



# INFUSE™ Olefin Block Copolymers

## Product Selection Guide

INFUSE™ Olefin Block Copolymers (OBCs) are polyolefins with alternating blocks of hard (highly rigid) and soft (highly elastomeric) segments. The block structure of OBCs offers an advantaged performance balance of flexibility and heat resistance compared to random polyolefin copolymers. The INFUSE™ OBC product offering features resins for a variety of fabrication processes – creating exciting possibilities for polymer converters, processors, and formulators – for new products, new applications, and new markets.

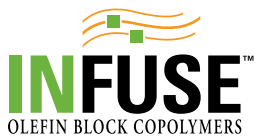
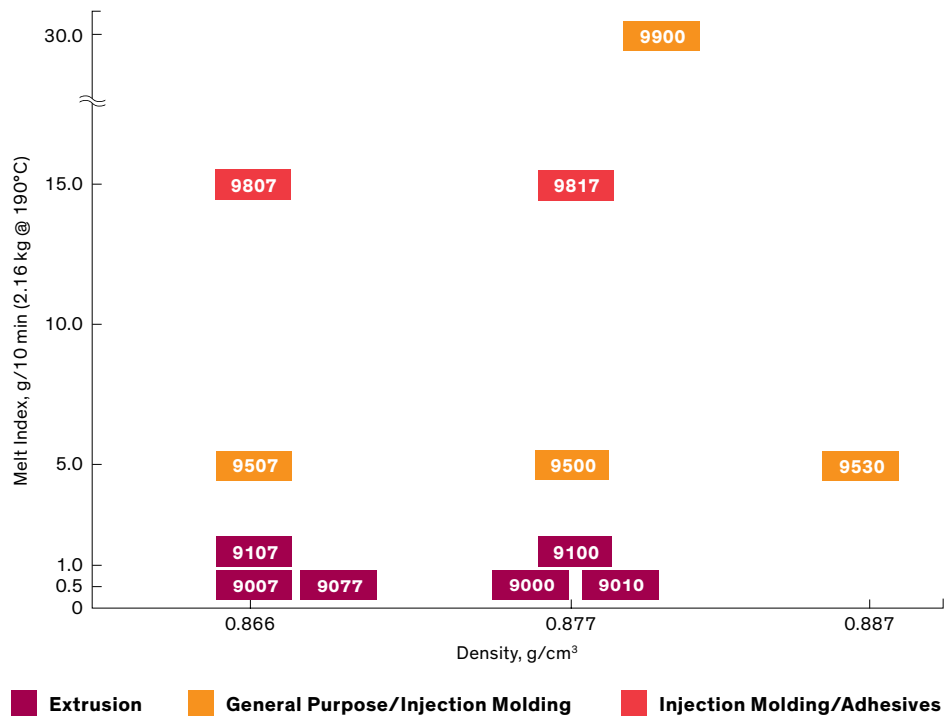


Figure 1: Melt Index vs. Density of INFUSE™ Olefin Block Copolymers Products<sup>(1,2)</sup>



<sup>(1)</sup> All grades are commercialized INFUSE™ OBC products.

<sup>(2)</sup> Typical properties; not to be construed as specifications. Users should confirm results by their own tests.

