

CLEARFLEX®

FH 50

LLDPE

Linear low density polyethylene

Clearflex FH 50 is a linear medium density polyethylene, with antioxidants, suitable for blown film extrusion.

Films manufactured with Clearflex FH 50 are characterised by a good balance between toughness and rigidity, have high temperature resistance together with optimum sealing properties.

Main Application

Due to its high mechanical properties and excellent processability, Clearflex FH 50 is recommended in coextrusion for the production of film having good rigidity. Moreover, its very low gel content makes the resin ideal for lamination.

Main Properties

Resin Properties	Value	Unit	Test Method
Melt Flow Rate (190 °C/2.16 kg)	1.7	g/10min	ISO 1133
Melt Flow Rate (190 °C/5 kg)	-	g/10min	ISO 1133
Melt Flow Rate (190 °C/21.6 kg)	-	g/10min	ISO 1133
Density	0.936	g/cm ³	ISO 1183
Melting Point	128	°C	Internal method
Brittleness temperature	< - 70	°C	ASTM D 746
Vicat softening point (1 kg)	117	°C	ISO 306/A

Film Properties *	Value	Unit	Test Method
Tensile stress at yield MD	16	MPa	ISO 527-3
Tensile stress at yield TD	18	MPa	ISO 527-3
Tensile strenght at break MD	35	MPa	ISO 527-3
Tensile strenght at break TD	25	MPa	ISO 527-3
Elongation at break MD	650	%	ISO 527-3
Elongation at break TD	750	%	ISO 527-3
1% Secant modulus MD	450	MPa	ISO 527-3
1% Secant modulus TD	500	MPa	ISO 527-3
Elmendorf tear resistance MD	8	N/mm	ISO 6383-2
Elmendorf tear resistance TD	100	N/mm	ISO 6383-2
Impact resistance F50 (Dart Drop Test)	50	g	ISO 7765-1
Dynamic coefficient of friction (COF)	> 0.5	-	ISO 8295
Haze	18	%	ISO 14782
Gloss, 45°	55	%	ASTM D 2478
Recommended film thickness	10 ÷ 50	micron	-

* Typical value for a film extruded between 190°-230°C, with BUR 2.5, thickness 25 µm. Actual properties are typical and may vary depending upon operating conditions and additive package.

Processing notes

Clearflex FH 50 is easily processable using blown film technology. Melt temperature should be between 190°C and 230°C.

Recommended thickness: 10 - 50 µm.

Storage and Handling

Clearflex FH 50 is supplied in pellet form. This material may readily be conveyed and bulk fed through equipment designed for conventional pelletised polyethylene resin, provided the equipment is designed to prevent accumulation of the fines and dust particles that are contained in all polyethylene resins. These fines and dust particles can, under certain conditions, pose an explosion hazard. We recommend that the conveying system used be equipped with filters of adequate size, operated and maintained in such a manner to ensure that no leaks develop and earthed adequately. We further recommend that good housekeeping be practised throughout your facility.

The product should be stored in dry conditions at temperatures below 50°C and protected from sunlight.

Improper storage can initiate degradation which results in odour generation, colour changes and can have negative effects on the physical properties of the product.

Before using this product it is recommended to read and understand the relevant Safety Data Sheet.

Availability

Contact the Versalis sales office nearest to you regarding availability and your specific application requirements.

Food Contact Status

Clearflex FH 50 complies with the rules and regulations of the European Union, as well as other countries, regarding the use of plastic materials in food contact applications. Certificates of compliance are available upon request.

TECHNICAL SERVICE

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IMPORTANT: please consult the relevant safety data sheet for more detailed information. The information and data presented herein are to the best of our knowledge true and accurate but no warranty or guarantee, expressed or implied, is made nor is any liability accepted with respect to the use of such information and data.

Versalis is available to provide the guaranteed values for each product on demand.
