

AdvaBond® 8227

Section 1. Product and Company Identification

Product Name:	Advabond®8227
Chemical Name/Family:	Modified Chlorined polyolefin
CAS No.:	Mixture
Product Use:	Adhesion Promoter
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:

Physical Hazards

Flammable liquids	Category 2
-------------------	------------

Health Hazards

Acute toxicity (oral)	Category 4
Aspiration hazard	Category 1
Skin corrosion irritation	Category 2
Serious Eye damage / eye irritation	Category 2B
Specific target organ toxicity, single exposure	Category 3 (Respiratory system)
Sensitization, skin	Category 1
Carcinogenicity	Category 2
Toxic To Reproduction	Category 2
Specific target organ toxicity, single exposure	Category 3 (Narcotic effects)

Environmental Hazards

Hazardous to the aquatic environment (acute toxicity)	Category 1
---	------------

GHS Label:



Pictogram:

Signal Word: Danger

Hazard Classification:**Hazard Statement:**

Highly flammable liquid and vapour
Harmful if swallowed
May be fatal if swallowed and enters airways
Causes eye irritation
Causes damage to central nervous system
May cause respiratory irritation;
May cause drowsiness or dizziness
Very toxic 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 equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash hands and uncovered body surface thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in well-ventilated area.
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 alcohol resistance foam, carbon dioxide, dry-chemical for extinction.

If swallowed: Call a POISON CENTER or doctor / physician if you feel unwell.

Rinse mouth.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Do NOT induce vomiting.

IF ON SKIN: Wash with plenty of soap and water.

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 eye irritation persists: Get medical advice/attention.

Specific treatment (see supplemental first aid instructions on this SDS).

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash before reuse.

Collect spillage.

Storage

Store in a well-ventilated place. Keep cool.

Store locked up.

Disposal

Dispose of contents/container in accordance with local / regional / national / international regulation to be specified.

Section 3. Composition/Information on Ingredients

Ingredients	CAS No.	Percent
Modified Chlorinated Polymer	Trade Secret	~30
Cyclohexane	110-82-7	50-55
n-Butyl acetate	123-86-4	10-20
Chloroform	67-66-3	<1%

Section 4. First Aid Measures

Skin Contact: Remove / Take off immediately all contaminated clothing. Rinse skin with water/shower.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses. If inhaled, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Inhalation: 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.

Ingestion: Rinse mouth. Call a POISON CENTER or doctor / physician if you feel unwell.

Section 5. Firefighting Measures

Specific Hazards in Case of Fire: Highly flammable liquid and vapour. Avoid inhalation of material or

Fire Extinguishing Media:	combustion by-products (carbon oxide). Regular dry chemical, carbon dioxide, alcohol-resistant foam
Unsuitable Extinguishing Media:	Material is lighter than water and a fire may be spread using water.
Special Protective Equipment and Precaution for Firefighters:	Keep personal removed from and upwind of fire. Prohibited from entering locations around the fires. Cool container with water spray. Wear self-contained breathing apparatus. Wear full protective equipment.
Unusual Fire & Explosion Hazards:	No information available.

Section 6. Accidental Release Measures

Personal Precautions:	Remove all sources of ignition. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
Protective Equipment:	Wear appropriate personal protective equipment (e.g. safety goggles, protective gloves, dust respirators)
Environmental Precautions:	Discharge into the environment must be avoided. Do not let product enter drain
Methods and Materials for Containment and Cleaning up:	Collect liquid in an appropriate container or absorb with an inert material (e.g. sand earth vermiculite), and place in a chemical waste container.

Section 7. Handling and Storage

Handling Conditions:	Avoid contact with skin and eyes or clothing. Avoid inhalation of vapor or mist. Wash thoroughly after handling. Use spark-proof tools and explosion-proof equipment. Good ventilation is needed at work area. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Storage Conditions:	Store in a well-ventilated place and in a cool dry place. Combustible. Protect from (strong) oxidizing materials. Package in an epoxy coating steel drum.

