

APS – 289 Concentrate

Section 1. Product and Company Identification

Product Name:	APS – 289 Concentrate
Chemical Name/Family:	Alkoxysilane
CAS No.:	Mixture
Product Use:	Water Repellent
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 2
Eye damage/irritation	Category 2A
Skin sensitization	Category 1
Reproductive toxicity	Category 2

GHS Label:



Symbol:

Signal Word: **Danger**

Hazard Classification:

Hazard Statement:

Highly flammable liquid and vapor
Causes serious eye irritation
May cause an allergic skin reaction
Suspected of damaging fertility or the unborn child

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.
 Wash skin thoroughly after handling.
 Avoid breathing fume/gas/mist/vapours/spray.
 Contaminated work clothing must not be allowed out of the workplace.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Use personal protective equipment as required.

Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 In case of fire: Use suitable extinguishing media for extinction.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
 Continue rinsing.
 If eye irritation persists: Get medical advice/ attention.
 IF ON SKIN: Wash with plenty of soap and water.
 If skin irritation or rash occurs: Get medical advice/attention.
 Wash contaminated clothing before reuse.
 IF exposed or concerned: 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

Ingredients	CAS No.	Percent
Methyltrimethoxysilane	1185-55-3	7 - 15

Section 4. First Aid Measures

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

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

Inhalation: If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Ingestion: If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

Section 5. Firefighting Measures

Fire and Explosion Hazard:	No Information Available
Fire Extinguishing Media:	Water spray, Alcohol-resistant foam, Dry chemical, Carbon dioxide (CO ₂)
Unsuitable Extinguishing Media:	High volume water jet
Specific Hazards in Case of Fire:	Do not use a solid water stream as it may scatter and spread fire. Flash back possible over considerable distance. Vapors may form explosive mixtures with air.
Special Fire Fighting Information:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

Section 6. Accidental Release Measures

Personal Precautions:	Remove all sources of ignition. Ventilate the area. Follow safe handling advice and personal protective equipment recommendations.
Protective Equipment:	Use personal protective equipment.
Environmental Precautions:	Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and Materials for Containment and Cleaning up:	Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapors/mists with a water spray jet. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases.

Section 7. Handling and Storage

Handling Conditions:	Ensure all equipment is electrically grounded before beginning transfer operations. This material can accumulate static charge due to its inherent physical properties and can therefore cause an electrical ignition source to vapors. In order to prevent a fire hazard, as bonding and grounding may be insufficient to remove static electricity, it is necessary to provide an inert gas purge before beginning transfer operations. Restrict flow velocity in order to reduce the accumulation of static electricity. Do not get on skin or clothing. Do not breathe vapors or spray mist. Do not swallow. Do not get in eyes. Handle in accordance with good industrial hygiene and safety practice. Non-sparking tools should be used. Keep away from water. Protect from moisture. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment. *** Agitate contents of container before using***
Storage Conditions:	Keep container tightly closed. Keep in properly labeled containers. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition. Protect from freezing. *** Agitate contents of container before using***

Section 8. Exposure Control/Personal Protection

Exposure Limits:	Methyltrimethoxysilane: TWA: 50 ppm
Appropriate engineering controls:	Processing may form hazardous compounds (see section 10). Minimize workplace exposure concentrations. Use only in an area equipped with explosion proof exhaust ventilation. Use with local exhaust ventilation.
Personal protective equipment:	
Respiratory Protection:	General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
Hand Protection:	Antistatic gloves. Impervious gloves. Flame retardant gloves.
Eye Protection:	Safety goggles
Skin and Body Protection:	Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Wear the following personal protective equipment: Flame retardant antistatic protective clothing. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc.).
Other Protective Equipment:	Ensure that eye flushing systems and safety showers are located close to the working place.
Hygiene Measures:	Wash hands thoroughly after handling. When using do not eat, drink or smoke. Wash contaminated clothing before re-use. These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

Section 9. Physical and Chemical Properties

Physical State:	Liquid
Color:	Straw
Odor:	Strong
Odor Threshold:	No Information Available
% Non-volatile by Weight:	No Information Available
pH:	N/A
Specific Gravity (77°F):	0.96
% Volatile by Weight:	<10
Melting Point:	No Information Available
Freezing Point:	No Information Available
Boiling point:	> 65 °C
Flash Point:	10 °C Method: Seta closed cup
Evaporation Rate (BuAc=1):	No Information Available
Flammability:	No Information Available
Explosion Limits:	Not Explosive
Vapor Pressure (mmHg):	No Information Available

