

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.

