

AP-SILANE 22

Section 1. Product and Company Identification

Product Name:	AP-SILANE 22
Chemical Name/Family:	Vinyl triethoxy silane
CAS No.:	78-08-0
Product Use:	Coupling Agent
Restrictions:	For Industrial Use Only
Company:	Advanced Polymer.
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:

Flammable liquids

Category 3

GHS Label:

**Pictogram:****Signal Word:** Warning

Hazard Classification:

Hazard Statement:

Flammable liquid and vapour

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.

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 powder and carbon dioxide (CO₂) for extinction.

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
Vinyltriethoxysilane	78-08-0	>99
Ethanol (Impurity)	64-17-5	< 0.1
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:	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before re-use.
Eye Contact:	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Seek medical attention immediately.
Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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.
Ingestion:	Rinse mouth. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

Section 5. Firefighting Measures

Specific Hazards in Case of Fire:	Flammable liquid and vapor. By heating and fire, harmful vapors/gases may be formed.
Fire Extinguishing Media:	Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable Extinguishing Media:	Water.
Special Protective Equipment and Precaution for Firefighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet, gloves, rubber boots, and self-contained breathing apparatus.
Unusual Fire & Explosion Hazards:	No information available.

Section 6. Accidental Release Measures

Personal Precautions:	Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Ventilate closed spaces before entering them. 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. Avoid release to the environment.
Methods and Materials for Containment and Cleaning up:	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

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. Wear appropriate personal protective equipment. Avoid release to the environment. Do not empty into drains.
Storage Conditions:	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.*** Agitate contents of container before using ***

Section 8. Exposure Control/Personal Protection

Exposure Limits:	Ethanol (CAS 64-17-5) ACGIH TLV : STEL : 1000 ppm OSHA Table Z-1 : PEL : 1900 mg/m ³ , 1000 ppm NIOSH TWA: 1900 ppm, 1000 ppm
Appropriate engineering controls:	Explosion-proof 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 protective gloves.
Eye Protection:	Tightly sealed safety glasses according to EN 166.
Skin and Body Protection:	Wear suitable protective clothing. Wear appropriate thermal protective clothing, when necessary.
Other Protective Equipment:	Provide eyewash and safety shower station.
Hygiene Measures:	Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice.

Section 9. Physical and Chemical Properties

Physical State:	Liquid
Color:	Colorless, transparent
Odor:	Slight odor
Odor Threshold:	No information available
pH:	N.A.

Specific Gravity (77°F):	0.91
% Volatile by Weight:	100
Melting Point:	No information available
Freezing Point:	No information available
Boiling point:	161°C (321.8°F)
Flash Point:	54°C (129.2°F) – closed cup
Evaporation Rate (BuAc=1):	<1
Flammability:	No data available
Vapor Pressure (mmHg):	< 0.66kPa (25 °C)
Vapor Density (Air=1):	6.6
Solubility:	Insoluble in water (Hydrolyzed with water)
Partition Coefficient:	No information available
Auto-ignition Temperature:	> 392 °F (> 200 °C)
Viscosity:	No information available
Decomposition Temperature:	No information available

Section 10. Stability and Reactivity

Chemical Stability:	Stable at normal temperatures and pressure
Reactivity:	Slowly reacts with water, acids and bases.
Hazardous Polymerization:	May not occur
Conditions to Avoid:	Avoid heat, flames, sparks and other sources of ignition. Avoid extreme temperature and direct sunlight. Hydrolyzed with water but no hazard.
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

Primary Routes of Entry:

Eye:	Yes	Skin:	Yes	Inhalation:	Yes	Ingestion:	Yes
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Potential Health Effects:

Inhalation	No adverse effects due to inhalation are expected.
Ingestion:	Expected to be a low ingestion hazard.
Skin:	No adverse effects due to skin contact are expected.
Eyes:	Direct contact with eyes may cause temporary irritation.

Signs and Symptoms of Exposures: No information available.

Acute Toxicity:	Ethanol (CAS 64-17-5) LC50 Mouse (Inhalation) : 39 mg/l, 4 hours; Rat (Inhalation) : 20000 ppm, 10 hours LD50 Mouse (Oral) : 3450 mg/kg Guinea Pig : 5.6 g/kg Rat : 6.2 g/kg
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	Vinyltriethoxysilane (CAS 78-08-0) LD50 Rat (Oral) : 23000 mg/kg Prolonged inhalation may be harmful.
Chronic Toxicity:	
Skin Corrosion/irritation:	No information available
Serious eye damage/eye irritation:	Causes eye irritation. [Ethanol]
Respiratory or Skin Sensitization:	No information available
Specific target organ toxicity - single exposure	No information available
Mutagenicity:	No information available
Carcinogenicity:	

IARC:	No	NTP:	No	OSHA:	No
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Section 12. Ecological Information

Ecotoxicity (Aquatic and Terrestrial):	Ethanol (CAS 64-17-5) Crustacea EC50 Water flea (Daphnia magna) 7.7 - 11.2 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:	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.
Technical Shipping Name:	(vinyltriethoxysilane)
Transport Hazard Class:	3
Packing Group:	III
Sea Transport (IMDG):	
UN Number:	1993
UN Proper Shipping Name:	Flammable liquid, N.O.S.
Technical Shipping Name:	(vinyltriethoxysilane)
Transport Hazard Class:	3

Packing Group:	III
Air Transport (IATA):	
UN Number:	UN1993
UN Proper Shipping Name:	Flammable liquid, N.O.S.
Technical Shipping Name:	(vinyltriethoxysilane)
Transport Hazard Class:	3
Packing Group:	III
Environmental Hazards (e.g., Marine pollutant):	None

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:	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:	Not regulated
New Jersey Right to Know Components:	Not listed
Pennsylvania Right to Know Components:	Not listed
California Proposition 65:	None

Section 16. Other Information

WHMIS Classification: No information available

HMIS Rating:

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

NFPA Rating

Health Hazard:	1
Fire Hazard:	3
Reactivity Hazard:	0



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