

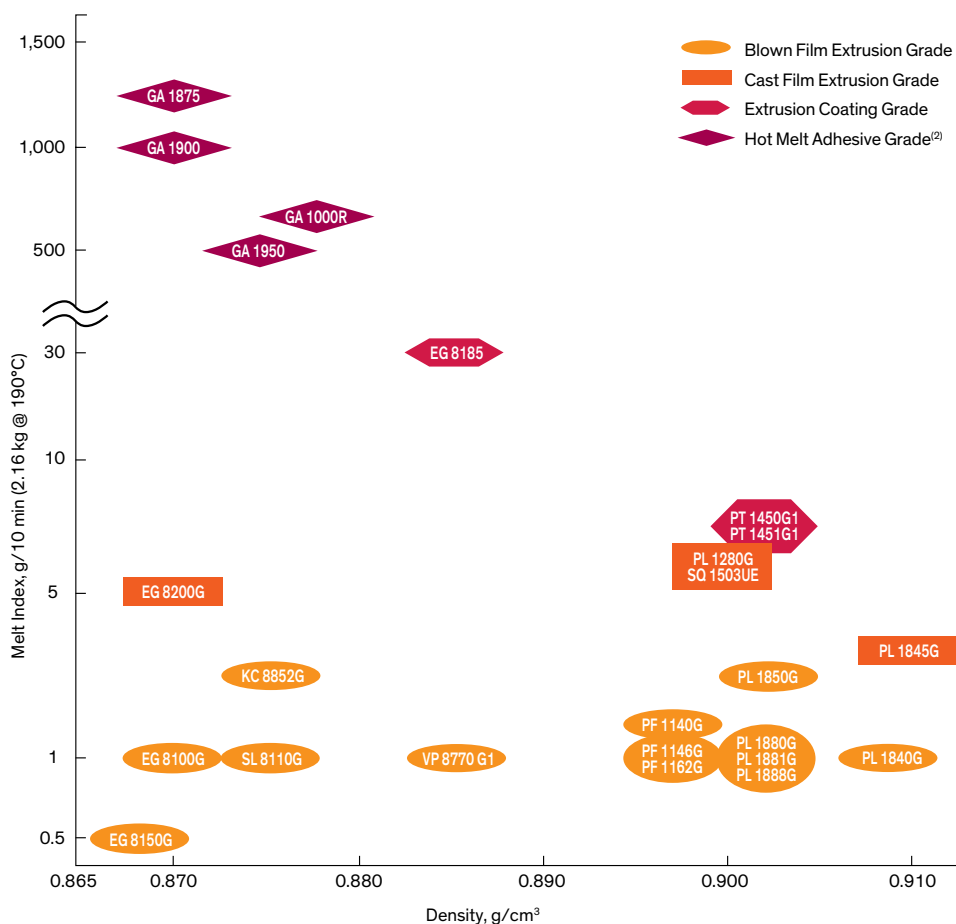


AFFINITY™ Polyolefin Plastomers and Polyolefin Elastomers Product Selection Guide

When you need a resin to help your applications flow faster, flex longer, stick better, breathe better, and more, you need AFFINITY™ Polyolefin Plastomers (POPs) or Polyolefin Elastomers (POEs). The AFFINITY™ product line combines high flow with low crystallinity, offering you opportunities to achieve improved performance, processing, and value in flexible packaging, hot melt adhesive (HMA), and other applications.



Figure 1: AFFINITY™ Polyolefin Plastomer and Polyolefin Elastomer Products⁽¹⁾



All grades are commercialized AFFINITY™ POP or POE products.
⁽¹⁾Typical properties; not to be construed as specifications. Users should confirm results by their own tests.
⁽²⁾AFFINITY™ GA POE melt index values are approximate; points are outside normal testing range.

