

# POLYEARTHYLENE TECHNICAL DATA SHEET



PRODUCT: PEL IP 242

**PRODUCT DESCRIPTION:** This is an injection grade of PolyEarthylene that is biodegradable, containing more than 25% biobased content with a high melt flow. This material is a polypropylene based resin that has been tested and found to work on living hinges. All data presented has been analyzed in accordance with ASTM standards. This material is FDA Title-21 Food Contact Compliant. The biodegradation timeline for this material is approximately 1-3 years.

Renewable Content	
Biobased Content (%) (ASTM D6866)	>25

CHARACTERISTIC	TEST METHOD	VALUE	UNIT
MELT FLOW INDEX	ASTM D1238 Procedure A	16.9	g/10 min (230°C, 2.16Kg)
SPECIFIC GRAVITY	ASTM D792	0.997	g/cm <sup>3</sup>
HARDNESS (SHORE D)	ASTM D2240	71	N/A
TENSILE STRENGTH (@YIELD)	ASTM D638	1,862	psi
TENSILE STRENGTH (@BREAK)	ASTM D638	187	psi
TENSILE MODULUS	ASTM D638	83,529	psi
TENSILE ELONGATION	ASTM D638	50	%
FLEXURAL MODULUS	ASTM D790	53,598	psi
FLEXURAL STRENGTH	ASTM D790	1,874	psi
IZOD IMPACT STRENGTH (NOTCH 1/8" SPECIMEN)	ASTM D256	5.56	ft-lb/in (73 °F)

## 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 450 °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.

Description of Temperature Zone	Temperatures (Range Value)
Feed	100-200°F
Barrel	360-380°F
Die Head	380-400°F

## Packaging and Storing:

This resin is packaged in a sealed, foil lined gaylord or bag. The product should be stored in a cool, dry, and isolated area away from moisture and other contaminants to achieve maximum stability and performance.

## Notes:

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 herein is typical and not to be construed as specifications.