ENGAGE™ POE 58750 Polyolefin Elastomer

Polyolefin Elastomer

Overview

POE 58750 Polyolefin Elastomer is an ethylene-octene copolymer that has excellent flow characteristics and performs well in a wide range of general purpose thermoplastic elastomer applications.

POE 58750 Polyolefin Elastomer provides good impact properties in blends with polypropylene (PP) and polyethylene (PE), especially in applications requiring slightly higher melt flow. POE 58750 Polyolefin Elastomer also provides high filler loading capability, excellent electrical properties, and (when cross-linked) exceptional heat aging, compression set, and weather resistance properties.

Main Characteristics:

- Pellet form
- Excellent flow characteristics
- High filler loading
- Excellent electrical properties
- Improved impact in polypropylene and polyethylene
- Exceptional heat aging, compression set, and weather resistance when cured

Applications:

- General purpose thermoplastic elastomers
- Impact modification
- Wire and cable

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density [1]	0.870	g/cm³	0.870	g/cm³	ASTM D792
Melt Index [2] (190°C/2.16 kg)	5.0	g/10 min	5.0	g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 250°F (121°C))	8	MU	8	MU	ASTM D1646
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus - 100% Secant [3] (Compression Molded)	334	psi	2.30	MPa	ASTM D638
Tensile Strength [3] (Break, Compression Molded)	827	psi	5.70	MPa	ASTM D638
Tensile Elongation [3]					ASTM D638
Break, Compression Molded	1100	%	1100	%	
Flexural Modulus					ASTM D790
1% Secant : Compression Molded	1580	psi	10.9	MPa	
2% Secant : Compression Molded	1570	psi	10.8	MPa	
Elastomers	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tear Strength [4]	212	lbf/in	37.1	kN/m	ASTM D624
Hardness	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Durometer Hardness					ASTM D2240
Shore A, 1 sec, Compression Molded	66		66		
Shore D, 1 sec, Compression Molded	17		17		
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Glass Transition Temperature	-63.4	°F	-53.0	°C	Dow Method
Vicat Softening Temperature	98.6	°F	37.0	°C	ASTM D1525
Melting Temperature (DSC) [5]	138	°F	59.0	°C	Dow Method
Peak Crystallization Temperature (DSC)	111	°F	44.0	°C	Dow Method

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Notes

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

[1] density range: 0.865-0.875g/cm3

[2] Melt Mass-Flow Rate (MFR) range: 3.25-6.75 g/10 min

[3] 20 in/min (510 mm/min)

[4] Die C

[5] 10°C/min

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