

Technical Information



DOW™ Butene 1220P Polyethylene Resin

Overview Polyethylene 1220P is a butene Linear Low Density Polyethylene for general blown film extrusion film applications.

Main Characteristics:

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

Complies with:

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

Additive • Antiblock: 2000 ppm • Slip: 1200 ppm • Processing Aid: No

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.919 g/cm ³	0.919 g/cm ³	ASTM D792
Base Density ¹	0.918 g/cm ³	0.918 g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	2.0 g/10 min	2.0 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	1.5 mil	38 µm	
Film Puncture Resistance (1.5 mil (38 µm))	60.4 ft-lb/in ³	5.00 J/cm ³	Dow Method
Secant Modulus			ASTM D882
2% Secant, MD : 1.5 mil (38 µm)	21800 psi	150 MPa	
2% Secant, TD : 1.5 mil (38 µm)	21000 psi	145 MPa	
Tensile Strength			ASTM D882
MD : Yield, 1.5 mil (38 µm)	1450 psi	10.0 MPa	
TD : Yield, 1.5 mil (38 µm)	1450 psi	10.0 MPa	
MD : Break, 1.5 mil (38 µm)	4790 psi	33.0 MPa	
TD : Break, 1.5 mil (38 µm)	3630 psi	25.0 MPa	
Tensile Elongation			ASTM D882
MD : Break, 1.5 mil (38 µm)	950 %	950 %	
TD : Break, 1.5 mil (38 µm)	1100 %	1100 %	
Dart Drop Impact (1.5 mil (38 µm))	140 g	140 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD : 1.5 mil (38 µm)	220 g	220 g	
TD : 1.5 mil (38 µm)	330 g	330 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	206 °F	96.7 °C	ASTM D1525
Melting Temperature (DSC)	241 °F	116 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°, 1.50 mil (38.1 µm))	53	53	ASTM D2457
Haze (1.50 mil (38.1 µm))	13 %	13 %	ASTM D1003

Extrusion Notes

Fabrication Conditions For Blown Film:

- Melt Temperature: 428°F (206°C)
- Die Gap: 70mil (1.8mm)
- Output: 120 lb/hr (54kg/hr)
- Blow-Up Ratio: 2.5:1