

APS-232HCA

Section 1. Product and Company Identification

Product Name:	APS-232HCA
Chemical Name/Family:	Silicone Resin
CAS No.:	Mixture
Product Use:	Super hydrophobic treatment
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 3

Health Hazards

Serious eye damage/eye irritation Category 2A

Sensitisation, skin Category 1

Acute Toxicity, oral Category 4

Specific target organ toxicity, single exposure; Respiratory tract irritation Category 3

Specific target organ toxicity, repeated exposure Category 2

Reproductive Toxicity Category 2

Environmental Hazards

Hazardous to the aquatic environment, long-term hazard Category 4

GHS Label:



Symbol:

Signal Word: **Warning**

Hazard Classification:

Hazard Statement:

Flammable liquid and vapour
Causes serious eye irritation
May cause an allergic skin reaction
Harmful if swallowed
May cause respiratory irritation
May cause damage to lung and liver through prolonged or repeated exposure
Suspected of damaging fertility or the unborn child
May cause long lasting harmful effects to aquatic life

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 and other handling equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands and exposed skin thoroughly after handling.
Do not breathe dust/fume/gas/mist/vapours/spray.
Contaminated work clothing should not be allowed out of the workplace.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required.
Avoid release to the environment.

Response

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
In case of fire: Use water fog, foam, dry chemical, carbon dioxide 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.
For specific treatment see Section 4 for supplemental first aid instructions.
Wash contaminated clothing before reuse.
If swallowed: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Get medical advice/attention if you feel unwell.
IF exposed or concerned: Get medical advice/attention.

Storage

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

Disposal

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

Acute Health Effects:

Inhalation: May cause respiratory tract irritation. At higher/aerosol/vapor concentrations narcotic effects are possible. If inhaled at high concentrations lung damage is possible. Overexposure may cause reproductive effect.
Eye Contact: Causes severe eye irritation. May cause permanent eye damage. Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product.
Skin Contact: May cause skin irritation. May cause skin sensitization. Prolonged and repeated contact with skin can cause defatting and drying of the skin resulting in skin irritation and dermatitis.
Ingestion: Although ingestion is unlikely, would be harmful if swallowed.

Chronic Health Effects:

Possible liver damage.

Section 3. Composition/Information on Ingredients

Ingredients	CAS No.	Percent
Silicone Resin	Mixture	50.0
Octamethylcyclotetrasiloxane	556-67-2	50.0

Section 4. First Aid Measures

- Skin Contact:** Immediately wipe away excess material. Take off all contaminated clothing immediately. Wash contaminated clothing before reuse. Wash skin with soap and water. Get medical attention if irritation develops and persists.
- 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. Direct contact with eyes causes severe eye irritation.
- Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen.
- Ingestion:** If conscious, give several glasses of water but do not induce vomiting. Get medical attention immediately.
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Section 5. Firefighting Measures

- Fire and Explosion Hazard:** Flammable liquid and vapor. Possible formation of explosive mixtures with air. Explosion could occur even if container is empty.
- Fire Extinguishing Media:** Alcohol resistant foam, dry chemical powder, carbon dioxide, dry sand.
- Unsuitable Extinguishing Media:** Do not use a solid water stream as it may scatter and spread fire.
- Specific Hazards in Case of Fire:** By heating and fire, harmful vapors/gases may be formed. Hazardous decomposition products: oxides of carbon, silicon, formaldehyde and incompletely burnt hydrocarbons. 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.
- Special Fire Fighting Information:** Firefighters must use full protective equipment including flame retardant coat, helmet, gloves, rubber boots, and self-contained breathing apparatus.

Section 6. Accidental Release Measures

Personal Precautions:	Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Do not touch or walk through spilled material. Ventilate closed spaces before entering them. Wear appropriate personal protective equipment. Avoid contact with eyes and skin. Avoid inhaling mists and vapors.
Protective Equipment:	Wear necessary personal protective equipment. Ventilate area.
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:	<p>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 can be done 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.</p> <p>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.</p>

Section 7. Handling and Storage

Handling Conditions:	All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Provide adequate ventilation. Use care in handling/storage. Obtain special instructions before use. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Do not smoke. Take precautionary measures against static discharges. Use personal protective equipment as required. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains. Do not handle until all safety precautions have been read and understood. Pregnant or breastfeeding women must not handle this product. Do not breathe mist or vapor. **Agitate contents of container before using**
Storage Conditions:	Store locked up. Keep away from heat, sparks and open flames. Store in a cool, well-ventilated place. Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Do not keep container below 18°C to avoid coagulation. Keep in original container.

Section 8. Exposure Control/Personal Protection

Exposure Limits:	No exposure limits noted for ingredient(s).
Appropriate engineering controls:	Explosion-proof general and local exhaust ventilation. Provide eyewash station.
Personal protective equipment:	
Respiratory Protection:	In case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protection is only recommended in the event that ventilation or engineering controls are unable to maintain exposures below recommended levels; or in the event of a spill or other emergency response situation.
Hand Protection:	Wear protective gloves.
Eye Protection:	Goggles with side shields.

Skin and Body Protection:	Suitable protective clothing.
Other Protective Equipment:	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. Handle in accordance with good industrial hygiene and safety practice.