Section 8. Exposure Control/Personal Protection

Exposure Limits:	Cyclohexane: 100ppm ACGIH TLV-TWA n-Butyl Acetate: 150ppm ACGIH TLV-TWA n-Butanol: 20ppm ACGIH TLV-TWA
Appropriate engineering controls:	Provide appropriate exhaust ventilation at places where mist and vapour is formed.
Personal protective equipment:	
Respiratory Protection:	Chemical cartridge respirator.
Hand Protection:	Chemical resistant gloves.
Eye Protection:	Use safety glasses. If dust exposure causes eye discomfort, use chemical goggles.
Skin and Body Protection:	Wear appropriate chemical resistant clothing and boots.
Other Protective Equipment:	Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Hygiene Measures:	Wash hands thoroughly after handling.

Section 9. Physical and Chemical Properties

Physical State:	Viscous liquid
Color:	Yellow
Odor:	Sweet odor

Odor Threshold:	No information available
pH:	Not applicable
Specific Gravity (77°F):	
% Volatile by Weight:	~30
Melting Point:	No information available
Freezing Point:	n-Butyl acetate: -108°F (-78°C) Cyclohexane: 4 - 7 °C (39 - 45 °F)
Boiling point:	n-Butyl acetate: 257-261°F (125-127°C) Cyclohexane: 80.7 °C (177.3 °F)
Flash Point:	n-Butyl acetate: 72°F (22°C)(CC) Cyclohexane: -18.0 °C (-0.4 °F) (CC)
Evaporation Rate (BuAc=1):	No information available
Flammability Limits:	Butyl Acetate: 1.4 to 7.6% by volume Cyclohexane: 1%-9% by volume n-Butanol: 1.4% - 11.2% by volume
Explosion Limits:	No information available
Vapor Pressure (mmHg):	n-Butyl acetate: 20 hPa (15 mmHg) at 25 °C (77 °F); Cyclohexane: 225.0 hPa (168.8 mmHg) at 37.7 °C (99.9 °F) 102.7 hPa (77.0 mmHg) at 20.0 °C (68.0 °F) n-Butanol: 5 hPa (4 mmHg) at 20 °C (68 °F)
Vapor Density (Air=1):	n-Butyl acetate: 4.0
Solubility:	Insoluble in water
Partition Coefficient:	n-Butyl acetate: log Pow 1.78; Cyclohexane: log Pow: 3.44
Auto-ignition Temperature:	n-Butyl Acetate: 759-797°F(404-425°C) Cyclohexane: 260.0 °C (500.0 °F)
Viscosity:	No information available
Decomposition Temperature:	No information available

Section 10. Stability and Reactivity

Chemical Stability:	Stable at normal temperatures and pressure.
Hazardous Polymerization:	May not occur
Conditions to Avoid:	Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat.
Incompatible Materials:	Oxidizing (strong) materials.
Hazardous Decomposition Products:	Thermal decomposition products: Oxides of carbon

Section 11. Toxicological Information

Primary Routes of Entry:

Eye:	Yes	Skin:	No	Inhalation:	Yes	Ingestion:	Yes
------	-----	-------	----	-------------	-----	------------	-----

Potential Health Effects:

Inhalation Mist is harmful if inhaled. Vapor may be harmful if inhaled.

Ingestion: Harmful if swallowed.

Skin: No information available.

Eyes: Causes eye irritation.

