

AP-Silane 32

Section 1. Product and Company Identification

Product Name:	AP-Silane 32
Chemical Name/Family:	N-β(aminoethyl)-γ-aminopropyl-trimethoxy silane
CAS No.:	1760-24-3
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:

Hazard Class	Category
Acute toxicity, inhalation	Category 4
Serious eye damage/eye irritation	Category 1
Sensitization, skin	Category 1B
Hazardous to the aquatic environment, acute toxicity	Category 2

GHS Label:



Symbol:

Signal Word: **Danger**

Hazard Classification:

Hazard Statement:

- Harmful if inhaled
- Causes serious eye damage
- May cause an allergic skin reaction
- Toxic to aquatic life

Precautionary Statement:

Prevention

Avoid breathing dust/fume/gas/mist/vapours/spray.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves/protective clothing/eye protection/face protection.
 Contaminated work clothing should not be allowed out of the workplace.
 Avoid release to the environment.

Response

IF INHALED: 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.
 IF IN EYES: Rinse cautiously with water for several minutes. 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.
 Specific treatment (see supplemental first aid instructions on this SDS).
 Wash contaminated clothing before reuse.

Storage

No storage statement required under GHS however refer to Section 7 for current storage conditions.

Disposal

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

Section 3. Composition/Information on Ingredients

Ingredients	CAS No.	Percent
N-β(aminoethyl)-γ-aminopropyl-trimethoxy silane	1760-24-3	>98
Methanol (impurity)	67-56-1	<1

Section 4. First Aid Measures

Skin Contact: Wash off with soap and plenty of water. Consult a physician. Wash contaminated clothing before reuse.

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

Inhalation: 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.

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

Fire and Explosion Hazard: Burning can produce nitrogen oxides, a toxic and corrosive gas.

Fire Extinguishing Media: Use alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media: No Information Available

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:	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking.
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:	Contain the spill or leak. Scrape up with rag and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

Section 7. Handling and Storage

Handling Conditions:	Avoid contact with eyes, skin and clothing. Avoid inhalation of vapor or mist. Wear suitable gloves and eye/face protection. Keep away from sources of ignition. Avoid contact with water or moisture. **Agitate contents of container before using**
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 (Impurity) (CAS# 67-56-1): OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) PEL 260 mg/m ³ ; 200 ppm ACGIH Threshold Limit Values STEL 250 ppm TWA 200 ppm NIOSH: Pocket Guide to Chemical Hazards STEL 325 mg/m ³ ; 250 ppm TWA 260 mg/m ³ ; 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

Physical State:	Liquid
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Color:	Colorless, transparent
Odor:	Amine odor
Odor Threshold:	No information available
% Non-volatile by Weight:	No information available
pH:	No information available
Specific Gravity (77°F):	1.02
% Volatile by Weight:	100
Melting Point:	No information available
Freezing Point:	No information available
Boiling point:	498°F (259°C)
Flash Point:	128°C (262.4°F) – Open Cup >94°C (201.2°F) – Closed Cup
Evaporation Rate (BuAc=1):	<1
Flammability:	No information available
Explosion Limits:	No information available
Vapor Pressure (25°C):	<1.3kPa
Vapor Density (Air=1):	7.7
Solubility:	Soluble in 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;
Reactivity:	Slowly react 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:	Will hydrolyze with water, but no hazard. Avoid contact with acids, bases and water.
Hazardous Decomposition Products:	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

Primary Routes of Entry:

Eye:	Yes	Skin:	Yes	Inhalation:	No	Ingestion:	Yes
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Potential Health Effects:

Inhalation	Causes irritation in mucous membranes and upper respiratory tract.
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.

Signs and Symptoms of Exposures:
Acute Toxicity:
N-β(aminoethyl)-γ-aminopropyl-trimethoxy silane (CAS # 1760-24-3)

LD50 (Dermal/Rabbit) >2000 mg/kg; 16ml/kg

LD50 (Oral/Rat) 2,995 mg/kg; 2400 mg/kg

LC50 (Inhalation/Rat) 1.49 – 2.44 mg/l/4h

Methanol (impurity) (CAS# 67-56-1):

LD50 (Dermal/Rabbit) 15800 mg/kg

LC50 (Inhalation/Rat) 64000 ppm, 4 Hours; 87.5 mg/l, 6 Hours

LD50 (Oral/Mouse) 7300 mg/kg

LD50 (Oral/Rabbit) 14.4 g/kg

LD50 (Oral/Rat) 5628 mg/kg

Prolonged inhalation may be harmful.

Chronic Toxicity:
Skin corrosion/irritation:

Skin-Rabbit : Moderately irritating

Serious eye damage/eye irritation:

Eye-Rabbit : 15mg Severe

Respiratory Sensitization:

No information available

Skin Sensitization:

Positive (Guinea pig)

Mutagenicity:

Negative (Ames Test, Chromosome analysis, Micronucleus test)

Reproductive toxicity:

Developmental toxicity: NOAEL 500mg/kg/day (Rat), Maternal toxicity: NOAEL 500mg/kg/day (Rat)

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

Aspiration hazard

No information available

Carcinogenicity:

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

Ecotoxicity (Aquatic and Terrestrial):
Aquatic
3-(2-Aminoethylamino)propyltrimethoxysilane (CAS # 1760-24-3):

Algae EbC50 Green algae (Selenastrum capricornutum) 5.5 mg/l, 72 hr

ErC50 Green algae (Selenastrum capricornutum) 8.8 mg/l, 72 hr

Fish LC50 Bluegill (Lepomis macrochirus) > 100 mg/l, 96 hr

Fathead minnow (Pimephales promelas) > 100 mg/l, 96 hr

Rainbow Trout > 100 mg/l, 96 hr

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 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):	Not Regulated
UN Number:	None
UN Proper Shipping Name:	None
Technical Shipping Name:	None
Transport Hazard Class:	None
Packing Group:	None
Sea Transport (IMDG/IMO):	
Technical Shipping Name	Contains organosilane
UN Number:	UN3082
UN Proper Shipping Name:	Environmentally hazardous substances, Liquid, N.O.S.
Transport Hazard Class:	Miscellaneous Dangerous Substances / Class 9
Packing Group:	III
Air Transport (IATA):	Not Regulated
UN Number:	None
UN Proper Shipping Name:	None
Transport Hazard Class:	None
Packing Group:	None
Environmental Hazards (e.g., Marine pollutant):	Contains organosilane

Section 15. Regulatory Information

International Inventories:	
TSCA (USA):	Listed
DSL (Canada):	Listed
ENCS (Japan)	Listed
REACH (Europe):	No information available
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)



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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: 1

Physical Hazard: 0

Personal Protection Equipment: X

NFPA Rating

Health Hazard: 3

Fire Hazard: 1

Reactivity Hazard: 0

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