Technical Data Sheet

*Circulen*Renew C14 LD2420F Plus

Low Density Polyethylene

Product Description

*Circulen*Renew C14 LD2420 F Plus 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 LD2420 F Plus is a drop-in solution and therefore doesn't require any adaptation of the existing processing equipment.
*Circulen*Renew C14 LD2420 F Plus is a non-additivated, low density polyethylene. This grade is characterized by a very low gel level. Typical customer applications are surface protection films or other higher value film applications where a very low gel content is required . It is delivered in pellet form.

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

Application	Bags & Pouches; Food Packaging Film; Hygiene Film; Liner Film; Shrink Film; Surface Protection Film
Market	Flexible Packaging
Processing Method	Blown Film
Attribute	General Purpose; Good Heat Seal; Good Melt Strength; Good Optical Properties; Good Processability; Low Gel

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Flow Rate, (190 °C/2.16 kg)	0.75	g/10 min	ISO 1133-1
Density	0.923	g/cm³	ISO 1183-1
Mechanical			
Tensile Modulus	260	MPa	ISO 527-1, -2
Tensile Stress at Yield	11	MPa	ISO 527-1, -2
Film			
Dart Drop Impact Strength, F50	150	g	ASTM D1709
Tensile Strength			
MD	26	MPa	ISO 527-1, -3
TD	24	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	5.5	J/mm	DIN 53373
Thermal			
Vicat Softening Temperature, (A/50)	96	°C	ISO 306
Peak Melting Point	111	°C	ISO 11357-3
Optical			
Haze, (50 µm)	<8	%	ASTM D1003
Gloss			
(20°)	>40		ASTM D2457
(60°)	>90		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	