Technical Data Sheet

*Circulen*Renew C14 LD3020K

Low Density Polyethylene

Product Description

*Circulen*Renew C14 LD3020 K 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 K is a drop-in solution and therefore doesn't require any adaptation of the existing processing equipment.
*Circulen*Renew C14 LD3020 K is a non-additivated, low density polyethylene. It is characterized by a good processability. LyondellBasell customers report that films made from *Circulen*Renew C14 LD3020 K exhibit a glossy surface finish. *Circulen*Renew C14 LD3020 K provides the option to produce films with very good optical properties. It is delivered in pellet form.

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

Regulatory Status

For regulatory compliance information, see *Circulen*Renew C14 LD3020K Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status	Commercial: Active
Availability	Europe
Application	Food Packaging Film; Lamination Film; Shrink Film; Surface Protection Film
Market	Flexible Packaging
Processing Method	Blown Film; Cast Film; Injection Molding
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)	4.0	g/10 min	ISO 1133-1
Density	0.928	g/cm³	ISO 1183-1
Mechanical			
Tensile Modulus	300	MPa	ISO 527-1, -2
Tensile Stress at Yield	13	MPa	ISO 527-1, -2
Film			
Dart Drop Impact Strength, F50	90	g	ASTM D1709
Tensile Strength			
MD	20	MPa	ISO 527-1, -3
TD	17	MPa	ISO 527-1, -3
Tensile Strain at Break			
MD	350	%	ISO 527-1, -3
TD	600	%	ISO 527-1, -3
Coefficient of Friction	>0.8		ISO 8295
Impact			
Failure Energy	3.5	J/mm	DIN 53373

Thermal			
Vicat Softening Temperature, (A/50 N)	97	°C	ISO 306
Peak Melting Point	114	°C	ISO 11357-3
Optical			
Haze, (50 µm)	<7	%	ASTM D1003
Gloss			
(20°)	>80		ASTM D2457
(60°)	>115		ASTM D2457
Additional Information			
Test Specimen	Film		
Film properties tested using 50 µm thickness blown film extruded at a melt temperature of 170°C and a blow-up ratio of 2.5:1.			
Processing Parameters			
Extrusion Temperature	150-190	°C	

Notes

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