Section 1. Product and Company Identification

Product Name: AdvaBond® 8117
Chemical Name/Family: Modified chlorine free polyolefin
CAS No.: Mixture
Product Use: Adhesion Promoter
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 2

Health Hazards
- Acute toxicity (oral): Category 4
- Acute toxicity (inhalation: vapour): Category 5
- Acute toxicity (inhalation: mist): Category 4
- Serious Eye damage / eye irritation: Category 2B
- Specific target organ toxicity, single exposure: Category 1 (Central nervous system)
- Specific target organ toxicity, single exposure: Category 2 (Respiratory system)
- Specific target organ toxicity, single exposure: Category 3 (Narcotic effects)
- Hazardous to the aquatic environment (acute toxicity): Category 2

Environmental Hazards
- Hazardous to aquatic environment (chronic toxicity): Category 2

GHS Label:

Pictogram: Danger
Hazard Classification:

Hazard Statement:
- Highly flammable liquid and vapour
- Harmful if swallowed
- Harmful if inhaled (mist)
- May be harmful if inhaled (vapour)
- Causes eye irritation
- Causes damage to central nervous system
- May cause damage to respiratory system
- May cause drowsiness or dizziness
- Toxic to aquatic life
- Toxic to aquatic life with long lasting effects

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.
- Do not breathe 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 INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- IF INHALED: 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 exposed: Call a POISON CENTER or doctor / physician.
- Collect spillage.
**Section 3. Composition/Information on Ingredients**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS No.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modified Non-chlorinated Polyolefin</td>
<td>Proprietary</td>
<td>15 - 20</td>
</tr>
<tr>
<td>Methylcyclohexane (MCH)</td>
<td>108-87-2</td>
<td>70 - 75</td>
</tr>
<tr>
<td>n-Butyl acetate (BuOAc)</td>
<td>123-86-4</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Compatibilizer</td>
<td>Proprietary</td>
<td>5 - 10</td>
</tr>
<tr>
<td>2-Butanol (2-BuOH)</td>
<td>78-92-2</td>
<td>0 - 5</td>
</tr>
</tbody>
</table>

**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 combustion by-products (carbon oxide).
- **Fire Extinguishing Media:** Regular dry chemical, carbon dioxide, alcohol-resistant foam
- **Unsuitable Extinguishing Media:** Material is lighter than water and a fire may be spread by the use of water.
- **Special Protective Equipment and Precaution for Firefighters:** Keep personal removed from and upwind of fire. Prohibited from entering into 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: MCH: 400 ppm ACGIH TLV-TWA, BuOAc: 150 ppm ACGIH TLV-TWA, 2-BuOH: 100 ppm 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: White cloudy
Odor: Sweet odor
Odor Threshold: No information available
pH: Not applicable
Specific Gravity (77°F): MCH: 0.7694/72°F (20°C), BuOAc: 0.88/72°F (20°C), 2-BuOH: 0.808/72°F (20°C)
% Volatile by Weight: ~80
Melting Point: No information available
Freezing Point: MCH: -197°F (-127°C), BuOAc: -106.6°F (-7°C)
Boiling point: MCH: 214°F (101°C), BuOAc: 257-261°F (125-127°C), 2-BuOH: 210°F (100°C)
Flash Point: MCH: 21.2°F (-6.0°C) (OC), BuOAc: 72°F (22°C) (CC), 2-BuOH: 75°F (24°C)
Evaporation Rate (BuAc=1): No information available
Flammability Limits: MCH: 1.2 to 6.7% by volume, BuOAc: 1.4 to 7.6% by volume 2-BuOH: 1.7 to 9.0% by volume
Explosion Limits: No information available
Vapor Pressure (mmHg): MCH: 5.73 kPa / 77°F (25°C), BuOAc: 1.2 kPa/68 °F(20°C)
Vapor Density (Air=1): MCH: 3.4, BuOAc: 4.0, 2-BuOH: 2.6
Solubility: Insoluble in water
Partition Coefficient: MCH: log Pow 3.61, BuOAc: log Pow 1.78, 2-BuOH: log Pow 0.6
Auto-ignition Temperature: MCH: 473°F (245°C), BuOAc: 759-797°F (404-425°C), 2-BuOH: 763°F (406°C)

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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:

<table>
<thead>
<tr>
<th>Eye</th>
<th>Yes</th>
<th>Skin</th>
<th>No</th>
<th>Inhalation</th>
<th>Yes</th>
<th>Ingestion</th>
<th>Yes</th>
</tr>
</thead>
</table>

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:

- **MCH**: oral-rabbit LD50 4000-4500mg/kg
  - oral-mouse LD50 1200mg/kg
  - oral-rat LD50 >3200mg/kg
  - dermal-rabbit LD50 >86700mg/kg
  - inhalation-mouse (vapour) LC50 36.9mg/L/2hours

- **BuOAc**: 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)

- **2-BuOH**: oral-rat LD50 6500mg/kg
  - oral-rat LD50 2200mg/kg
  - inhalation-rat (vapour) LC50 16000ppm/4hours

Skin corrosion/irritation: Direct contact may cause irritation.

- **MCH**: skin-rabbit mild
- **BuOAc**: human mild

Eye damage/eye irritation: Contact with fumes and the liquid may cause irritation.

- **MCH**: eyes-rabbit mild
- **BuOAc**: eyes-rabbit moderate

Chronic Toxicity: No information available

Respiratory or Skin Sensitization: No information available

Mutagenicity: No information available

Specific target organ toxicity (single exposure): May cause damage to central nervous system.

- May cause drowsiness or dizziness.
- **MCH**: Anesthetic acts were confirmed in an inhalation exposure test using rabbits.
- **BuOAc**: Central nervous system adverse effects were observed by the human data. Showed pulmonary edema and respiratory irritation due to...
animal testing.
2-BuOH : Anesthetic actions is seen in humans and mice according to EHC 65 (1987) inhalation exposure. Although central nervous system depression symptoms were seen in mice described in high inhalation exposure levels

<table>
<thead>
<tr>
<th>Carcinogenicity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC: N.D.</td>
</tr>
</tbody>
</table>

**Section 12. Ecological Information**

**Ecotoxicity (Aquatic and Terrestrial):** Toxic to aquatic life with a long lasting effects
MCH: Crustacea(brine shrimp) LC50 3300 μg/L/96H
Oryzias latipes LC50 5.02mg/L/48H
BuOAc: Crustacea (Daphnia magna) LC50 32000μg/L/48H
2-BuOH: Crustacea (Daphnia magna) EC50 2300mg/L/24H

**Bioaccumulative Potential**
It is presumed that bioaccumulation is low.
MCH: BCF=321, BuOAc: Log Pow 1.78

**Mobility in Soil:**
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 (NDSL)
- ENCS (Japan): Yes
- REACH (Europe): No
- IECS (China): No
- KECL (Korea): No
- PICCS (Philippines): No
- AICS (Australia): No
- ERMA (New Zealand): No information available

Federal Regulations:
- SARA 313: No information available
- 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: No information available
- New Jersey Right to Know Components: No information available
- Pennsylvania Right to Know Components: No information available
- California Proposition 65: No information available

Section 16. Other Information

WHMIS Classification: No information available

HMIS Rating:
- Health Hazard: 2
- Flammability: 3
- Physical Hazard: 0
- Personal Protection Equipment: X

NFPA Rating
- Health Hazard: 2
- Fire Hazard: 3
- Reactivity Hazard: 0

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Prepared By .................................. Advanced Polymer, Inc.
Date Revised .................................. July 31, 2018
Revised By .................................. Advanced Polymer, Inc.

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