# PRIMACOR™ 1321

## Copolymer

## Introduction

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 environmental stress crack and product resistance
- Good hot-tack and sealability
- Insensitivity to moisture

Applications:

- Multilayer films
- Food packaging

Complies with:

- US. FDA 21 CFR 177.1310(a)(1)
- EU. No 10/2011

Additives:

- Antiblock: No
- Slip: No

## Properties

| | | Nominal Value (English) | Nominal Value (SI) | Test Method |
|---|---|---|---|---|
| **Resin Properties** | Density | 0.935 g/cm$^3$ | 0.935 g/cm$^3$ | ASTM D792<br>ISO 1183 |
| | Melt Index[1] (2.16 kg @190°C) | 2.6 g/10min | 2.6 g/10min | ASTM D1238<br>ISO 1133 |
| | Comonomer Contents[2] | 6.5 % | 6.5 % | SK Method |
| | Vicat Softening Temperature | 192 °F | 88.9 °C | ASTM D1525<br>ISO 306 |
| | Melting Temperature (DSC) | 217 °F | 103 °C | SK Method |
| **Mechanical Properties** | Tensile Strength at Yield[3] (Compression Molded) | 1460 psi | 10.0 MPa | ASTM D638<br>ISO 527-2/508 |
| | Tensile Strength at Break[3] (Compression Molded) | 2910 psi | 20.1 MPa | ASTM D638<br>ISO 527-2/508 |
| | Tensile Elongation at Break[3] (Compression Molded) | 640 % | 640 % | ASTM D638<br>ISO 527-2/508 |

 

| | | | Nominal Value (English) | Nominal Value (SI) | Test Method |
|---|---|---|---|---|---|
| **Film Properties** | Film Thickness | | 2.0 mil | 50.8 μm | ASTM D374 |
| | Haze | | 3.7 % | 3.7 % | ASTM D1003<br>ISO 14782 |
| | Gloss (45°) | | 76 | 76 | ASTM D2457 |
| | Dart Drop Impact | | 410 g | 410 g | ASTM D1709B<br>ISO 7765-1/B |
| | Elmendorf Tear Strength | MD | 270 g | 270 g | ASTM D1922<br>ISO 6383-2 |
| | | TD | 390 g | 390 g | |
| | Tensile Strength at Yield | MD | 1640 psi | 11.3 MPa | ASTM D882<br>ISO 527-3 |
| | | TD | 1620 psi | 11.1 MPa | |
| | Tensile Strength at Break | MD | 4610 psi | 31.8 MPa | ASTM D882<br>ISO 527-3 |
| | | TD | 4620 psi | 31.9 MPa | |
| | Tensile Elongation at Break | MD | 460 % | 460 % | ASTM D882<br>ISO 527-3 |
| | | TD | 510 % | 510 % | |

**Extrusion Condition[4]**

- Screw Size: 2.5 in. (63.5 mm); 30:1 L/D; Single Flight with Maddock Mixer
- Die Gap: 40 mil (1.0 mm)
- Die Diameter: 6 in. (152.4 mm)
- Melt Temperature: 380 °F (193 °C)
- Output: 6 lb/hr/in. of Die Circumference (1.07 kg/hr/cm of Die Circumference)
- Blow-up Ratio: 2.5:1
- Frost Line Height: 29 in. (737 mm)

[1] As measured at the time of production.
[2] Comonomer content measured by a SK proprietary method that has equivalent accuracy as compared to ASTM D 4094.
[3] 20 in/min (510 mm/min)
[4] 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.

**Notes**
These are ***typical values*** and are ***not be construed as specifications.*** The physical properties are highly dependent on the manufacturing conditions. So customers should confirm performances by their own tests.

*For additional sales, order and technical assistance*

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