

## Technical Data Sheet

### Lupolen 3020F



Low Density Polyethylene

#### Product Description

*Lupolen 3020 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 *Lupolen 3020 F* exhibit a good shrinkage performance.

*Lupolen 3020 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.

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

Typical Properties	Nominal Value	Units	Test Method
<b>Physical</b>			
Melt Flow Rate, (190 °C/2.16 kg)	0.9	g/10 min	ISO 1133-1
Density	0.927	g/cm <sup>3</sup>	ISO 1183-1
<b>Mechanical</b>			
Tensile Modulus	300	MPa	ISO 527-1, -2
Tensile Stress at Yield	12	MPa	ISO 527-1, -2
<b>Film</b>			
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
<b>Impact</b>			
Failure Energy	4	J/mm	DIN 53373
<b>Thermal</b>			
Vicat Softening Temperature, (A/50)	100	°C	ISO 306
Peak Melting Point	114	°C	ISO 11357-3

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**Optical**

Haze, (50 $\mu$ m)	<7 %	ASTM D1003
Gloss		
(20°)	>50	ASTM D2457
(60°)	>100	ASTM D2457

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**Additional Information**

Test Specimen Film

Film properties tested using 50  $\mu$ m thickness blown film extruded at a melt temperature of 180°C and a blow-up ratio of 2.5:1.

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**Processing Parameters**

Extrusion Temperature	170-220 °C
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