



AFFINITY™ PL 1845G

Polyolefin Plastomer

Overview

AFFINITY™ PL 1845G Polyolefin Plastomer is a Polyolefin Plastomer (POP) produced using INSITE™ Technology from Dow Plastics. It is specifically designed for use as a sealant layer in flexible structures prepared using the cast process. Its low heat seal initiation temperature, its outstanding optical properties and its coextrusion capability with polypropylene polymers make AFFINITY PL 1845G Polyolefin Plastomer the ideal resin for use as low temperature sealing skin layer in coextruded cast bioriented polypropylene (BOPP) film structures.

AFFINITY PL 1845G Polyolefin Plastomer does not contain any slip nor antiblock agent. In order to optimise the application performance, it is recommended to add slip/antiblock master batches based on polyolefin plastomers.

Complies with:

- Canadian HPFB No Objection
- EU, No 10/2011
- U.S. FDA FCN 424

Consult the regulations for complete details.

Additive

- Antiblock: No
- Slip: No
- Processing Aid: No

| Physical | Nominal Value (English) | Nominal Value (SI) | Test Method |
|---|-------------------------|-------------------------|-------------|
| Density | 0.910 g/cm ³ | 0.910 g/cm ³ | ASTM D792 |
| Melt Index (190°C/2.16 kg) | 3.5 g/10 min | 3.5 g/10 min | ISO 1133 |
| Films | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Tensile Strength ¹ | | | ASTM D882 |
| MD : Break, 0.98 mil (25 µm), Cast Film | 6530 psi | 45.0 MPa | |
| TD : Break, 0.98 mil (25 µm), Cast Film | 4790 psi | 33.0 MPa | |
| Tensile Elongation ¹ | | | ASTM D882 |
| MD : Break, 0.98 mil (25 µm), Cast Film | 530 % | 530 % | |
| TD : Break, 0.98 mil (25 µm), Cast Film | 670 % | 670 % | |
| Dart Drop Impact ¹ | | | ASTM D1709B |
| 0.98 mil (25 µm), Cast Film | 470 g | 470 g | |
| Elmendorf Tear Strength ¹ | | | ASTM D1922 |
| MD : 0.98 mil (25 µm), Cast Film | 180 g | 180 g | |
| TD : 0.98 mil (25 µm), Cast Film | 360 g | 360 g | |
| Seal Initiation Temperature | | | Dow Method |
| 0.79 mil (20 µm) ² | 203 °F | 95.0 °C | |
| 0.98 mil (25 µm), Cast Film ³ | 210 °F | 99.0 °C | |
| Thermal | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Vicat Softening Temperature | 203 °F | 95.0 °C | ISO 306/A |
| Melting Temperature | 217 °F | 103 °C | DSC |
| Optical | Nominal Value (English) | Nominal Value (SI) | Test Method |
| Gloss | | | ASTM D2457 |
| 20°, 0.787 mil (20.0 µm) ⁴ | 96 | 96 | |
| 20°, 0.984 mil (25.0 µm), Cast Film ¹ | 145 | 145 | |
| Clarity ¹ (0.984 mil (25.0 µm), Cast Film) | 75.0 | 75.0 | ASTM D1746 |
| Haze | | | ASTM D1003 |
| 0.787 mil (20.0 µm) ⁴ | 1.20 % | 1.20 % | |
| 0.984 mil (25.0 µm), Cast Film ¹ | 0.700 % | 0.700 % | |



Notes

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

¹ Single layer cast film, extruded at 274 °C , 0.5 mm die gap.

² BOPP Film; 1 µm sealant layer each side
Temperature at which 1.8 N/15 mm heat seal strength is reached

³ Single layer cast film, extruded at 274 °C , 0.5 mm die gap.
Temperature required to reach 5.25 N/15 mm heat seal strength

⁴ BOPP Film; 1 µm sealant layer each side

