

## Technical Data Sheet

### *Lupolen 3220F*

Low Density Polyethylene

#### Product Description

*Lupolen 3220 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 3220 F* exhibit a good shrinkage performance.

*Lupolen 3220 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.

#### Availability

<b>Application</b>	Food Packaging Film; Hygiene Film; Lamination Film; Shrink Film; Surface Protection Film
<b>Market</b>	Flexible Packaging
<b>Processing Method</b>	Blown Film
<b>Attribute</b>	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	0.930	g/cm <sup>3</sup>	ISO 1183-1
<b>Mechanical</b>			
Tensile Modulus	430	MPa	ISO 527-1, -2
Tensile Stress at Yield	14	MPa	ISO 527-1, -2
<b>Film</b>			
Dart Drop Impact Strength, F50	120	g	ASTM D1709
Tensile Strength			
MD	28	MPa	ISO 527-1, -3
TD	24	MPa	ISO 527-1, -3
Tensile Strain at Break			
MD	420	%	ISO 527-1, -3
TD	600	%	ISO 527-1, -3
Coefficient of Friction	>0.7		ISO 8295
<b>Impact</b>			
Failure Energy	4	J/mm	DIN 53373
<b>Thermal</b>			
Vicat Softening Temperature, (A/50)	105	°C	ISO 306
Peak Melting Point	117	°C	ISO 11357-3

<b>Optical</b>		
Haze, (50 µm)	<7 %	ASTM D1003
Gloss		
(20°)	>85	ASTM D2457
(60°)	>115	ASTM D2457
<b>Additional Information</b>		
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.		
<b>Processing Parameters</b>		
Extrusion Temperature	170-220 °C	