Technical Information

CEFOR™ 1221P

Linear Low Density Polyethylene Resin

Overview

CEFOR 1221P is a butene Linear Low Density Polyethylene for general cast 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: No
- Slip: No
- Processing Aid: No

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Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.918	g/cm³	0.918	g/cm³	ASTM D792
Base Density [1]	0.918	g/cm³	0.918	g/cm³	Dow Method
Melt Mass-Flow Rate (190°C/2.16 kg)	2.0	g/10 min	2.0	g/10 min	ISO 1133
Films	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Film Thickness - Tested	1	mil	25	µm	
Film Puncture Force (1.0 mil (25 µm))	11.0	lbf	48.9	N	Dow Method
Film Puncture Resistance (1.0 mil (25 µm))	109	ft·lb/in³	9.02	J/cm³	Dow Method
Secant Modulus					ASTM D882
2% Secant, MD : 1.0 mil (25 µm)	21600	psi	149	MPa	
2% Secant, TD : 1.0 mil (25 µm)	21300	psi	147	MPa	
Tensile Strength					ASTM D882
MD : Yield, 1.0 mil (25 µm)	1550	psi	10.7	MPa	
TD : Yield, 1.0 mil (25 µm)	1300	psi	8.96	MPa	
MD : Break, 1.0 mil (25 µm)	5740	psi	39.6	MPa	
TD : Break, 1.0 mil (25 µm)	2990	psi	20.6	MPa	
Tensile Elongation					ASTM D882
MD : Break, 1.0 mil (25 µm)	450	%	450	%	
TD : Break, 1.0 mil (25 µm)	680	%	680	%	
Dart Drop Impact (1.0 mil (25 µm))	66	g	66	g	ASTM D1709A
Elmendorf Tear Strength [2]					ASTM D1922
MD : 1.0 mil (25 µm)	37	g	37	g	
TD : 1.0 mil (25 µm)	370	g	370	g	
Film Stretch Performace - Max Elongation [3]					Dow Method
1.0 mil (25.4 µm)	230		230		
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Vicat Softening Temperature	205	°F	96.1	°C	ASTM D1525
Melting Temperature (DSC)	241	°F	116	°C	Dow Method
Optical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Gloss (20°, 1.00 mil (25.4 µm))	151		151		ASTM D2457
Haze (1.00 mil (25.4 µm))	0.560	%	0.560	%	ASTM D1003

Extrusion Notes
Fabrication Conditions For Cast Film: • Melt Temperature: 520°F (271°C) • Die Gap: 20mil (0.5mm) • Line Speed: 600 fpm (183 m/min) • Air Gap: 3.0 in. (7.6 mm)

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.

[2] Method B; Modified Rectangular Test Specimen

[3] On-Pallet testing