

## AP-Silane 31

---

### Section 1. Product and Company Identification

---

Product Name: AP-Silane 31  
Chemical Name/Family: 3-(2-aminoethylamino)propyl-methyl-dimethoxysilane  
CAS No.: 3069-29-2  
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 4

##### Health Hazards

Acute toxicity, oral Category 4

Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 1

Sensitization, skin Category 1A

##### Environmental Hazards

Not classified

#### GHS Label:



Symbol:

Signal Word: **Danger**

#### Hazard Classification:

##### Hazard Statement:

Combustible liquid

Harmful if swallowed

Causes skin irritation

Causes serious eye damage

May cause an allergic skin reaction

**Precautionary Statement:**

**Prevention**

- Keep away from flames and hot surfaces. – No smoking.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Wash hands and exposed skin thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Contaminated work clothing should not be allowed out of the workplace.

**Response**

- In case of fire: Use foam, dry chemical powder, Carbon Dioxide (CO<sub>2</sub>).
- IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- Rinse mouth.
- IF ON SKIN: Wash with plenty of soap and water.
- Specific treatment (see supplemental first aid instructions on this SDS).
- If skin irritation or rash occurs: Get medical advice/attention.
- IF IN EYES: 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.
- Take off contaminated clothing and wash before reuse.

**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**

---

Ingredients	CAS No.	Percent
3-(2-aminoethylamino)propyl-methyl-dimethoxysilane	3069-29-2	>98
Methanol (impurity)	67-56-1	<1

---

**Section 4. First Aid Measures**

---

- Skin Contact:** Remove contaminated clothing immediately and wash skin with soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
- Eye Contact:** Rinse immediately with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
- Inhalation:** Move to fresh air. Call a physician if symptoms develop or persist.
- Ingestion:** Rinse mouth. Get medical attention immediately.
- Other Symptoms & effects, acute and delayed** Dermatitis. Rash. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. May cause an allergic skin reaction.

---

## Section 5. Firefighting Measures

---

<b>Fire and Explosion Hazard:</b>	By heating and fire, harmful vapors/gases may be formed. Nitrogen oxides. (corrosive)
<b>Fire Extinguishing Media:</b>	Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable Extinguishing Media:</b>	No Information Available
<b>Special Fire Fighting Information:</b>	Firefighters must use standard protective equipment including flame retardant coat, helmet, gloves, rubber boots, and self-contained breathing apparatus. 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.

---

## Section 6. Accidental Release Measures

---

<b>Personal Precautions:</b>	Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Ensure adequate ventilation. Wear appropriate personal protective equipment. Avoid breathing mist or vapor.
<b>Protective Equipment:</b>	Wear appropriate protective equipment.
<b>Environmental Precautions:</b>	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Shut off all sources of ignition.
<b>Methods and Materials for Containment and Cleaning up:</b>	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material.  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. Never return spills in original containers for re-use.

---

## Section 7. Handling and Storage

---

<b>Handling Conditions:</b>	Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Use care in handling/storage. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains.
<b>Storage Conditions:</b>	Keep away from heat, sparks and open flame. Keep container tightly closed. Store in a well-ventilated place. Keep out of the reach of children. Store in a cool, dry place out of direct sunlight. Keep in original container.

---

## Section 8. Exposure Control/Personal Protection

---

<b>Exposure Limits:</b>	<b>Methanol (Impurity) (CAS# 67-56-1):</b> <b>OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)</b> PEL 260 mg/m <sup>3</sup> ; 200 ppm
-------------------------	---

**ACGIH Threshold Limit Values**

STEL 250 ppm

TWA 200 ppm

**NIOSH: Pocket Guide to Chemical Hazards**

STEL 325 mg/m<sup>3</sup>; 250 ppm

TWA 260 mg/m<sup>3</sup>; 200 ppm

**Appropriate engineering controls:**

Local Exhaust: Recommended

Mechanical (general): Adequate ventilation system

**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**

<b>Physical State:</b>	Liquid
<b>Color:</b>	Colorless, transparent
<b>Odor:</b>	Amine odor
<b>Odor Threshold:</b>	No information available
<b>% Non-volatile by Weight:</b>	No information available
<b>pH:</b>	No information available
<b>Specific Gravity (77°F):</b>	1.02
<b>% Volatile by Weight:</b>	100
<b>Melting Point:</b>	< 32 °F (< 0 °C)
<b>Freezing Point:</b>	No information available
<b>Boiling point:</b>	453.2 °F (234 °C)
<b>Flash Point:</b>	186.8 °F (86 °C) Closed Cup 230 °F (110 °C) Open Cup
<b>Evaporation Rate (BuAc=1):</b>	<1
<b>Flammability:</b>	No information available
<b>Explosion Limits:</b>	No information available
<b>Vapor Pressure (25°C):</b>	<1.3kPa
<b>Vapor Density (Air=1):</b>	7.1
<b>Solubility:</b>	Soluble in water
<b>Partition Coefficient:</b>	No information available
<b>Auto-ignition Temperature:</b>	>392°F (200°C)
<b>Viscosity:</b>	No information available
<b>Decomposition Temperature:</b>	No information available

---

## Section 10. Stability and Reactivity

---

<b>Chemical Stability:</b>	Stable
<b>Reactivity:</b>	Slowly react with water, acids or bases.
<b>Hazardous Polymerization:</b>	May not occur
<b>Conditions to Avoid:</b>	Store in a well-ventilated place at temperatures below 120°F.
<b>Incompatible Materials:</b>	Will hydrolyze with water, but no hazard. Avoid contact with acids, bases and water.
<b>Hazardous Decomposition Products:</b>	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.

