

## Technical Data Sheet

### *Circulen 2420K Plus*



Low Density Polyethylene

#### Product Description

*Circulen 2420 K Plus* is a circular polymer, which contains building blocks from non-mechanical recycling processes converting renewables and organic wastes into new cracker feedstock.

The bio content of recycled cracker feedstock is measured and certified on the Certificate of Analysis.

*Circulen 2420 K Plus* is a non-additivated, low density polyethylene. It is characterized by a good processability. Films made from *Circulen 2420 K Plus* exhibit 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 2420K Plus* [Product Stewardship Bulletin \(PSB\) and Safety Data Sheet \(SDS\)](#).

<b>Status</b>	Commercial: Active
<b>Availability</b>	Africa-Middle East; Asia-Pacific; Europe
<b>Application</b>	Coatings, Protective; Food Packaging Film; Hygiene Film; Shrink Film; Surface Protection Film
<b>Market</b>	Flexible Packaging
<b>Processing Method</b>	Blown Film; Cast Film; Extrusion Coating; Injection Molding
<b>Attribute</b>	Good Heat Seal; Good Optical Properties; Good Processability

Typical Properties	Nominal Value	Units	Test Method
<b>Physical</b>			
Melt Flow Rate, (190 °C/2.16 kg)	4.0	g/10 min	ISO 1133-1
Density	0.924	g/cm <sup>3</sup>	ISO 1183-1
<b>Mechanical</b>			
Tensile Modulus	260	MPa	ISO 527-1, -2
Tensile Stress at Yield	11	MPa	ISO 527-1, -2
<b>Film</b>			
Dart Drop Impact Strength, F50	100	g	ASTM D1709
Tensile Strength			
MD	22	MPa	ISO 527-1, -3
TD	17	MPa	ISO 527-1, -3
Tensile Strain at Break			
MD	300	%	ISO 527-1, -3
TD	600	%	ISO 527-1, -3
Coefficient of Friction	>0.7		ISO 8295
<b>Impact</b>			
Failure Energy	3.5	J/mm	DIN 53373
<b>Thermal</b>			
Vicat Softening Temperature, (A/50 N)	92	°C	ISO 306
Peak Melting Point	111	°C	ISO 3146

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**Optical**

Haze, (50 μm)	<8 %	ASTM D1003
Gloss		
(20°)	>60	ASTM D2457
(60°)	>105	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

Blown Film Extrusion

**Notes**

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