

Technical Data Sheet

PEL TH 170

Product Description

A high-density polyethylene-based grade of PolyEarthylene® with a minimum biobased content of 78%. It is an extrusion grade of PolyEarthylene® designed for sheet extrusion, thermoforming, and blow molding applications.

Renewable Content

Minimum Biobased Content (%) (ASTM D6866)	78%
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)	0.77 g/10min	0.77 g/10min	ASTM D1238 Procedure A
Specific Gravity	1.200	1.200	ASTM D792
Durometer Hardness (Shore D)	70	70	ASTM D2240
Tensile Strength @Yield	2,537 psi	17.5 MPa	ASTM D638
Tensile Strength @Break	985 psi	6.8 MPa	ASTM D638
Tensile Modulus	107,000 psi	737 MPa	ASTM D638
Tensile Elongation	158 %	158 %	ASTM D638
Flexural Modulus	130,500 psi	899 MPa	ASTM D790
Flexural Strength @Peak	3,200 psi	22.1 MPa	ASTM D790
1/8" Notch Izod Impact Strength (73 °F)	2.99 ft-lb/in	159.9 J/m	ASTM D256

Processing Conditions:

PolyEarthylene resins can be processed with conventional thermoforming equipment. The addition of this resin should be performed after a standard purging process. The melt temperature of the resin should be kept below 390°F, if possible.

Manufacturing processes differ and the temperature ranges for thermoforming 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.

Thermoforming Processing Parameters:

Description of Temperature Zone	Temperatures (Range Value)
Feed	100-200°F
Barrel	330-390°F
Die Head	330-390°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.