



MATERIAL SAFETY DATA SHEET

Version 4.0
Revision Date: 03/20/2025
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Living Document

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product name: PEL FZ 311
Synonyms: PolyEarthylene
Material Use: All plastic applications
Product Use: Film
Chemical Formula: Polyolefin compound with functional additives
CAS Name & No: Not applicable (mixture)
Identified Uses: Bio-based, eco-friendly alternatives to conventional polyolefin-based plastics.

Company: Verde Bioresins, Inc
1431 E. Orangethrope Ave
Fullerton, California 92831
USA

Manufacturer: Verde Bioresins, Inc
1431 E. Orangethrope Ave
Fullerton, California 92831
USA

Emergency or MSDS Contact Phone Number: 1(310) 219-6333

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS No. | WT % |
|----------------------|-----------|-------|
| Polyethylene | 9002-88-4 | 85-95 |
| Calcium Carbonate | 1317-65-3 | 5-10 |
| Proprietary Additive | Mixture | 1-5 |

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| SECTION 3: HAZARDS IDENTIFICATION |
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Classification of the substance or mixture

Not a hazardous substance or mixture. (HMIS: 0)

Signal Word

Not Applicable

GHS Label elements or precautionary statements

Not a hazardous substance or mixture.

Hazards not classified according to HNOC or GHS

None

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| SECTION 4: FIRST AID MEASURES |
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Inhalation

No adverse effects anticipated under normal conditions if adequately ventilated. However, if exposure occurs, remove victim to fresh air. Obtain medical attention if irritation persists.

Skin Contact

No adverse effects anticipated under normal conditions. However, if vapor or fume exposure occurs, wash skin thoroughly with soap and water. Obtain medical attention if irritation persists.

Eye Contact

Foreign Body: In the event of eye irritation, flush eyes with water for at least 15 minutes. Obtain medical attention if irritation persists. Molten Material: Get medical attention immediately

Ingestion

If ingestion occurs, vomiting can be induced after diluting with water or milk. Call a physician for additional medical advice. Not likely to occur.

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Carbon oxides. Dry Powder. Foam. Water Spray.

Advice for firefighters

Wear full bunker gear including a positive pressure self-contained breathing apparatus in any closed space. Keep away from heat, sparks and flames.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Leak/Spill

Allow molten material to solidify before cleaning. Sweep, pick up solids, and put in dust bin. Keep away from heat, sparks, and flame.

Protect People

Remove unnecessary personnel from the release area. Wear appropriate personal protection equipment during clean-up.

Protect the Environment

Contain material to prevent contamination of the soil, surface water or ground water.

Clean Up

Sweep or vacuum material and place in a disposal container. See Section 11.

SECTION 7: HANDLING AND STORAGE



Handling

Use the proper personal protective equipment during handling. Minimize dust generation and accumulation. Use good manufacturing practices.

Storage

Store in a cool, dry, protected area away from heat, sparks, and flame.

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| SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION |
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Engineering Controls

Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Adequate ventilation should be provided as conditions warrant. Local exhaust ventilation should comply with OSHA regulations and the American Conference of Governmental Industrial Hygienists, Industrial Ventilation - A Manual of Recommended Practice.

Respiratory Protection

For most conditions, no respiratory protection should be needed. If desired, NIOSH approved respiratory protection meeting the requirements of 29 CFR 1910.134 may be used. If the material is overheated and starts smoldering, wear a positive pressure self-contained breathing apparatus for respiratory protection.

Eye Protection

Use safety glasses or chemical goggles

Skin Protection

Leather work gloves.

Clothing

Wear adequate protective clothing

Footwear

Safety Shoes

Ventilation

Adequate ventilation to avoid chronic inhalation of dust

Control of environmental exposure

No special environmental precautions required.

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| SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES |
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| Appearance | Pellets |
| Odor | Odorless to Mild |
| Boiling Point (°C) | No data available |
| Melting Point (°C) | 170-210 |
| Freezing Point | No data available |
| Specific Gravity (water = 1.0) | 0.935 g/cm ³ |
| Vapor Pressure (mm of mercury) | No data available |
| pH | Not Applicable – Solid |

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| SECTION 10: STABILITY AND REACTIVITY |
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Chemical Stability

Stable under recommended storage conditions.

Polymerization

Hazardous polymerization will not occur.

Possibility of hazardous reactions

No data available

Conditions to avoid

No data available

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. In the event of fire: see section 5.

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| SECTION 11: TOXICOLOGICAL INFORMATION |
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Acute Toxicity

LD50 Oral – Rat: > 8,000 mg/kg

Remarks: (RTECS)

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

At high temperature it may cause thermal burns

Serious eye damage/eye irritation

At normal temperature it may cause irritation and damage to the eye. At high temperatures, molten plastic may cause severe damage to the eye and thermal burns

Respiratory or skin sensitization

No data available

Ingestion

Not a likely route of entry

Germ cell mutagenicity

No data available

Carcinogenicity

No component of this product present at levels $\geq 0.1\%$ is recognized as possible human carcinogen by IARC, NTP or OSHA.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure



No data available

Aspiration hazard

No data available

SECTION 12: ECOLOGICAL INFORMATION

Aquatic

No data available

Biodegradation

No data available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Management Information

Any disposal practice must be in compliance with local, state and federal laws and regulations (contact local or state environmental agency for specific rules). Waste characterization and compliance with applicable laws are the responsibility of the waste generator.

SECTION 14: TRANSPORTATION INFORMATION

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| <u>Proper Shipping Name</u> | PolyEarthylene |
| <u>DOT - Hazard Class</u> | Not Regulated |
| <u>DOT - Shipping ID No.</u> | Not Regulated |
| <u>DOT - Labeling</u> | Not Regulated |

SECTION 15: REGULATORY INFORMATION

Regulatory information is not meant to be all-inclusive. It is the user's responsibility to ensure compliance with federal, state or provincial and local laws.



SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA Hazards

Lead Free

The components used to produce this material are not expected to contain lead (Pb) nor is lead intentionally employed in its manufacture.

Reach

All components used to manufacture this product are in compliance with the January 19, 2021 Reach (SVHC) directive EC/2006/1907.

RoHS/RoHS2/III

This product is compliant with EU RoHS directive 2015/863/EU.

PFOA/PFOS

PFOS CAS No. 1763-23-1 (Perfluorooctansulfonic Acid) and PFOA CAS No. 335-67-1 (Perfluorooctanoic Acid) are not present or intentionally added to this product.

Massachusetts Right to Know Components

Calcium carbonate CAS No. 1317-65-3

Pennsylvania Right to Know Components

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|-------------------|------------------|
| Calcium carbonate | CAS No.1317-65-3 |
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New Jersey Right to Know Components

| | |
|-------------------|-------------------|
| Calcium carbonate | CAS No. 1317-65-3 |
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California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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| SECTION 16: OTHER INFORMATION |
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The information provided in this Material Safety Data Sheet is believed to be accurate and has been compiled from sources believed to be reliable. It is offered only as a reference for safe handling, processing, using, storage, transportation, disposal, and release. It is not to be considered a warranty or quality specification. Handling of this product requires the previous knowledge of its hazards for the user. It is the responsibility of the product user enterprise to promote the training of its employees and contractors in the possible risks arising from the product.

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