Vapor Density (Air=1):	No Information Available
Solubility:	Not miscible with water
Partition Coefficient:	No Information Available
Auto-ignition Temperature:	No Information Available
Viscosity:	45 cst
Decomposition Temperature:	No Information Available

Section 10. Stability and Reactivity

Chemical Stability:	Stable under normal conditions
Possibility of Hazardous Reactions:	Highly flammable liquid and vapor. Vapors may form explosive mixture with air. Use at elevated temperatures may form highly hazardous compounds. Can react with strong oxidizing agents. Hazardous decomposition products will be formed upon contact with water or humid air. Hazardous decomposition products will be formed at elevated temperatures.
Conditions to Avoid:	Exposure to moisture. Handling operations that can promote accumulation of static charges. Heat, flames and sparks
Incompatible Materials:	Oxidizing agents, water
Hazardous Decomposition Products:	With water or humid air: Ethanol, Methanol, Butan-1-ol Thermal: Formaldehyde

Section 11. Toxicological Information

Primary Routes of Entry:

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

Inhalation	Exposure to high vapor concentrations may cause eye and respiratory tract irritation, headache, dizziness, nausea, drowsiness and loss of consciousness.
Ingestion:	Although ingestion is unlikely, liquid would irritate upper digestive tract if swallowed.
Skin:	Prolonged and repeated contact with skin can cause defatting and drying of the skin resulting in skin irritation and dermatitis.
Eyes:	Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product.

Signs and Symptoms of Exposures: No information available

Acute Toxicity:

PRODUCT:

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 40 mg/l

Exposure time: 4 h

Test atmosphere: vapor

Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

INGREDIENT: Methyltrimethoxysilane

Acute oral toxicity : LD50 (Rat): 12.3 ml/kg

Assessment: The substance or mixture has no acute oral toxicity

Remarks: Information taken from reference works and the literature.

Acute inhalation toxicity : LC50 (Rat): > 42.1 mg/l
 Exposure time: 6 h
 Test atmosphere: vapor
 Assessment: The substance or mixture has no acute inhalation toxicity
 Remarks: Based on test data

Acute dermal toxicity : LD50 (Rabbit): > 9,500 mg/kg
 Assessment: The substance or mixture has no acute dermal toxicity
 Remarks: Based on test data

Chronic Toxicity:

No Information Available

Respiratory Sensitization:

Not classified based on available information.

Skin Sensitization:

May cause an allergic skin reaction.

Ingredients: Methyltrimethoxysilane:

Assessment: Probability or evidence of low to moderate skin sensitization rate in humans

Test Type: Buehler Test

Species: Guinea pig

Remarks: Causes sensitization.

Based on test data

Mutagenicity:

Not classified based on available information.

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Remarks: Based on test data

Carcinogenicity:

Not classified based on available information.

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

Ecotoxicity (Aquatic and Terrestrial):
Methyltrimethoxysilane:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia sp.):

> 100 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)):

> 100 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to bacteria : EC50: > 100 mg/l

Method: OECD Test Guideline 209

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:	Waste Disposal Method as in accordance with EPA and local regulations. Product is classified as a RCRA hazardous waste.
Disposing of Contaminated Packaging:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not burn or use a cutting torch on the empty drum.

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):

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): No

Section 15. Regulatory Information

International Inventories:

TSCA (USA):	All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
DSL (Canada):	All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).
ENCS (Japan)	All components are listed on ENCS/ISHL or exempted from inventory listing.
REACH (Europe):	All ingredients pre-registered or exempt.
IECSC (China):	All ingredients listed or exempt.
KECL (Korea):	All ingredients listed or exempt.
PICCS (Philippines):	All ingredients listed or exempt.
AICS (Australia):	All ingredients listed or exempt.
ERMA (New Zealand):	All ingredients listed or exempt.

Federal Regulations:

SARA 313:	None
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SARA 311/312:	Fire Hazard
	Acute Health Hazard
	Chronic Health Hazard
Clean Water Act:	No Information Available
Clean Air Act, Section 112 HAPs (See 40CFR61):	No Information Available
State Regulations:	
Massachusetts Right to Know Components:	No Information Available
New Jersey Right to Know Components:	Methyltrimethoxysilane 1185-55-3 5 - 10 %
Pennsylvania Right to Know Components:	Methyltrimethoxysilane 1185-55-3 7-15 %
California Proposition 65:	WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Section 16. Other Information

WHMIS Classification: No information available

HMIS Rating:

Health Hazard 2

Flammability: 3

Physical Hazard: 0

Personal Protection Equipment: H

NFPA Rating

Health Hazard: 2

Fire Hazard: 3

Reactivity Hazard: 0

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