

Marlex® D139 Polyethylene

METALLOCENE LINEAR LOW DENSITY POLYETHYLENE (mLLDPE)

This metallocene linear low density polyethylene is an ethylene-hexene copolymer tailored for blown film applications that require:

- Superb clarity
- Excellent gloss
- Exceptional toughness
- Outstanding heat seal

Typical blown film applications include:

- Seal layer in coextrusions
- Heavy duty packaging
- Clarity packaging
- Agricultural films

| Nominal Resin Properties | English | SI | Method |
|----------------------------|---------|-------------------------|------------|
| Melt Index, 190 °C/2.16 kg | --- | 1.0 g/10 min | ASTM D1238 |
| Density | --- | 0.918 g/cm ³ | ASTM D1505 |
| Slip | None | None | --- |
| Antiblock | None | None | --- |
| Process Aid | Yes | Yes | --- |

| Nominal Blown Film Properties at 1 mil ¹ | English | SI | Method |
|---|-----------|-----------|------------|
| Haze | 4 % | 4 % | ASTM D1003 |
| Gloss, 60° | 130 | 130 | ASTM D2457 |
| COF | > 1 | > 1 | ASTM D1894 |
| Dart | --- | 630 g/mil | ASTM D1709 |
| Elmendorf Tear MD | --- | 165 g/mil | ASTM D1922 |
| Elmendorf Tear TD | --- | 440 g/mil | ASTM D1992 |
| Tensile Strength at Yield MD | 1850 psi | 13 MPa | ASTM D882 |
| Tensile Strength at Yield TD | 1450 psi | 10 MPa | ASTM D882 |
| Tensile Strength at Break MD | 10800 psi | 74 MPa | ASTM D882 |
| Tensile Strength at Break TD | 8200 psi | 57 MPa | ASTM D882 |
| Tensile Elongation at Break MD | 500 % | 500 % | ASTM D882 |
| Tensile Elongation at Break TD | 600 % | 600 % | ASTM D882 |
| 1 % Secant Modulus MD | 26000 psi | 179 MPa | ASTM D882 |
| 1 % Secant Modulus TD | 30200 psi | 208 MPa | ASTM D882 |
| Seal Initiation Temperature ² | 219 °F | 104 °C | ASTM F88 |

1. Produced on a LLDPE line at 2.5:1 BUR, 80 mil die gap, 8 in die, 250 lb/h, 400 °F melt temperature.

2. Temperature at which 0.3 lb/in heat seal strength is achieved. 0.5 s dwell, 30 psi pressure, 11.8 in/min separation rate.

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