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DOW™ Butene 1211P
Polyethylene Resin

Overview

Polyethylene 1211P is a butene Linear Low Density Polyethylene for general blown film applications.

Main Characteristics:

- Used in Industrial, Food & Specialty Packaging
- Better optics and processability
- Better color stability
- Good sealing performance

Complies with:

- U.S. FDA 21 177.1520 (c) 3.2a
- EU. No 10/2011
- Consult the regulations for complete details.

Additive

- Antiblock: No
- Slip: No
- Processing Aid: No

Physical	Nominal Value (English)		Nominal Value (SI)		Test Method
Density	0.918	g/cm³	0.918	g/cm³	ASTM D792
Base Density	0.918	g/cm³	0.918	g/cm³	Dow Method [1]
Melt Index (190°C/2.16 kg)	1.0	g/10 min	1.0	g/10 min	ASTM D1238
Films	**Nominal Value (English)**		**Nominal Value (SI)**		**Test Method**
Film Thickness - Tested	2.0	mil	51	µm	
Film Puncture Resistance (2.0 mil (51 µm))	99.0	ft·lb/in³	8.19	J/cm³	Dow Method
Secant Modulus					ASTM D882
2% Secant, MD: 2.0 mil (51 µm)	26600	psi	183	MPa	
2% Secant, TD: 2.0 mil (51 µm)	31500	psi	217	MPa	
Tensile Strength					ASTM D882
MD: Yield, 2.0 mil (51 µm)	1500	psi	10.3	MPa	
TD: Yield, 2.0 mil (51 µm)	1600	psi	11.0	MPa	
MD: Break, 2.0 mil (51 µm)	4600	psi	31.7	MPa	
TD: Break, 2.0 mil (51 µm)	3630	psi	25.0	MPa	
Tensile Elongation					ASTM D882
MD: Break, 2.0 mil (51 µm)	660	%	660	%	
TD: Break, 2.0 mil (51 µm)	710	%	710	%	
Dart Drop Impact (2.0 mil (51 µm))	100	g	100	g	ASTM D1709A
Elmendorf Tear Strength					ASTM D1922
MD: 2.0 mil (51 µm)	110	g	110	g	
TD: 2.0 mil (51 µm)	260	g	260	g	
Thermal	**Nominal Value (English)**		**Nominal Value (SI)**		**Test Method**
Vicat Softening Temperature	214	°F	101	°C	ASTM D1525
Melting Temperature (DSC)	241	°F	116	°C	Dow Method
Optical	**Nominal Value (English)**		**Nominal Value (SI)**		**Test Method**
Gloss (20°, 2.00 mil (50.8 µm))	69		69		ASTM D2457
Haze (2.00 mil (50.8 µm))	11	%	11	%	ASTM D1003

Extrusion Notes

Fabrication Conditions For Blown Film:

- Melt Temperature: 440°F (227°C)
- Die Gap: 70mil (1.8mm)
- Output: 120 lb/hr (55 Kg/hr)
- Blow Up Ratio: 2.5:1
- Frost Line Height: 28 in. (71 cm)

Form No. 400-00226426en
Rev: 2013-06-12

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

[1] Base density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm³. Base density is the estimated density of the polymer if it did not contain any antiblock.

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Published: 2013-06-12

Form No. 400-00226426en
Rev: 2013-06-12