

High Density Polyethylene



HF09522

EVALENE[®] HF09522 is a high molecular weight High Density Polyethylene grade for blown film applications.

EVALENE[®] HF09522 is ideal for stiff and strong films. Bags made of **EVALENE[®] HF09522** can carry heavy loads and exhibit good puncture resistance. Packaging made from **EVALENE[®] HF09522** has superior performance and good barrier resistance against moisture and oxygen. Downgauging using **EVALENE[®] HF09522** is highly recommended due to its superior mechanical properties. Optimum gauge reduction is a real possibility.

FEATURES

- Superior toughness
- High stiffness
- Good puncture resistance
- Good moisture barrier properties
- Meets FDA Philippines food-contact requirements
- Halal certified

TYPICAL APPLICATIONS

- Grocery bags
- Supermarket produce bags
- Carrier bags
- Trash bags
- Sack liners

Product Properties

Property	Test Condition	Test Method	Typical Value	Unit
Flow Index ¹	190°C/21.6 kg	ASTM D1238	9	g/10 min
Melt Index	190°C/2.16 kg	ASTM D1238	0.075	g/10 min
Density	23°C	ASTM D1505	0.952	g/cm ³
Tensile Strength at Yield*	500 mm/min	ASTM D882	27 / 28	MPa
Elongation at Yield*	500 mm/min	ASTM D882	9 / 5	%
Tensile Strength at Break*	500 mm/min	ASTM D882	37 / 22	MPa
Elongation at Break*	500 mm/min	ASTM D882	226 / 332	%
Tensile Modulus*	1% Secant, 25 mm/min	ASTM D882	786 / 940	MPa
Elmendorf Tear Strength*		ASTM D1922	21 / 336	g
Dart Drop Impact Strength*		ASTM D1709	160	g

¹Product is controlled by Flow Index. Melt Index is estimated for customer use.

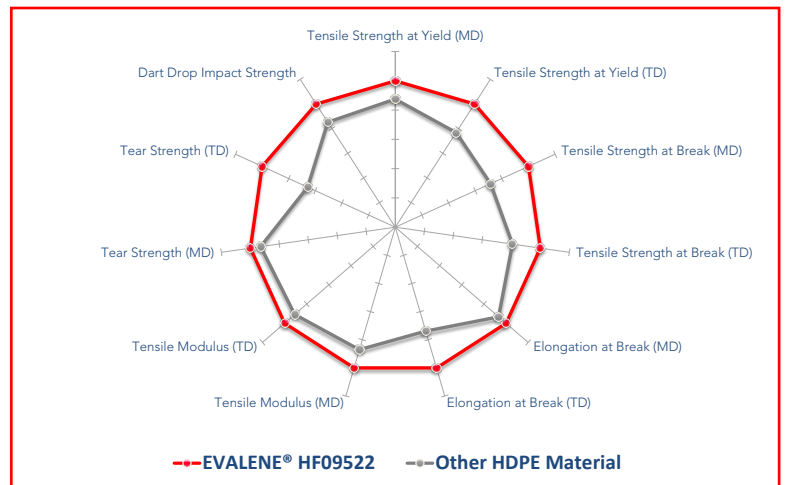
*Properties tested on 25µ films as extruded on 60 mm die, 3.2:1 BUR, at 12 - 17 m/min take-up speed.

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

Typical Processing Conditions

Extrusion Temperatures	180 - 230°C
Blow Up Ratio	3 - 5
Die Gap	0.8 - 1.3 mm

Figure 1. Mechanical property performance of EVALENE® HF09522 vs. other HDPE material



EVALENE® HF09522 delivers benefits to the converter and the end-user alike. Its overall superior mechanical properties over the other HDPE material is evident in this side-by-side comparison. **EVALENE® HF09522** likewise exhibits outstanding stiffness-toughness balance which makes it suitable for a wide range of applications. Finally, **EVALENE® HF09522** has at least 10% advantage on tensile strength over the other HDPE material, opening up opportunities to downgauge. Because of this superior tensile strength, higher load-bearing capacity can be expected from a bag made of **EVALENE® HF09522** which is a major advantage for a grocery, shopping or any other carrier bag.

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