Technical Information

ENGAGE™ 8100
Polyolefin Elastomer

Overview

ENGAGE™ 8100 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.

ENGAGE 8100 provides superb impact properties in blends with polypropylene (PP) and polyethylene (PE). ENGAGE 8100 provides high filler loading capability and outstanding peroxide cure capability. When cross-linked by peroxide, silane, or irradiation, it gives exceptional heat aging, compression set, and weather resistance properties, and may be used to produce high performance electrical insulation.

Main Characteristics:

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

Applications:

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

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.870	g/cm³	0.870	g/cm³	ASTM D792
Melt Index (190°C/2.16 kg)	1.0	g/10 min	1.0	g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 250°F (121°C))	24	MU	24	MU	ASTM D1646
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus - 100% Secant [1] (Compression Molded)	421	psi	2.90	MPa	ASTM D638
Tensile Strength [1] (Break, Compression Molded)	1420	psi	9.76	MPa	ASTM D638
Tensile Elongation [1]					ASTM D638
Break, Compression Molded	810	%	810	%	
Flexural Modulus					ASTM D790
1% Secant : Compression Molded	2070	psi	14.3	MPa	
2% Secant : Compression Molded	1900	psi	13.1	MPa	
Elastomers	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tear Strength [2]	228	lbf/in	40.0	kN/m	ASTM D624
Hardness	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Durometer Hardness					ASTM D2240
Shore A, 1 sec, Compression Molded	73		73		
Shore D, 1 sec, Compression Molded	22		22		
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Glass Transition Temperature	-61.6	°F	-52.0	°C	Dow Method
Vicat Softening Temperature	113	°F	45.0	°C	ASTM D1525
Melting Temperature (DSC) [3]	140	°F	60.0	°C	Dow Method
Peak Crystallization Temperature (DSC)	113	°F	45.0	°C	Dow Method

Notes

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

[1] 20 in/min (510 mm/min)

[2] Die C

[3] 10°C/min

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