Table 1: Typical Properties of AFFINITY™ Polyolefin Plastomers and Polyolefin Elastomers (Density: 0.868-0.897 g/cm³)⁽¹⁾

AFFINITY™ POP and POE Grades											
Property/ Product Information	EG 8150G ⁽²⁾ POP	EG 8100G POP	EG 8200G POP	GA 1875 POE	GA 1900 POE	GA 1950 POE	GA 1000R POE	SL 8110G POP	KC 8852G POP	VP 8770G1 POP	PF 1140G POP
Processing Type	Blown Film Extrusion	Blown Film Extrusion	Cast Film Extrusion	–	–	–	–	Blown Film Extrusion	Blown Film Extrusion	Blown Film Extrusion	Blown Film Extrusion
Typical Applications	General	General	General	Hot Melt Adhesives	Hot Melt Adhesives	Hot Melt Adhesives	Hot Melt Adhesives	Blown Film	Industrial Package Collation	General	Packaging Film
Density, g/cm ³ (Base Value) ASTM D 792	0.868	0.870	0.870	0.870	0.870	0.874	0.878	0.875	0.875	0.885	0.897
Melt Index, g/10 min (2.16 kg @ 190°C) ASTM D 1238	0.5	1	5	1,250 ⁽³⁾	1,000 ⁽³⁾	500 ⁽³⁾	660 ⁽³⁾	1	3	1	1.6
DSC Melting Peak, °C (10°C/min) ⁽⁴⁾	55	55	63	70	68	70	68	75	68	82	96
Vicat Softening Point, °C ⁽⁴⁾	46	43	45	N/A ⁽⁵⁾	N/A ⁽⁵⁾	N/A ⁽⁵⁾	N/A ⁽⁵⁾	56	48	57	77
Contains Slip Agent	–	–	–	–	–	–	–	–	–	–	–
Contains Antiblock Agent	–	–	–	–	–	–	–	–	–	–	–
Contains Process Aids	–	–	–	–	–	–	–	–	–	–	–

⁽¹⁾Typical properties; not to be construed as specifications. Users should confirm results by their own tests.

⁽²⁾Available only in Europe.

⁽³⁾Values are approximate; points are outside normal testing range.

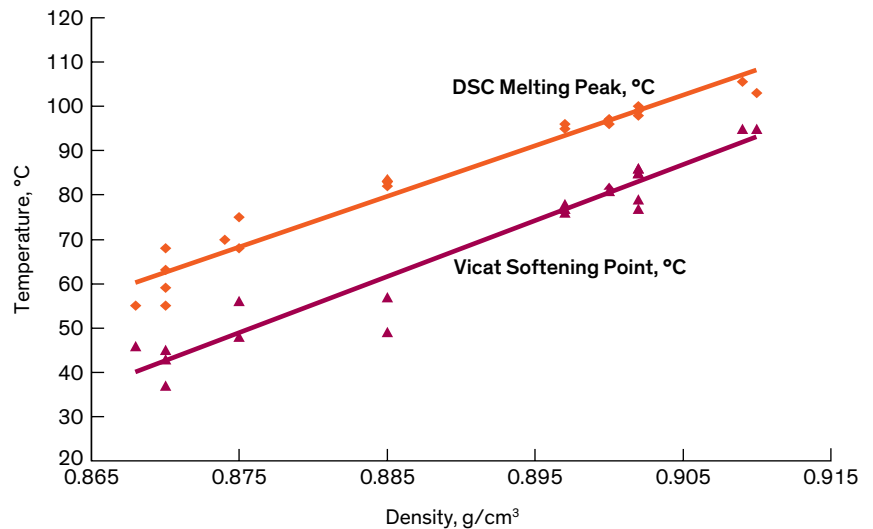
⁽⁴⁾Dow Method. Test protocols and additional information available upon request.

⁽⁵⁾Data Not Available; could not be tested by current methods.

Typical Applications for AFFINITY™ POPs

- Meat
- Cheese
- Fresh-cut Produce
- Dry Foods (e.g., crackers, cookies, cereal, cake mixes)
- Stand-up Pouches

Figure 2: AFFINITY™ POPs and POEs — DSC Melting Peak and Vicat Softening Point vs. Density^(1,2)



⁽¹⁾Data per tests conducted by Dow. Test protocols and additional information available upon request. Properties shown are typical, not to be construed as specifications. Users should confirm results by their own tests.

⁽²⁾Dow Method. Test protocols and additional information available upon request.

