EVALENE® HDPE PP LLDPE PRODUCT DATA SHEET

Linear Low Density Polyethylene



LF20186

EVALENE® LF20186 is a high slip, high antiblock Linear Low Density Polyethylene grade with butene (C4) as comonomer for blown film applications.

EVALENE® LF20186 is tailored for thin to medium thickness films (25 to 50 microns; 0.001" to 0.002"). It is especially designed to work well when blended with low density polyethylene (LDPE). It is likewise suitable as lamination layer or core layer material in coextruded films. Films made with **EVALENE® LF20186** are notable for their toughness, flexibility and clarity - a good combination of mechanical and optical properties.

FEATURES

- Outstanding mechanical properties
- Excellent compatibility for blending with LDPE
- Enhanced clarity
- Meets FDA Philippines food-contact requirements
- Halal certified

TYPICAL APPLICATIONS

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

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Product Properties

Property	Test Condition	Test Method	Typical Value	Unit
Melt Index	190°C/2.16 kg	ASTM D1238	2.0	g/10 min
Density	23°C	ASTM D1505	0.918	g/cm^3
Tensile Stength at Yield*	500 mm/min	ASTM D882	9 / 9	MPa
Elongation at Yield*	500 mm/min	ASTM D882	57 / 30	%
Tensile Strength at Break*	500 mm/min	ASTM D882	12 / 11	MPa
Elongationat Break*	500 mm/min	ASTM D882	478 / 444	%
Tensile Modulus*	1% Secant, 25 mm/min	ASTM D882	160 / 178	MPa
Elmendorf Tear Strength*		ASTM D1922	213 / 399	g
Dart Drop Impact Strength*		ASTM D1709	64	g
% Haze*		ASTM D1003	11	%
Gloss*	45° angle of incidence	ASTM D2457	80	%
Coefficient of Friction - Static*		ASTM D1894	0.16	-
Coefficient of Friction - Kinetic*		ASTM D1894	0.12	-

*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

EVALENE® LF20186 has balanced mechanical properties overall. It has comparable tensile, tear and dart properties with the 2.2 MI, 923 Density LLDPE material.

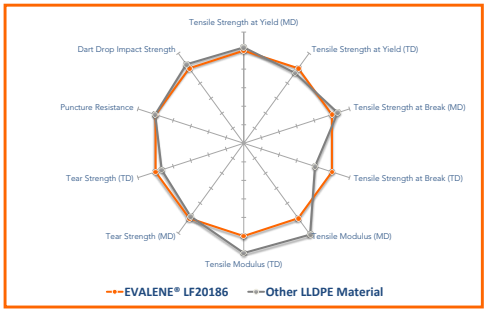


Figure 1. Mechanical property performance of EVALENE® LF20186 vs. a 2.2 MI, 923 Density LLDPE material

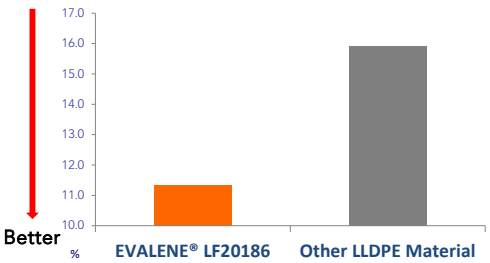


Figure 2. Comparison of haze between EVALENE® LF20186 and 2.2 MI, 923 Density LLDPE material

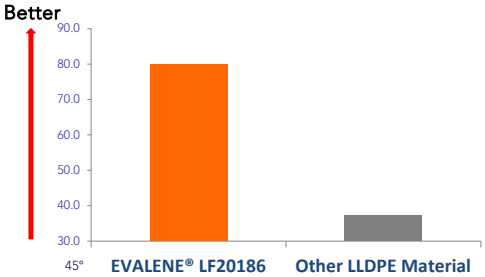


Figure 3. Comparison of gloss between EVALENE® LF20186 and 2.2 MI, 923 Density LLDPE material

When it comes to clarity, **EVALENE® LF20186** stands out. It has almost 30% lower haze and more than double gloss compared to the other LLDPE material. Such outstanding optical properties allow **EVALENE® LF20186** to deliver stunning optics that both the films producer and the end-user want.

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