



FLEXIRENE® FG 85'GCA

LLDPE
Linear low density polyethylene bio circular attributed



SUSTAINABILITY

The product Flexirene FG 85' BCA 'Bio Circular attributed' is a highly sustainable LLDPE produced using bionafta from renewable raw materials together with traditional raw materials. In order to attribute the sustainable feedstock component to the final product Versalis applies the Mass Balance approach, a recognized methodology that allows to trace the flow of materials along the value chain and to assign the sustainability characteristic of the raw material to the final product on a documentary basis. Flexirene FG 85' BCA provides the same chemical composition and physical-mechanical performance of the traditional grade, in addition is accompanied by a sustainability declaration that certifies the share of bio attributed product. It is a butene copolymer linear low density polyethylene (C4-LLDPE) with antioxidants, suitable for blown film technology. The production of Flexirene FG 85' BCA allows to contribute to the circular economy, since the bionafta used derives from waste from industrial processing of organic substances (e.g. used cooking oils). Flexirene FG 85' BCA will be bio circular attributed for 90%. The exact amount of "bio circular attributed" product will be reported in the sustainability certificate issued upon the delivery of the product.

MAIN PROPERTIES

Resin Properties	Value	Unit	Test method
Melt Flow Rate (190 °C/2.16 kg)	1.0	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	0.925	g/cm ³	ISO 1183
Melting Point	124	°C	Internal Method
Brittleness temperature	<- 70	°C	ASTM D 746
Vicat softening point (1 kg)	105	°C	ISO 306/A
Film Properties *	Value	Unit	Test method
Tensile stress at yield MD	12	MPa	ISO 527-3
Tensile stress at yield TD	13	MPa	ISO 527-3
Tensile stress at break MD	45	MPa	ISO 527-3
Tensile stress at break TD	33	MPa	ISO 527-3
Elongation at break MD	600	%	ISO 527-3
Elongation at break TD	800	%	ISO 527-3
1% Secant modulus MD	250	MPa	ISO 527-3
1% Secant modulus TD	290	MPa	ISO 527-3
Elmendorf tear resistance MD	35	N/mm	ISO 6383-2
Elmendorf tear resistance TD	150	N/mm	ISO 6383-2
Impact resistance F50 (Dart Drop Test)	60	g	ISO 7765-1/A
Dynamic coefficient of friction (COF)	> 0.5	-	ISO 8295
Haze	13	%	ISO 14782
Gloss, 45°	50	%	ASTM D 2457
Recommended film thickness	15 + 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.

