



# PRIMACOR™ 1321 Copolymer

**Overview** PRIMACOR™ 1321 Copolymer is an ethylene acrylic acid copolymer suitable for extruded blown and cast film.

PRIMACOR 1321 Copolymer has been specifically designed for use as an adhesive layer in composite films or sealant layer in flexible packaging structures.

PRIMACOR 1321 Copolymer exhibits:

- Good interlayer adhesion to PE and PA.
- Good optical properties.
- Excellent toughness and strength.
- Excellent stress crack and product resistance.
- Good hot-tack and sealability.
- Insensitivity to moisture.

Note:

PRIMACOR 1321 Copolymer should comply with FDA regulation 177.1310, and with most European food contact regulations when used unmodified and processed according to good manufacturing practices for food contact applications. Please contact your nearest office regarding food contact compliance statements. The purchaser remains responsible for determining whether the use complies with all relevant regulations.

Applications:

- Composite films.
- Food packaging.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.935 g/cm <sup>3</sup>	0.935 g/cm <sup>3</sup>	ASTM D792 ISO 1183/A
Melt Index (190°C/2.16 kg)	2.6 g/10 min	2.6 g/10 min	ISO 1133 ASTM D1238 <sup>1</sup>
Comonomer Content	6.5 %	6.5 %	Dow Method <sup>2</sup>
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ISO 527-2/508
Yield, Compression Molded	1460 psi	10.0 MPa	ASTM D638 <sup>3</sup>
Break, Compression Molded	2910 psi	20.1 MPa	ASTM D638 <sup>3</sup>
Tensile Elongation			ISO 527-2/508
Break, Compression Molded	640 %	640 %	ASTM D638 <sup>3</sup>
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	2.00 mil	50.8 µm	
Tensile Strength			
MD: Yield, 2.00 mil (50.8 µm)	1640 psi	11.3 MPa	ASTM D882
TD: Yield, 2.00 mil (50.8 µm)	1620 psi	11.1 MPa	ASTM D882
MD: Yield, 2.00 mil (50.8 µm)	1640 psi	11.3 MPa	ISO 527-3
TD: Yield, 2.00 mil (50.8 µm)	1670 psi	11.5 MPa	ISO 527-3
MD: Break, 2.00 mil (50.8 µm)	4610 psi	31.8 MPa	ASTM D882 ISO 527-3
TD: Break, 2.00 mil (50.8 µm)	4620 psi	31.8 MPa	ASTM D882 ISO 527-3
Tensile Elongation			ASTM D882 ISO 527-3
MD: Break, 2.00 mil (50.8 µm)	460 %	460 %	
TD: Break, 2.00 mil (50.8 µm)	510 %	510 %	
Dart Drop Impact (2.00 mil (50.8 µm))	410 g	410 g	ASTM D1709B ISO 7765-1/B

<b>Films</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	<b>Test Method</b>
Elmendorf Tear Strength			
MD: 2.00 mil (50.8 µm)	270 g	270 g	ASTM D1922 <sup>2</sup>
TD: 2.00 mil (50.8 µm)	390 g	390 g	ASTM D1922 <sup>2</sup>
MD: 2.00 mil (50.8 µm)	270 lbf	1200 N	ISO 6383-2 <sup>2</sup>
TD: 2.00 mil (50.8 µm)	390 lbf	1700 N	ISO 6383-2 <sup>2</sup>
<b>Thermal</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	<b>Test Method</b>
Vicat Softening Temperature	192 °F	88.9 °C	ASTM D1525 ISO 306
Melting Temperature	217 °F	103 °C	DSC
<b>Optical</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	<b>Test Method</b>
Gloss (45°, 2.00 mil (50.8 µm))	76	76	ASTM D2457
Haze			
2.00 mil (50.8 µm)	3.7 %	3.7 %	ISO 14782
2.00 mil (50.8 µm)	3.7 %	3.7 %	ASTM D1003
<b>Extrusion</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	
Melt Temperature	380 °F	193 °C	

#### **Extrusion Notes**

Fabrication Conditions For Film:

Equipment used to process this resin should be constructed of corrosion resistant materials. Dies and adapters are recommended to be stainless steels and/or duplex chrome or nickel plated.

- Screw Size: 2.5 in. (63.5 mm); 30:1 L/D
- Screw Type: Single Flight with Maddock Mixer
- Die Gap: 40 mil (1.0 mm)
- Melt Temperature: 380°F (193°C)
- Output: 6 lb/hr/in. of die circumference
- Die Diameter: 6 in.
- Blow-Up Ratio: 2.5:1
- Frost Line Height: 29 in. (737 mm)

#### **Notes**

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

<sup>1</sup> As measured at the time of production.

<sup>2</sup> Comonomer content measured by a DOW proprietary method that has equivalent accuracy as compared to ASTM D 4094.

<sup>3</sup> 20 in/min (510 mm/min)

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