PolyEarthylene®

Verde®

Technical Data Sheet

PEL IM 277

Product Description

A polyethylene-based grade of PolyEarthylene® with a minimum biobased content of 56%. It is an injection molding grade of PolyEarthylene® tailored specifically for applications requiring high strength and durability.

Renewable Content	
Minimum Biobased Content (%) (ASTM D6866)	56%
Est. Biodegradation Timeline (Years)	3-5

General

- Complies with U.S. FDA 21 CFR 177.1520 (c)3.1a
- No BPAs, phthalates, or PFAS intentionally added
- Recyclable
- Biodegrades in a landfill environment in 3-5 years under ASTM D5511

Properties	Value (English)	Value (SI)	Method
Melt Flow Index (190°C, 2.16 kg)	9.47 g/10min	9.47 g/10min	ASTM D1238 Procedure A
Specific Gravity	1.010	1.010	ASTM D792
Durometer Hardness (Shore D)	76.5	76.5	ASTM D2240
Tensile Strength @Yield	2,650 psi	18.2 MPa	ASTM D638
Tensile Strength @Break	1,380 psi	9.5 MPa	ASTM D638
Tensile Modulus	142,572 psi	983 MPa	ASTM D638
Tensile Elongation	17.2 %	17.2 %	ASTM D638
Flexural Modulus	65,866 psi	454 MPa	ASTM D790
Flexural Strength @Peak	2,129 psi	14.7 MPa	ASTM D790
1/8” Notch Izod Impact Strength (73 °F)	0.49 ft-lb/in	26.1 J/m	ASTM D256

Processing Conditions:

PolyEarthylene resins can be processed with conventional injection molding equipment. The addition of this resin should be performed after a standard purging process. The melt temperature of the resin should be kept below 380°F, if possible.

Manufacturing processes differ and the temperature ranges for injection molding presented in the table are only suggested by Verde Bioresins, Inc.

Modifications to operational parameters may be required for some equipment. Any questions related to the material can be addressed to Verde Bioresins, Inc.

Injection Molding Processing Parameters:

Description of Temperature Zone	Temperatures (Range Value)
Feed	100-200°F
Barrel	330-380°F
Die Head	330-380°F

Disclaimer:

All data present has been analyzed in accordance with ASTM standards. Data are obtained from specimens molded under carefully controlled conditions from representative samples of the compound described herein. Properties may be materially affected by the molding techniques applied and by the size and shape of the item molded. No assurance can be implied that all molded articles will have the same properties as those listed. This data is not based on the minimum quantity of results required to report as qualifying specifications and may be subject to refinement. Data is typical and not to be construed as specifications.