to cool unopened containers. Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

Unusual Fire & Explosion Hazards: No unusual fire or explosion hazards noted.

Section 6. Accidental Release Measures

Personal Precautions: Eliminate sources of ignition. Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Do not touch or walk through spilled material. Ensure adequate ventilation. Do not breathe mist or vapor. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Protective Equipment: Wear appropriate personal protective equipment.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

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: Use care in handling/storage. Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains. **Agitate contents of container before use**

Storage Conditions: Store locked up. Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Keep in original container.

Section 8. Exposure Control/Personal Protection

Exposure Limits: No information available.

Appropriate engineering controls: Provide adequate general and local exhaust ventilation.

Personal protective equipment:
- Respiratory Protection: If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection.
- Hand Protection: Wear appropriate chemical resistant gloves.
- Eye Protection: Tightly sealed safety glasses.
- Skin and Body Protection: Wear appropriate chemical resistant clothing. Wear appropriate thermal protective clothing, when necessary.
- Hygiene Measures: When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Handle in accordance with good industrial hygiene and safety practice.
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>Colorless, clear</td>
</tr>
<tr>
<td>Odor</td>
<td>Amine odor</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific Gravity (77°F)</td>
<td>0.94</td>
</tr>
<tr>
<td>% Volatile by Weight</td>
<td>100</td>
</tr>
<tr>
<td>Melting Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>422.6 °F (217 °C)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>203 °F (95 °C) Closed Cup</td>
</tr>
<tr>
<td></td>
<td>208.4 °F (98 °C) Open Cup</td>
</tr>
<tr>
<td>Evaporation Rate (BuAc=1)</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Flammability</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion Limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure (25°C)</td>
<td>&lt; 1.3 kPa</td>
</tr>
<tr>
<td>Vapor Density (Air=1)</td>
<td>7.6</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>&gt; 392 °F (&gt; 200 °C)</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
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</tbody>
</table>

Section 10. Stability and Reactivity

<table>
<thead>
<tr>
<th>Stability</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Stability</td>
<td>Stable at normal conditions. Slowly reacts with water, acids or bases.</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>May not occur</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Contact with water or moisture until ready for use. Heat, flames and sparks.</td>
</tr>
<tr>
<td>Incompatible Materials</td>
<td>Strong oxidizing agents. Water, acids or alkalis</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>This product slowly reacts with water, acids or bases to evolve following compounds: Ethanol</td>
</tr>
<tr>
<td></td>
<td>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. Nitrogen oxides.</td>
</tr>
</tbody>
</table>

Section 11. Toxicological Information

<table>
<thead>
<tr>
<th>Route of Entry</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Routes of Entry</td>
<td></td>
</tr>
<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>

<table>
<thead>
<tr>
<th>Potential Health Effects</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Prolonged inhalation may be harmful. May cause irritation to the respiratory system.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Causes digestive tract burns. Harmful if swallowed.</td>
</tr>
</tbody>
</table>
Skin: Causes severe skin burns. May cause an allergic skin reaction.
Eyes: Causes serious eye damage.

**Signs and Symptoms of Exposures:**

**Acute Toxicity:**
Harmful if swallowed. May cause an allergic skin reaction.

*3-Aminopropyltriethoxysilane:*
- LD50 Dermal (Rabbit): 4290 mg/kg
- LD50 Oral (Rat): 1570 - 3650 mg/kg; 1780 mg/kg

**Chronic Toxicity:**
Prolonged inhalation may be harmful.

**Skin corrosion/irritation:**
- SKIN - RABBIT: 5mg/24Hr SEVERE

**Serious eye damage/eye irritation:**
- EYE - RABBIT: 0.75mg/24Hr SEVERE

**Respiratory Sensitization:**
No data available.

**Skin Sensitization:**
May cause an allergic skin reaction.

**Mutagenicity:**
Negative (Ames Test)

**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):**
- 3-Aminopropyltriethoxysilane:
  - Fish LC50 (Oryzias latipes) >1000 mg/l, 48 hr

**Bioaccumulative Potential:**
No data available.

**Mobility in Soil:**
No data available.

**PBT and vPvB Assessment:**
No data available.

**Other Adverse Effects:**
No data available.

**Section 13. Disposal Considerations**

**Product:** This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Disposing of Contaminated Packaging:** Dispose of as unused product.

**Section 14. Transport Information**

**Land Transport (DOT):**
- UN Number: UN3267
- UN Proper Shipping Name: Corrosive liquid, basic, organic, n.o.s. (3-aminopropyltriethoxysilane)
- Transport Hazard Class: 8
- Packing Group: II

**Sea Transport (IMDG):**
- UN Number: UN3267
- UN Proper Shipping Name: Corrosive liquid, basic, organic, n.o.s. (3-aminopropyltriethoxysilane)
- Transport Hazard Class: 8
- Packing Group: II

**Air Transport (IATA):**
Section 15. Regulatory Information

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

Federal Regulations:
- SARA 313: No data available.
- SARA 311/312: No data available.
- Clean Water Act: No data available.
- Clean Air Act, Section 112 HAPs (See 40CFR61): No data 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: No information available.

Section 16. Other Information

WHMIS Classification: No data available.

HMIS Rating:
- Health Hazard: 3
- Flammability: 1
- Physical Hazard: 0
- Personal Protection Equipment: X

NFPA Rating
- Health Hazard: 3
- Fire Hazard: 1
- Reactivity Hazard: 0

Date Prepared ....................... June 15, 2015
Prepared By .......................... Advanced Polymer, Inc.
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