



MATERIAL SAFETY DATA SHEET

Identity: HiOmega™ FlaxOil Epoxy

GREEN GRAFFITI COAT(A) & PROPRIETARY PHOTOINITIATOR(B)

Section 1

Company Name: Polar Industries
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Section II: Hazardous Ingredients/Identify Information

Part-A

Hazardous Components

Specific Chemical Identity: (Common Name) OSHA PEL ACGIHT TLV

Other Limits

None

Part-B

Chemical Family: Alicyclic Anhydride
Chemical Use: Chemical intermediate

HMIS Hazard Rating

| | | |
|--------------------|----|------------|
| Health: | 2* | 4=Extreme |
| Fire: | 1 | 3=High |
| Reactivity: | 1 | 2=Moderate |
| | | 1=Slight |
| | | 0=Least |

Inhalation: May cause nose, throat, and lung irritation. May cause respirator tract sensitization. May aggravate pre-existing respiratory disorders. Chronic exposure may cause bronchitis and asthma.

Skin Contact: May cause severe irritation. Contact with moist skin may cause burns. May cause skin sensitization. May aggravate pre-existing skin disorders.

Eye Contact: May cause severe irritation or burns.

Ingestion: May cause burns of the mouth, throat, and gastrointestinal tract.

Section III: Physical/Chemical Characteristics

Part-A

| | | | |
|--|--|-------------------------|-----------------------------------|
| Boiling Point: | N/A | Specific Gravity | (H ₂ O=1); 0.910-0.945 |
| Vapor Pressure (mm HG): | <0.05 mm @300° C | Melting Point: | Liquid above 0° C |
| Vapor Density (g/cm³): | > 1.04 | Freezing Point: | -8 to -13 Celsius |
| Evaporation Rate: | N/A | | |
| Solubility in Water: | 0.3 % (20°C) | (Butyl Acetate=1) | |
| Appearance: | Component "A" - light yellow to colourless liquid Component "B" – white liquid; Component "C" (if applicable) – white powder | | |

Part-B

| Components | Percentage | TLV(ppm) |
|---|--|-----------------|
| Proprietary anhydride | >97 | Not Established |
| Boiling Point: | 535°F (279°C) | |
| Melting Point: | Not Established | |
| Molecular Weight: | 166.19 | |
| Volatility/Vol (%): | Not Established | |
| Vapor Pressure (mm Hg): | 0.01 at 77°F (25°C) | |
| Vapor Density (Air =1): | >1 | |
| Solubility in H₂O: | reacts slowly with water | |
| Appearance/Odor: | White to tan solid/ Faint characteristic odor. | |
| Odor Threshold: | Not Established | |
| Viscosity (cps): | Not Established | |
| Specific Gravity (H₂O = 1): | 1.143+/- 0.015 @ 167°F (75°C) | |
| Evap. Rate (Butyl Acetate=1): | <1 | |
| Flash Point: | 300°F (149°C) PMCC, ASTM D93 | |

Section IV: Fire and Explosion Hazard Data

Part-A

| | |
|--|---|
| Flash Point | Pensky-Martens Closed Cup ca. 340 ° C |
| Flammable Limits: | LEL UEL Not established |
| Extinguishing Media: | Dry Chemical or CO ₂ preferred |
| Special Fire Fighting Procedures: | Stop spill, start fire fighting efforts immediately. Limit spread. Treat as an oil (edible fat) fire. |
| Unusual Fire and Explosion Hazards: | Ignition temperature approximately >340. In the event of fire and/or explosion do not breathe fumes |

Part-B

| | |
|---|---|
| Extinguishing Media: | Use water, foam, dry chemical, or carbon dioxide (CO ₂) |
| Special Firefighting Procedures/Precautions: | Firefighters should wear NIOSH approved self-contained breathing apparatus. Responders should wear protective clothing to prevent skin contact. Move containers from fire area. If unable to move, cool sealed containers with water. |
| Unusual Fire and Explosion Information: | This material reacts with water or steam to form methyltetrahydrophthalic acid. This reaction is slightly exothermic. It should not present any problems if large quantities of water are used. |
| Environmental Note: | Contain runoff. |

Section V: Reactivity Data

Part-A

Stability: (X) Stable () Unstable

Incompatibility (materials to avoid): Amines, strong bases or strong acids.

