Technical Information

DOW™ LDPE 611A

Low Density Polyethylene Resin

Overview

- A shrink film resin with good optics for packaging applications
- Optimum gauge range: 1.0-3.0 mil
- Complies with U.S. FDA 21 CFR 177.1520 (c) 2.2
- Complies with U.S. FDA-DMF
- Complies with Canadian HPFB No Objections(With Limitations)
- Complies with EU, No 10/2011
- Consult the regulations for complete details.

Additive

- Antiblock: 1245 ppm
- Slip: No
- Processing Aid: No

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.924	g/cm³	0.924	g/cm³	ASTM D792
Base Density [1]	0.923	g/cm³	0.923	g/cm³	Dow Method
Melt Index (190°C/2.16 kg)	0.88	g/10 min	0.88	g/10 min	ASTM D1238
Films	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Film Toughness					ASTM D882
MD : 1.0 mil (25 µm)	666	ft·lb/in³	55.1	J/cm³	
MD : 2.0 mil (51 µm)	780	ft·lb/in³	64.5	J/cm³	
TD : 1.0 mil (25 µm)	770	ft·lb/in³	63.7	J/cm³	
TD : 2.0 mil (51 µm)	808	ft·lb/in³	66.9	J/cm³	
Secant Modulus					ASTM D882
2% Secant, MD : 1.0 mil (25 µm)	28600	psi	197	MPa	
2% Secant, MD : 2.0 mil (51 µm)	29200	psi	201	MPa	
2% Secant, TD : 1.0 mil (25 µm)	32600	psi	225	MPa	
2% Secant, TD : 2.0 mil (51 µm)	32900	psi	227	MPa	
Tensile Strength					ASTM D882
MD : Yield, 1.0 mil (25 µm)	1730	psi	11.9	MPa	
MD : Yield, 2.0 mil (51 µm)	1710	psi	11.8	MPa	
TD : Yield, 1.0 mil (25 µm)	1780	psi	12.3	MPa	
TD : Yield, 2.0 mil (51 µm)	1770	psi	12.2	MPa	
MD : Break, 1.0 mil (25 µm)	3680	psi	25.4	MPa	
MD : Break, 2.0 mil (51 µm)	3130	psi	21.6	MPa	
TD : Break, 1.0 mil (25 µm)	2510	psi	17.3	MPa	
TD : Break, 2.0 mil (51 µm)	2450	psi	16.9	MPa	
Tensile Elongation					ASTM D882
MD : Break, 1.0 mil (25 µm)	270	%	270	%	
MD : Break, 2.0 mil (51 µm)	370	%	370	%	
TD : Break, 1.0 mil (25 µm)	540	%	540	%	
TD : Break, 2.0 mil (51 µm)	560	%	560	%	
Dart Drop Impact					ASTM D1709A
1.0 mil (25 µm)	78	g	78	g	
2.0 mil (51 µm)	120	g	120	g	
Elmendorf Tear Strength					ASTM D1922
MD : 1.0 mil (25 µm)	190	g	190	g	
MD : 2.0 mil (51 µm)	400	g	400	g	
TD : 1.0 mil (25 µm)	180	g	180	g	
TD : 2.0 mil (51 µm)	450	g	450	g	
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Vicat Softening Temperature	207	°F	97.2	°C	ASTM D1525
Melting Temperature (DSC)	234	°F	112	°C	Dow Method

Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss			ASTM D2457
45°, 1.00 mil (25.4 µm)	71	71	
45°, 2.00 mil (50.8 µm)	76	76	
Haze			ASTM D1003
1.00 mil (25.4 µm)	6.00 %	6.00 %	
2.00 mil (50.8 µm)	7.00 %	7.00 %	

Extrusion	Nominal Value (English)	Nominal Value (SI)
Melt Temperature	416 °F	213 °C

Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Type: Single Flight
- Die Gap: 40 mil (1.02 mm)
- Melt Temperature: 416°F (213°C)
- Output: 10 lb/hr/in. of die circumference
- Die Diameter: 6 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 130 rpm
- Frost Line Height: 28 in. (711 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.