

# Linear Low Density Polyethylene



## LF10181

EVALENE® LF10181 is a high slip, high antiblock Linear Low Density Polyethylene grade with butene (C4) as comonomer for blown film applications.

**EVALENE® LF10181** is the resin of choice for tough flexible films. It exhibits a good balance of tensile and impact strength which makes it ideal for a wide range of film and packaging applications.

### FEATURES

- Balanced toughness and flexibility
- Superior stiffness
- Good tear resistance
- Meets FDA Philippines food-contact requirements
- Halal certified

### TYPICAL APPLICATIONS

- Flexible packaging
- Agricultural films
- Industrial liners
- Garment bags
- Trash bags
- Shopping bags
- Ice bags

## Product Properties

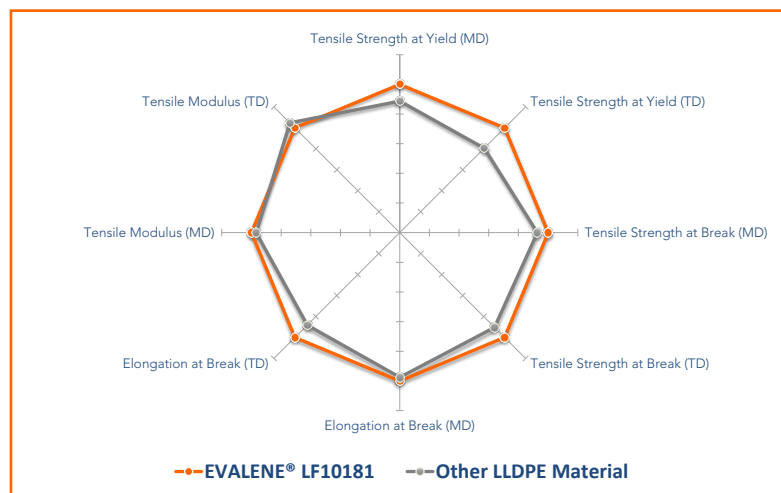
Property	Test Condition	Test Method	Typical Value	Unit
Melt Index	190°C/2.16 kg	ASTM D1238	1.0	g/10 min
Density	23°C	ASTM D1505	0.918	g/cm <sup>3</sup>
Tensile Strength at Yield*	500 mm/min	ASTM D882	9 / 8	MPa
Elongation at Yield*	500 mm/min	ASTM D882	61 / 22	%
Tensile Strength at Break*	500 mm/min	ASTM D882	11 / 10	MPa
Elongation at Break*	500 mm/min	ASTM D882	410 / 409	%
Tensile Modulus*	1% Secant, 25 mm/min	ASTM D882	167 / 159	MPa
Elmendorf Tear Strength*		ASTM D1922	197 / 406	g
Dart Drop Impact Strength*		ASTM D1709	79	g
% Haze*		ASTM D1003	13.5	%
Gloss*	45° angle of incidence	ASTM D2457	84	%
Coefficient of Friction - Static*		ASTM D1894	0.07	-
Coefficient of Friction - Kinetic*		ASTM D1894	0.05	-

\*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	1 - 3 mm

Figure 1. Mechanical property performance of EVALENE® LF10181 vs. a 1.1 MI, 923 Density LLDPE material



**EVALENE® LF10181** exhibits a more balanced combination of mechanical properties compared to the 1.1 MI, 923 Density LLDPE grade. Specifically, it has superior tensile strength at yield which makes a film made of **EVALENE® LF10181** more resistant against dimensional changes and distortion. **EVALENE® LF10181** is suitable for tough flexible films.

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