

Linear Low Density Polyethylene

**Product Description**

The HF1810 resin is a pelletized linear low density polyethylene selected by customers for applications that require maximum strength and toughness. This product offers excellent additive homogeneity, requires no transfer equipment modification, and facilitates clean and safe handling. Typical applications include heavy duty shipping sacks, trash can liners, commercial and industrial packaging, as well as food and consumer packaging. HF1810 offers enhanced film strength, drawdown, toughness and heat seal strength. In addition, this resin has excellent low temperature resistance for applications such as stretch film and frozen food packaging.

**Regulatory Status**

For regulatory compliance information, see HF1810 [Product Stewardship Bulletin \(PSB\) and Safety Data Sheet \(SDS\)](#).

<b>Status</b>	Commercial: Active
<b>Availability</b>	Asia-Pacific; Europe; North America; South & Central America
<b>Application</b>	Agriculture Film; Bags & Pouches; Can Liners; Film Wrap; Food Packaging Film; Heavy Duty Packaging; Lamination Film; Liner Film; Retail Carryout Bags; Shrink Film
<b>Market</b>	Flexible Packaging; Rigid Packaging
<b>Processing Method</b>	Blown Film; Sheet and Profile Extrusion

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
<b>Physical</b>					
Melt Flow Rate, (190 °C/2.16 kg)	1.0	g/10 min	1.0	g/10 min	ASTM D1238
Base Resin Density, (23 °C)	0.918	g/cm <sup>3</sup>	0.918	g/cm <sup>3</sup>	ASTM D792
Product Density, (23 °C)	0.918	g/cm <sup>3</sup>	0.918	g/cm <sup>3</sup>	ASTM D792
<b>Film</b>					
Dart Drop Impact Strength, F50	200	g	200	g	ASTM D1709
Tensile Strength at Break					
MD	7540	psi	52	MPa	ASTM D882
TD	6530	psi	45	MPa	ASTM D882
Tensile Elongation at Break					
MD	710	%	710	%	ASTM D882
TD	750	%	750	%	ASTM D882
1% Secant Modulus					
MD	34800	psi	240	MPa	ASTM D882
TD	42000	psi	290	MPa	ASTM D882
Elmendorf Tear Strength					
MD	525	g	525	g	ASTM D1922
TD	720	g	720	g	ASTM D1922
<b>Optical</b>					
Haze	16	%	16	%	ASTM D1003
Gloss, (45°)	41	%	41	%	ASTM D2457
<b>Additive</b>					
Slip	None		None		LYB Method

Antiblock	None	None	LYB Method
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## Notes

Film sample used for testing was 1.0 mil gauge, 2.5:1 BUR.

These are typical property values not to be construed as specification limits.

## Processing Techniques

Recommended processing conditions for this product are a melt temperature of 400 - 450 °F and a 1.5 to 3.0:1 blow-up ratio.

Using proper techniques, these products can readily be drawn below 0.90 mils at optimum production rates.

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

## Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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