

Technical Data Sheet

*Circulen*Renew C14 LD3020F



Low Density Polyethylene

Product Description

*Circulen*Renew C14 LD3020 F is part of the *Circulen*@product family of circular and sustainable solutions. *Circulen*Renew C14 polymer reduces the carbon footprint as it replaces fossil feedstock through using renewable raw materials made from bio-based waste and residue oils. The renewable content of *Circulen*Renew C14 is measured by an accredited third party laboratory and stated as a parameter on the Certificate of Analysis (CoA).

*Circulen*Renew C14 LD3020 F is a drop-in solution and therefore doesn't require any adaptation of the existing processing equipment.

*Circulen*Renew C14 LD3020 F is a non-additivated, low density polyethylene. It is characterized by a good melt strength leading to a good bubble stability during blown film extrusion. LyondellBasell customers report that films made from *Circulen*Renew C14 LD3020 F exhibit a good shrinkage performance.

*Circulen*Renew C14 LD3020 F provides the option to produce films with good optical and mechanical properties. It is delivered in pellet form.

This product is not intended for use in medical and pharmaceutical applications.

Application	Bags & Pouches; Food Packaging Film; Lamination Film; Shrink Film; Surface Protection Film
Market	Flexible Packaging
Processing Method	Blown Film
Attribute	Good Heat Seal; Good Processability; Superior Optical Properties

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Flow Rate, (190 °C/2.16 kg)	0.9	g/10 min	ISO 1133-1
Density	0.927	g/cm ³	ISO 1183-1
Mechanical			
Tensile Modulus	300	MPa	ISO 527-1, -2
Tensile Stress at Yield	12	MPa	ISO 527-1, -2
Film			
Dart Drop Impact Strength, F50	120	g	ASTM D1709
Tensile Strength			
MD	27	MPa	ISO 527-1, -3
TD	22	MPa	ISO 527-1, -3
Tensile Strain at Break			
MD	300	%	ISO 527-1, -3
TD	600	%	ISO 527-1, -3
Coefficient of Friction	>0.8		ISO 8295

Impact		
Failure Energy	4 J/mm	DIN 53373
Thermal		
Vicat Softening Temperature, (A/50)	100 °C	ISO 306
Peak Melting Point	114 °C	ISO 11357-3
Optical		
Haze, (50 µm)	<7 %	ASTM D1003
Gloss		
(20°)	>50	ASTM D2457
(60°)	>100	ASTM D2457
Additional Information		
Test Specimen	Film	
Film properties tested using 50 µm thickness blown film extruded at a melt temperature of 180°C and a blow-up ratio of 2.5:1.		
Processing Parameters		
Extrusion Temperature	170-220 °C	