Table 2: Typical Properties of AFFINITY™ Polyolefin Plastomers (Density: 0.899-0.910 g/cm³)⁽¹⁾

AFFINITY™ POP Grades												
Property/ Product Information	PF 1146G	PF 1162G	PL 1280G	SQ 1503UE ⁽²⁾	PL 1880G	PL 1881G	PL 1888G	PL 1850G	PT 1450G1	PT 1451G1	PL 1840G	PL 1845G
Processing Type	Blown Film Extrusion	Blown Film Extrusion	Cast Film Extrusion	Cast Film Extrusion	Blown Film Extrusion	Blown Film Extrusion	Blown Film Extrusion	Blown Film Extrusion	Extrusion Coating	Extrusion Coating	Blown Film Extrusion	Cast Film Extrusion
Typical Applications	Packaging Film	Packaging Film	Packaging Sealant	Rotomolding Processes	Packaging Sealant	Packaging Sealant	Packaging Sealant	Packaging Sealant	Packaging Sealant	Packaging Coating	Packaging Sealant	Packaging Sealant
Density, g/cm ³ (Base Value) ASTM D 792	0.899 (0.897)	0.900 (0.897)	0.900	0.900	0.902	0.904 (0.902)	0.904 (0.902)	0.902	0.902	0.902	0.909	0.910
Melt Index, g/10 min (2.16 kg @ 190°C) ASTM D 1238	1	1	6	6	1	1	1	3	7.5	7.5	1	3.5
DSC Melting Peak, °C (10°C/min) ⁽³⁾	95	95	96	97	99	100	98	98	98	98	106	103
Vicat Softening Point, °C ⁽³⁾	78	76	81	82	86	86	85	85	77	79	95	95
Contains Slip Agent	Yes	Yes	–	–	–	Yes	Yes	–	–	–	–	–
Contains Antiblock Agent	Yes	Yes	–	–	–	Yes	Yes	–	–	–	–	–
Contains Process Aids	Yes	–	–	–	–	–	Yes	–	–	–	–	–

⁽¹⁾Typical properties; not to be construed as specifications. Users should confirm results by their own tests.

⁽²⁾Available only in Europe.

⁽³⁾Dow Method. Test protocols and additional information available upon request.

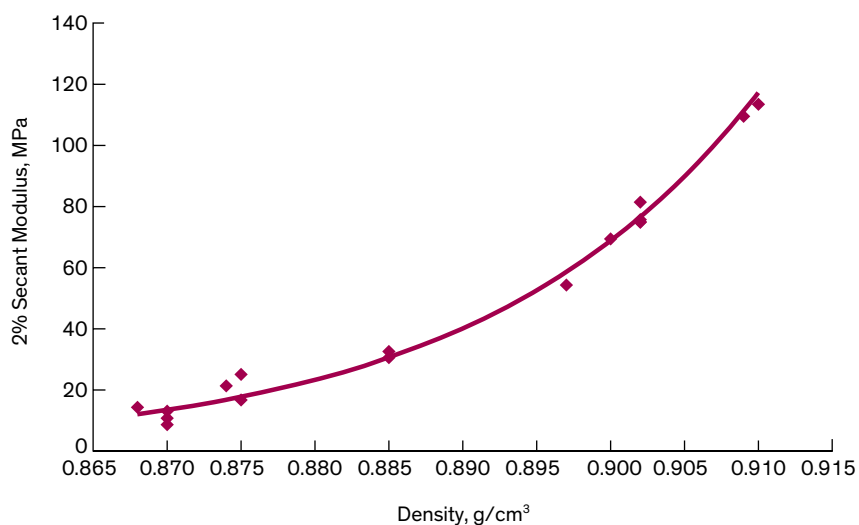
AFFINITY™ POP Attributes

- Exceptional Sealability
- Great Optics
- Excellent Organoleptics
- High Oxygen Transmission Rate
- Exceptional Toughness

AFFINITY™ GA POE Attributes

- More Powerful Bonds
- Greater Sealing Mileage per Pound (Kg)
- Broader Temperature Range Performance
- Less Plugging and Clogging
- Virtually No Char, Discoloration, or Odor
- Improved Packaging Economy
- Less Downtime and Maintenance Expense

Figure 3: AFFINITY™ POPs and POEs – 2% Secant Modulus vs. Density^(1,2)



⁽¹⁾ Data per tests conducted by Dow. Test protocols and additional information available upon request. Properties shown are typical, not to be construed as specifications. Users should confirm results by their own tests.

⁽²⁾Dow Method. Test protocols and additional information available upon request.

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