



# 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/cm <sup>3</sup>	0.918 g/cm <sup>3</sup>	ASTM D792
Base Density	0.918 g/cm <sup>3</sup>	0.918 g/cm <sup>3</sup>	Dow Method <sup>1</sup>
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/in <sup>3</sup>	8.19 J/cm <sup>3</sup>	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)

## Notes

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

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<sup>1</sup> 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/cm<sup>3</sup>. Base density is the estimated density of the polymer if it did not contain any antiblock.

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This document is intended for use within Asia Pacific

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