

Technical Data Sheet

CirculenRenew C14 LD2420F



Low Density Polyethylene

Product Description

CirculenRenew C14 LD2420 F is part of the *Circulen*® product family of circular and sustainable solutions.

CirculenRenew 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).

CirculenRenew C14 LD2420 F is a drop-in solution and therefore doesn't require any adaptation of the existing processing equipment.

CirculenRenew C14 LD2420 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. 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 LD2420F [Product Stewardship Bulletin \(PSB\)](#) and [Safety Data Sheet \(SDS\)](#).

Status	Commercial: Active
Availability	Africa-Middle East; Asia-Pacific; Europe
Application	Agriculture Film; Bags & Pouches; Food Packaging Film; Hygiene Film; Liner Film; Shrink Film
Market	Flexible Packaging
Processing Method	Blown Film
Attribute	General Purpose; Good Heat Seal; Good Melt Strength; Good Optical Properties; Good Processability

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 N)	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
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Notes

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