

## Technical Data Sheet

## PEL FZ 282

## Product Description

An LLDPE grade of PolyEarthylene® with a minimum biobased content of 63%. It is a higher clarity film grade of PolyEarthylene® designed for general blown film applications.

## Renewable Content

|                                           |     |
|-------------------------------------------|-----|
| Minimum Biobased Content (%) (ASTM D6866) | 63% |
| 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)        | 1.61 g/10min    | 1.61 g/10min   | ASTM D1238 Procedure A |
| Specific Gravity                        | 0.937           | 0.937          | ASTM D792              |
| Durometer Hardness (Shore D)            | 54              | 54             | ASTM D2240             |
| Tensile Strength @Yield                 | 1,528 psi       | 9.48 MPa       | ASTM D638              |
| Tensile Strength @Break                 | 745 psi         | 6.82 MPa       | ASTM D638              |
| Tensile Modulus                         | 13,828 psi      | 93.1 MPa       | ASTM D638              |
| Tensile Elongation                      | 780 %           | 780 %          | ASTM D638              |
| Flexural Modulus                        | 11,832 psi      | 103.4 MPa      | ASTM D790              |
| Flexural Strength @Peak                 | 773 psi         | 6.4 MPa        | ASTM D790              |
| 1/8" Notch Izod Impact Strength (73 °F) | 5.5 ft-lb/in    | 280 J/m        | ASTM D256              |
| Haze                                    | 29.3 % (2 mil)  | 29.3 % (2 mil) | ASTM D1003             |
| Light Transmission                      | 90.9 % (2 mil)  | 90.9 % (2 mil) | ASTM D1003             |
| Film Tensile Strength (TD)              | 2,132 psi       | 14.7 MPa       | ASTM D882              |
| Film Elongation (TD)                    | 67.9 %          | 67.9 %         | ASTM D882              |
| Film Tensile Strength (MD)              | 1,842 psi       | 12.7 MPa       | ASTM D882              |
| Film Elongation (MD)                    | 12.6 %          | 12.6 %         | ASTM D882              |

**Processing Conditions:**

PolyEarthylene resins can be processed with conventional blown film 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 blown film 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.

## Blown Film Processing Parameters:

| Description of Temperature Zone | Temperatures (Range Value) |
|---------------------------------|----------------------------|
| Feed                            | 100-200°F                  |
| Barrel                          | 340-380°F                  |
| Die Head                        | 340-380°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.

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