



## Product Data Sheet

Rev. 1 - 26/07/2002

### Linear Low Density Polyethylene

### LL-218/21

#### Description

LL-218/21 is a LLDPE Butene copolymer produced by Braskem. It was specially designed to provide outstanding processing performance. Films obtained with this grade show good physical and optical properties and enhanced sealability. Very low gel amount.

#### Additive

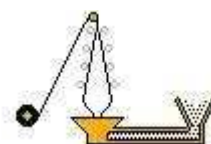
Antiblocking Medium  
Slip Medium

#### Applications

Automatic Packaging (FFS)  
"Liners"  
General purpose  
HDPE and LDPE blends

#### Process

Blown Film Extrusion



#### Control Properties

	ASTM Method	Unit	Value
Melt Index (190°C/2.160kg)	D-1238	g/10 min	2.0
Density	D-1505	g/cm <sup>3</sup>	0.917

#### Properties

Blown Film Properties <sup>a</sup>

	ASTM Method	Units	Values
Haze	D-1003	%	45.2
Gloss - Angle 45°	D-2457	%	3.2
Ultimate Strength (MD/TD)	D-882	MPa	36/29
Elongation at Break (MD/TD)	D-882	%	1401/1646
1% Secant Modulus (MD/TD)	D-882	MPa	150/176
Dart Drop Impact	D-1709	gf/50%f	89
Elmendorf tear strength (MD/TD)	D-1922	kgF/cm	44/133
Coefficient of Friction (COF)- Kinetic	D-1894	-	0.17
Minimum Thickness (p/s)	-	µm	30

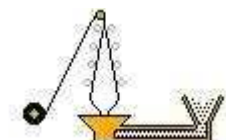
(a) 25 µm thickness film, processed in a 40mm screw diameter extruder with blow up ratio of 2.2:1. (MD: Machine Direction; TD: Transversal Direction).

#### Recommended Processing Conditions

##### Blown Films

- Temperature Profile:...from 150 to 170°C
- Blow up Ratio:.....from 2 to 3:1

- Die Gap:.....from 1.8 to 2.5 mm
- Screen Package.....40/40 - 100% pure  
40/60/40 - Blend
- Mass temperature.....170°C (max 190°C)



#### Final Remarks

1. This resin meets the requirements for olefin polymers as defined in 21 CFR Section 177.1520 issued by FDA - "Food and Drug Administration". The additives content is in accordance to the FDA regulation. The resin can be used in food packaging applications.
2. The information contained here is presented in good faith and intend to indicate the performance of material based on laboratory tests. The values should not to be taken as accurate or as a performance warranty. Only the control property values should be seen as a warranty.
3. Product registred on No. Reg. CAS: 25087-34-7.
4. Contact our Technical Service Area to obtain detailed product specifications, to consult about other appropriate applications or to clarify any doubt.