Hazardous Decomposition or By Products: N/A

Conditions to Avoid: Do not overheat. If product begins to smoke, reduce heat.

Hazardous Polymerization: () May Occur (X) Will not occur

Part-B

Chemical Stability: Stable

Conditions to Avoid: Incompatible materials

Incompatible Materials: Alcohols, acids, bases, and oxidizers. Heat and / or water will affect product quality.

Decompositions Products: Oxides of carbon. Occurs above 428°F (220°C).

Hazardous Polymerization: Will not occur.

Section VI: Health Hazard Data

Part-A

Route(s) of Entry: Inhalation? XX Skin? XX Ingestion? No emergency care expected

Carcinogenicity: None

NTP: NO

IARC Monographs: NO

OSHA Regulated: NO

Health Hazards Signs (acute and chronic): Component "C" is a fine powder, inhalation should be avoided. Component "A" is derived from flax. Component "B" Anhydride, see applicable MSDS.

Symptoms of Exposure: None known

Medical Conditions Generally Aggravated by Exposure: Person with respiratory problems should avoid inhalation of any dust material. Person with allergy to flax should avoid any contact.

Emergency and First Aid Procedures: Skin: wash exposed skin with acetone or water or both. Eyes: Flush eyes thoroughly with water for several minutes. Remove contact lenses, if worn.

Part-B

Inhalation: Remove victim to fresh air. If breathing is difficult, give oxygen. If not breathing, administer artificial respiration. Get medical attention.

Skin Contact: Immediately remove contaminated clothing and shoes. Wipe excess material from skin and flush with water for at least 15 minutes. Use soap if available or follow washing with soap and water. Do not reuse contaminated clothing without laundering. Get medical attention.

Eye Contact: Immediately flush with plenty of water for at least 15 minutes. Get medical attention.

Ingestion: Get medical attention immediately.

Section VII: Precautions for Safe Handling and Use

Part-A

Steps to be taken in case material is released or spilled:

Use oil absorbent and dispose of properly (either sand or vermiculite floor absorbent).

Waste Disposal Method:

Do not put into sewer lines. Dispose of in accordance with local regulations.

Precautions to be taken in handling and storing:

Keep away from fire or open flames. Store in dry area, preferable at less than 85 °F and low relative humidity to maintain quality.

Other Precautions:

Consult federal and/or local authorities for approved disposal procedures.

Part-B

Containers do not have to be grounded and bonded when material is transferred, but it is recommended as a good practice. Store in a cool, dry place. Keep away from heat, sparks, and flames.

Section VIII: Control Measures

Part-A

Respiratory Protection: Not necessary under normal conditions of use. (Component "A + B")
Dust mask, if levels exceed 15mg/cu.meter. (Component "C"; 3 part)

Ventilation:

Local Exhaust: Normal ventilation, mechanical (general)

Special: If product is used at elevated temperatures, a fume collection system is suggested.

Protective Gloves: Required for safety protection **Eye Protection:** Safety glasses

Other Protective Clothing and Equipment: Evaluate need based on particular application

Work/Hygienic Practice: Handle in accordance with good industrial, hygiene and safety practice for handling non-hazardous liquid material.

Part-B

Respirator Protection: NIOSH approved respirator protection for organic vapors.

Ventilation: Utilize local exhaust to control high vapor concentrations. Do not rely on general exhaust.

Protective Gloves: Utilize appropriate impervious chemical gloves.

Eye Protection: Chemical goggles and possibly a face shield.

Other Protective Equipment: Wear additional protective clothing to prevent skin contact. This may include apron, chemical resistant boots, and chemical resistant suits.

Work Practices: Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before reuse. Shower after work using soap and water.

NOTE: The information in this MSDS is compiled from sources considered to be accurate to the best of our knowledge and applies to activities within the scope of the intended use of the product as a vegetable/seed oil. No warranty is expressed or implied with respect to completeness of continuing accuracy of the information given here. User should satisfy themselves that they have all current data relevant to their particular use.