

Linear Low Density Polyethylene

LF10182



EVALENE® LF10182 is a barefoot Linear Low Density Polyethylene grade with butene (C4) as comonomer for blown film applications.

EVALENE® LF10182 is recommended as lamination or core layer material in a coextruded film where superior stiffness is required. Its outstanding mechanical properties make **EVALENE® LF10182** ideal for applications that require exceptional toughness and puncture resistance.

FEATURES

- Excellent stiffness
- Outstanding mechanical properties
- Meets FDA Philippines food-contact requirements
- Halal certified

TYPICAL APPLICATIONS

- Flexible packaging

Product Properties

Property	Test Condition	Test Method	Metric Value	Unit
Melt Index	190°C/2.16 kg	ASTM D1238	1.0	g/10 min
Density	23°C	ASTM D1505	0.918	g/cm ³
Tensile Strength at Yield*	500 mm/min	ASTM D882	10 / 9	MPa
Elongation at Yield*	500 mm/min	ASTM D882	53 / 36	%
Tensile Strength at Break*	500 mm/min	ASTM D882	12 / 10	MPa
Elongation at Break*	500 mm/min	ASTM D882	416 / 393	%
Tensile Modulus*	1% Secant, 25 mm/min	ASTM D882	195 / 205	MPa
Elmendorf Tear Strength*		ASTM D1922	277 / 444	g
Dart Drop Impact Strength*		ASTM D1709	77	g
% Haze*		ASTM D1003	15	%
Gloss*	45° angle of incidence	ASTM D2457	84	%

*Properties tested on 25µ films made using a Killion extruder with 38mm screw, 3.5" die, 1.0mm die gap, at 2.25:1 BUR.

Tensile and tear properties are in machine and transverse directions (MD / TD).

Typical Processing Conditions

Extrusion Temperatures	170 - 190°C
Blow Up Ratio	2 - 4
Die Gap (Blown Film)	1 - 3 mm

EVALENE[®] LF10182 has overall superior mechanical properties over the other LLDPE material in this side-by-side comparison. Its advantages in tensile, tear and dart drop impact strength make it ideal for applications that require strength and toughness. As core or lamination layer material in a coextruded film, **EVALENE[®] LF10182**'s stiffness is comparable with the other LLDPE material. **EVALENE[®] LF10182** provides 30% higher dart drop impact strength and 40% higher tear strength in the machine direction than the other LLDPE material, giving it performance that exceeds expectations.

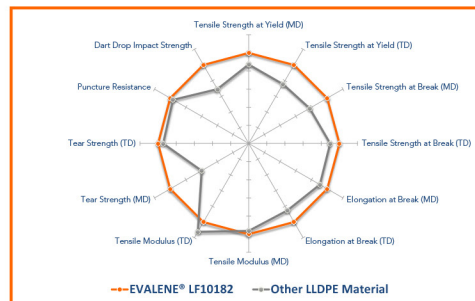


Figure 1. Mechanical property performance of **EVALENE[®] LF10182** vs. a 1.1 MI, 921 Density LLDPE material

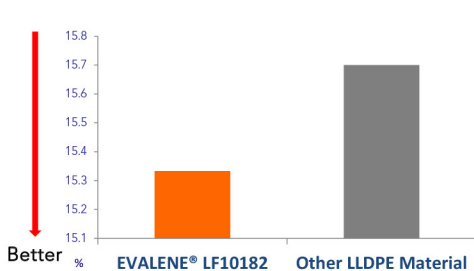


Figure 2. Comparison of haze between **EVALENE[®] LF10182** and a 1.1 MI, 921 Density LLDPE material

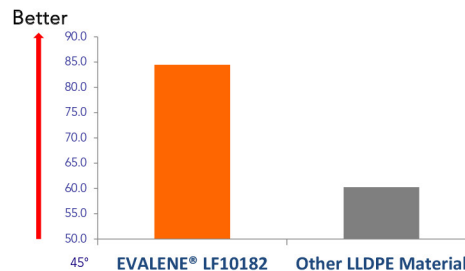


Figure 3. Comparison of gloss between **EVALENE[®] LF10182** and a 1.1 MI, 921 Density LLDPE material

EVALENE[®] LF10182 provides better optics than the other LLDPE material as shown in these graphs. A film made with **EVALENE[®] LF10182** is clearer because it has lower haze, and has more luster because of its higher gloss compared to the other LLDPE material. Such attributes make **EVALENE[®] LF10182** suitable for applications where clarity is important for branding opportunities and consumer appeal.

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