**Table 1: Typical Properties of INFUSE™ Olefin Block Copolymers<sup>(1,2)</sup>**

	Test Method				
		9000	9010	9007	9077
<b>Description / Key Attributes</b>		Good elastic recovery	Low tack, high tensile strength	Highly flexible, excellent elastic recovery	Highly flexible, excellent softness
		Excellent compression set in blends and compounds	Excellent for blends and compounds	Excellent for blends and compounds	Excellent compatibilizer and blend component
				Dusted	Dusted
<b>Typical Applications</b>		Compounding, Profile Extrusion	Compounding, Profiles, Grips, Thermoplastic Elastomers (TPEs)	Compounding, TPEs	Crosslinked (XL) Foams, Compounding
<b>Physical Properties</b>					
Melt Index, g/10 min (2.16 kg @ 190°C)	ASTM D1238	0.5	0.5	0.5	0.5
Density, g/cm <sup>3</sup>	ASTM D792	0.877	0.877	0.866	0.869
DSC Melting Point, °F (°C)	Dow Method <sup>(3)</sup>	248 (120)	252 (122)	246 (119)	244 (118)
Glass Transition Temperature, °F (°C)	Dow Method <sup>(3)</sup>	-80 (-62)	-65 (-54)	-80 (-62)	-85 (-65)
<b>Mechanical Properties</b>					
Hardness, Shore A	ASTM D2240	71	77	64	51
Tensile Modulus, 100% Secant, psi (MPa)	ASTM D638	477 (3.3)	493 (3.4)	258 (1.8)	175 (1.2)
Ultimate Tensile Strength, psi (MPa)	ASTM D638	911 (6.3)	1,910 (13.2)	590 (4.1)	435 (3.0)
Ultimate Tensile Elongation, %	ASTM D638	370	>750	400	>750
Ultimate Tensile Strength, psi (MPa)	ASTM D412	2,175 (15)	2,110 (14.5)	1,407 (10)	–
Ultimate Tensile Elongation, %	ASTM D412	1,150	770	1,300	–
Tear Strength, kN/m	ASTM D624	42	48	29	26
<b>Thermal Properties</b>					
TMA @ 1.0 mm, °F (°C)	1 N, 5°C/min <sup>(3)</sup>	219 (104)	250 (121)	190 (88)	226 (108)
Compression Set @ 21°C, %	ASTM D395	23	24	18	20
Compression Set @ 70°C, %	ASTM D395	45	67	57	43

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

<sup>(2)</sup> All tests performed on compression molded samples.

<sup>(3)</sup> Dow Method. Additional information available upon request.

<sup>(4)</sup> Injection molded

<sup>(5)</sup> 20 in./min (510 mm/min)

<sup>(6)</sup> Die C

**INFUSE™ OBC Grades**

9100	9107	9500	9507	9530	9807	9817	9900
High service temperature performance	High service temperature performance	General purpose elastomer	General purpose elastomer	General purpose elastomer	Excellent flow and processability	Excellent flow and processability	General purpose elastomer
General purpose elastomer	General purpose elastomer	Excellent haptics	Excellent flow and processability	Excellent compression set at high temperatures	Higher set-up temperature	Reduced part weight	High flow
	Dusted		Dusted		Dusted	Dusted	
Compounding, Profile Extrusion, Blown Films	TPEs, Elastic Films, Blown Films	Injection Molding, XL Foams, Overmolding on PP and PE, Cast Films	Injection Molding, Elastic Films	Injection Molding, XL Foams	Injection Molding for TPEs, Adhesives	Injection Molding for TPEs, Adhesives	Injection Molding for TPEs, Adhesives
1	1	5	5	5	15	15	30
0.877	0.866	0.877	0.866	0.887	0.866	0.877	0.880
248 (120)	250 (121)	251 (122)	246 (119)	246 (119)	244 (118)	248 (120)	252 (122)
-80 (-62)	-80 (-62)	-80 (-62)	-80 (-62)	-80 (-62)	-80 (-62)	-80 (-62)	-58 (-50)
75	60	69	60	83	55	71	78 <sup>(4)</sup>
404 (2.8)	234 (1.6)	331 (2.3)	216 (1.5)	554 (3.8)	189 (1.3)	335 (2.3)	580 (4.0) <sup>(4,5)</sup>
950 (6.6)	739 (5.1)	723 (5.0)	419 (2.9)	1,069 (7.4)	176 (1.2)	355 (2.4)	640 (4.41) <sup>(4,5)</sup>
480	600	1,150	1,210	1,000	1,200	1,540	780 <sup>(4,5)</sup>
1,885 (13)	1,595 (11)	1,378 (10)	1,015 (7)	2,465 (17)	435 (3)	1,015 (7)	735 (5.07) <sup>(6)</sup>
1,250	1,550	1,600	1,900	1,300	2,200	1,700	870 <sup>(6)</sup>
40	27	35	22	52	17	31	47.5
237 (114)	151 (66)	207 (97)	171 (77)	232 (111)	140 (60)	203 (95)	154 (68)
19	16	22	22	20	16	15	38
47	49	55	70	45	76	58	98

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