---

## Section 11. Toxicological Information

---

<b>Potential Health Effects:</b>	
Inhalation	Prolonged inhalation may be harmful.
Ingestion:	Harmful if swallowed.
Skin:	Causes skin irritation. May cause an allergic skin reaction.
Eyes:	Causes serious eye damage.
<b>Acute Toxicity:</b>	Harmful if swallowed. May cause an allergic skin reaction. Dermatitis. Rash. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain. May cause an allergic skin reaction.
	3-(2-Aminoethylamino)propyl-methyl-dimethoxysilane (CAS 3069-29-2) <b>Acute</b> Oral LD50 Rat > 2000 mg/kg; 200 - 2000 mg/kg
	Methanol(Impurity) (CAS 67-56-1) <b>Acute</b> 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
<b>Chronic Toxicity:</b>	No information available
<b>Skin corrosion/irritation:</b>	No information available
<b>Serious eye damage/eye irritation:</b>	Eye-Rabbit : 15mg Severe
<b>Respiratory Sensitization:</b>	No information available
<b>Skin Sensitization:</b>	May cause an allergic skin reaction.
<b>Mutagenicity:</b>	No information available
<b>Reproductive toxicity:</b>	Reproductive effect: NOAEL 1000mg/kg/day(Rat), Developmental toxicity:NOAEL 1000mg/kg/day(Rat)
<b>Specific target organ toxicity - single exposure</b>	May cause damage to the following organs. Optic nerves. Central nervous system. [Methanol]
<b>Specific target organ toxicity - repeated exposure</b>	No information available

**Aspiration hazard** No information available

**Carcinogenicity:**

IARC:	No	NTP:	No	OSHA:	No
-------	----	------	----	-------	----

## Section 12. Ecological Information

**Ecotoxicity (Aquatic and Terrestrial):** **Methanol(Impurity) (CAS # 67-56-1):**  
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 dispose 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: NA-1993

UN Proper Shipping Name: Combustible liquid, n.o.s. (3-(2-Aminoethylamino)propyl-methyl-dimethoxysilane)

Technical Shipping Name: None

Transport Hazard Class: Combustible Liq.

Packing Group: III

### Sea Transport (IMDG/IMO):

Technical Shipping Name: Not Regulated

UN Number: None

UN Proper Shipping Name: None

Transport Hazard Class: None

Packing Group: None

### Air Transport (IATA):

UN Number: Not Regulated

UN Number: None

UN Proper Shipping Name: None

Transport Hazard Class: None

Packing Group: None

**Environmental Hazards (e.g., Marine pollutant):** No information available

## Section 15. Regulatory Information

### International Inventories:

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

### Federal Regulations:

SARA 313:	None
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(Impurity) (CAS # 67-56-1)
New Jersey Right to Know Components:	Methanol(Impurity) (CAS # 67-56-1)
Pennsylvania Right to Know Components:	Methanol(Impurity) (CAS # 67-56-1)
California Proposition 65:	Methanol(Impurity) (CAS # 67-56-1)

## Section 16. Other Information

**WHMIS Classification:** No information available

### HMIS Rating:

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

### NFPA Rating

Health Hazard:	3
Fire Hazard:	2
Reactivity Hazard:	0

Date Prepared ..... November 23, 2015  
Prepared By ..... Advanced Polymer, Inc.  
Date Revised .....  
Revised By .....

THE INFORMATION AND RECOMMENDATIONS HEREIN, ARE TO THE BEST OF OUR KNOWLEDGE, TRUE AND ACCURATE. NO WARRANTY, EXPRESS OR IMPLIED, IS MADE OR INTENDED.

TO THE CUSTOMERS OF ADVANCED POLYMER, INC.

All statements, technical information and recommendations contained herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed, and the following is made in lieu of all warranties, express or implied:

Seller's and manufacturer's only obligation shall be to replace such quantity of the product proved to be defective. Neither seller nor manufacturer shall be liable for any injury, loss of damage, direct, or consequential arising out of the use of or the inability to use the product. Before using, user shall determine the suitability of the product for his intended use. The user assumes all risk and liability whatsoever in connection therewith.

No statement or recommendation contained herein shall have any force or effect unless in an agreement signed by officers of seller and manufacturer. Since the manufacturer of the product described in this technical data sheet has no means of controlling the final use of the product by the consumer for the user, it is the responsibility of the immediate purchaser and any intermediate seller or sellers to inform the user of the purposes for which the product may be fit and suitable and of the properties of the product, including the precautionary measures which must be taken in order to ensure the safety of the user and of other third persons and property.

No statement made herein shall be taken as an authorization or inducement to practice any patented invention without appropriate license.