Signs and Symptoms of Exposures: No information available

Acute Toxicity:

n-Butyl acetate: oral-rat LD50 14.13g/kg
 dermal-rabbit LD50 17600mg/kg
 inhalation-rat (vapour) LC50 2000ppm (9.5mg/L)
 inhalation-rat(mist) LC50 391ppm (1.85mg/L)
 Cyclohexane: LD50 Oral - Rat - 12,705 mg/kg
 LC50 Inhalation - Rat - 4 h - 34,000 mg/l (OECD Test
 Guideline 403)
 LD50 Dermal - Rabbit - > 2,000 mg/kg

Skin corrosion/irritation

Direct contact may cause irritation.

n-Butyl acetate: human mild

Eye damage/eye irritation

Contact with fumes and the liquid may cause irritation.

n-Butyl acetate: eyes-rabbit moderate

Chloroform: eye-rabbit ; Severe

Chronic Toxicity:

No information available

Respiratory or Skin Sensitization:

No information available

Mutagenicity:

Classification not possible (GHS)
 Chloroform: Ames Test; Positive (+/-S9)
 Chromosomal aberration test ; Positive (in vivo)
 Micronucleus test ; Positive (in vivo)

Specific target organ toxicity (single exposure)

May cause damage to central nervous system.
 May cause drowsiness or dizziness.
 n-Butyl acetate: Central nervous system adverse effects were observed by the human data. Showed pulmonary edema and respiratory irritation due to animal testing.
 Chloroform: Human; necrosis of hepatic cells, liver damage, jaundice, hypertrophy of the liver, kidney damage, stertorous respiration, cyanosis and excessive sweating.
 Suspected of causing cancer

Carcinogenicity:

IARC:	Chloroform: Group-2B (Possibly carcinogenic to humans)	NTP:	Chloroform: A3 (confirmed animal carcinogen)	OSHA:	N.D.
-------	--	------	---	-------	------

Section 12. Ecological Information

Ecotoxicity (Aquatic and Terrestrial): Toxic to aquatic life with a long lasting effects
 n-Butyl acetate: Crustacea (Daphnia magna) LC50 32000µg/L/48H
 Chloroform: Oncorhynchus mykiss LC50 1.24-2.03mg/L/96hr

Bioaccumulative Potential It is presumed that bioaccumulation is low.

Mobility in Soil:	Chloroform: BCF=13 No information available
PBT and vPvB Assessment:	No information available
Other Adverse Effects:	No information available

Section 13. Disposal Considerations

Product:	Dispose of contents / container in accordance with local / regional / national /international regulation. Do not dump into sewers, on the ground or into any body of water.
Disposing of Contaminated Packaging:	Dispose as unused product. Contact a licensed professional waste disposal service to this material

Section 14. Transport Information

Land Transport (DOT):	
UN Number:	1866
UN Proper Shipping Name:	Resin solution
Transport Hazard Class:	3
Packing Group:	II
Sea Transport (IMDG):	
UN Number:	1866
UN Proper Shipping Name:	Resin solution
Transport Hazard Class:	3
Packing Group:	II
Air Transport (IATA):	
UN Number:	1866
UN Proper Shipping Name:	Resin solution
Transport Hazard Class:	3
Packing Group:	II
Environmental Hazards (e.g., Marine pollutant):	Yes

Section 15. Regulatory Information

International Inventories:	
TSCA (USA):	Yes
DSL (Canada):	Yes
ENCS (Japan)	Yes
REACH (Europe):	Not listed
IECSC (China):	Not listed
KECL (Korea):	Not listed
PICCS (Philippines):	Not listed
AICS (Australia):	Not listed
ERMA (New Zealand):	No information available
Federal Regulations:	

SARA 313:	Cyclohexane (CAS# 110-82-7)
	n-Butyl acetate (123-86-4)
	n-Butanol (71-36-2)
SARA 311/312:	Chloroform (CAS # 67-66-3), <1%
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:	No information available
Pennsylvania Right to Know Components:	No information available
California Proposition 65:	Chloroform (CAS # 67-66-3), <1%

Section 16. Other Information

WHMIS Classification: No information available

HMIS Rating:

Health Hazard 2

Flammability: 3

Physical Hazard: 0

Personal Protection X

Equipment:

NFPA Rating

Health Hazard: 2

Fire Hazard: 3

Reactivity Hazard: 0

Date Prepared January 15, 2020

Prepared By Advanced Polymer.

Date Revised August 10, 2021

Revised By Advanced Polymer.

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.

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.