Section 9. Physical and Chemical Properties

Physical State:	Liquid
Color:	Yellowish, clear
Odor:	Slight
Odor Threshold:	No information available
% Non-volatile by Weight:	50.0
pH:	N/A
Specific Gravity (77°F):	~1.00
% Volatile by Weight:	50.0
% VOC:	~3.0
Melting Point/Freezing Point:	No information available
Boiling point:	No information available
Flash Point:	95°F (35°C) Closed Cup
Evaporation Rate (BuAc=1):	No information available
Flammability (solid/gas):	No information available
Explosion Limits:	No information available
Vapor Pressure :	No information available
Vapor Density (Air=1):	No information available
Solubility (water):	Insoluble
Partition Coefficient:	No information available
Auto-ignition Temperature:	No information available
Viscosity:	No information available
Decomposition Temperature:	>200°C (>392°F)

Section 10. Stability and Reactivity

Chemical Stability:	Stable under normal conditions (temperature, pressure etc.)
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	Moisture
Incompatible Materials:	Acids, alkalis and water
Hazardous Decomposition Products:	Hazardous decomposition products: oxides of carbon, silicon, formaldehyde and incompletely burnt hydrocarbons.

Section 11. Toxicological Information

Primary Routes of Entry:

Inhalation	Yes
Ingestion:	Yes
Skin:	Yes
Eyes:	Yes

Signs and Symptoms of Exposures:	No information available.
Acute Toxicity:	
Inhalation LC50	Octamethylcyclotetrasiloxane (CAS# 556-67-2) Rat >5000 mg/m ³ , 4 hours
Oral LD50	Octamethylcyclotetrasiloxane (CAS# 556-67-2) Rat >5000 mg/kg
Chronic Toxicity:	
Skin corrosion/irritation	Octamethylcyclotetrasiloxane (CAS# 556-67-2) SKIN-RABBIT : 500 mg/24hr MILD
Serious Eye damage/eye irritation	No information available
Respiratory or Skin Sensitization:	No information available
Mutagenicity:	No information available
Reproductive Toxicity	Octamethylcyclotetrasiloxane administered to rats by whole body inhalation at concentrations of 500 and 700 ppm for 70 days prior to mating, through mating, gestation and lactation resulted in decreases in liver litter size. Additionally, increases in the incidence of deliveries of offspring extending over an unusually long time period (dystocia) were observed at these concentrations. Statistically significant alterations in these parameters were not observed in the lower concentrations evaluated (300 and 70 ppm). In a previous range-finding study, rats exposed to vapor concentrations of 700 ppm had decreases in the number of implantation sites and live litter size. The significance of these findings to humans is not known.
Specific target organ toxicity – single exposure	No information available
Specific target organ toxicity – repeated exposure	Repeated inhalation or oral exposure of mice and rats to octamethylcyclotetrasiloxane produced an increase in liver size. No gross histopathological or significant clinical chemistry effects were observed. An increase in liver metabolizing enzymes, as well as a transient increase in the number of normal cells (hyperplasia) followed by an increase in cell size (hypertrophy) were determined to be the underlying causes of the liver enlargement. The biochemical mechanisms producing these effects are highly sensitive in rodents, while similar mechanisms in humans are insensitive. A two year combined chronic and carcinogenicity assay was conducted on octamethylcyclotetrasiloxane. Rats were exposed by whole-body vapor inhalation 6hrs/day, 5days/week for up to 104 weeks to 0, 10, 30, 150 or 700 ppm of octamethylcyclotetrasiloxane. The increase in incidence of (uterine) endometrial cell hyperplasia and uterine adenomas (benign tumors) were observed in female rats at 700 ppm. Since these effects only occurred at 700 ppm, a level that greatly exceeds typical workplace or consumer exposure, it is unlikely that industrial, commercial or consumer uses of products containing octamethylcyclotetrasiloxane would result in a significant risk to humans.
Carcinogenicity:	

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

Ecotoxicity (Aquatic and Terrestrial):	May cause long lasting harmful effects to aquatic life.
Bioaccumulative Potential	Octamethylcyclotetrasiloxane (CAS# 556-67-2) Bio Concentration Factor (BCF)/(Fathead minnows) : 12400 Partition coefficient n-octanol/water (log Kow) 5.1
Mobility in Soil:	No information available
PBT and vPvB Assessment:	No information available
Other Adverse Effects:	No information available

Section 13. Disposal Considerations

Product:	Follow applicable federal, state and local regulations.
Disposing of Contaminated Packaging:	Treat as unused product as above.

Section 14. Transport Information

Land Transport (DOT):

UN Number:	UN1993
UN Proper Shipping Name:	Flammable liquids, N.O.S. (Contains Octamethylcyclotetrasiloxane)
Transport Hazard Class:	3
Packing Group:	III

Sea Transport (IMDG):

UN Number:	UN1993
UN Proper Shipping Name:	Flammable liquids, N.O.S. (Contains Octamethylcyclotetrasiloxane)
Transport Hazard Class:	3
Packing Group:	III

Air Transport (IATA):

UN Number:	UN1993
UN Proper Shipping Name:	Flammable liquids, N.O.S. (Contains Octamethylcyclotetrasiloxane)
Transport Hazard Class:	3
Packing Group:	III

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

IECSC (China):	Listed
KECL (Korea):	Listed
PICCS (Philippines):	Listed
AICS (Australia):	Listed
ERMA (New Zealand):	No information available

Federal Regulations:

SARA 313: n-Butanol (CAS # 71-36-3) <1.5%

SARA 311/312:

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire	Yes
Reactive/Physical Hazard	No
Pressure	No

Clean Water Act: No information available

Clean Air Act, Section 112 HAPs (See 40CFR61): No information available

State Regulations:

Massachusetts Right to Know Components: n-Butanol (CAS # 71-36-3) <1.5%

New Jersey Right to Know Components: n-Butanol (CAS # 71-36-3) <1.5%

Pennsylvania Right to Know Components: n-Butanol (CAS # 71-36-3) <1.5%

California Proposition 65: None

Section 16. Other Information

WHMIS Classification: No information available

HMIS Rating:

Health Hazard	3
Flammability:	3
Reactivity:	1
Personal Protection Equipment:	X

NFPA Rating

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

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