

## Technical Data Sheet

### Lupolen 2221D

Low Density Polyethylene



#### Product Description

Lupolen 2221D is a fractional melt index homopolymer LDPE resin designed for film applications requiring excellent bubble stability/melt strength, impact strength, stiffness and shrink. 2221D is selected by customers for collation shrink films, pallet shrink films, packaging films and heavy duty films where processability, strength and stiffness are important. 2221D contains an antioxidant.

#### Regulatory Status

For regulatory compliance information, see [Lupolen 2221D 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>	Agriculture Film; Bags & Pouches; Can Liners; Clarity Film; Film Wrap; Food Packaging Film; Heavy Duty Packaging; Shrink Film; Stretch Hood; Textile Packaging Film
<b>Market</b>	Flexible Packaging
<b>Processing Method</b>	Blown Film

Typical Properties	Nominal Value	Units	Test Method
<b>Physical</b>			
Melt Flow Rate, (190 °C/2.16 kg)	0.25	g/10 min	ASTM D1238
Base Resin Density, (23 °C)	0.9220	g/cm <sup>3</sup>	ASTM D1505
Product Density, (23 °C)	0.9220	g/cm <sup>3</sup>	ASTM D1505
<b>Film</b>			
Dart Drop Impact Strength, F50	190	g	ASTM D1709
Tensile Strength at Break			
MD	28	MPa	ASTM D882
TD	24	MPa	ASTM D882
Tensile Strength at Yield			
MD	12	MPa	ASTM D882
TD	12	MPa	ASTM D882
Tensile Elongation at Break			
MD	400	%	ASTM D882
TD	550	%	ASTM D882
1% Secant Modulus			
MD	220	MPa	ASTM D882
TD	250	MPa	ASTM D882
Elmendorf Tear Strength			
MD	170	g	ASTM D1922
TD	220	g	ASTM D1922
<b>Optical</b>			
Haze	7.5	%	ASTM D1003
Gloss	62		ASTM D2457

**Additive**

Slip	None	LYB Method
Antiblock	None	LYB Method

**Notes**

Data obtained from 50 micron film produced on a 50 mm extruder with a 100 mm die, 205°C melt temperature, 2.5:1 BUR, 0.635 mm die gap at 27 kg/hr.

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

**Processing Techniques**

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

**Company Information**

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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