

ENGAGE™ 8157

Polyolefin Elastomer

Overview

ENGAGE™ 8157 Polyolefin Elastomer is an ethylene-octene copolymer that has excellent flow characteristics and provides superb impact properties in blends with polypropylene (PP) and polyethylene (PE) and is widely used in TPO applications where excellent low temperature impact properties are desired.

ENGAGE 8157 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
- Talc dusted (untreated, 1 µm)

Applications:

- General purpose thermoplastic elastomers
- Thermoplastic olefins (TPO)
- Wire and cable
- Impact modification

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.868 g/cm ³	0.868 g/cm ³	ASTM D792
Melt Index (190°C/2.16 kg)	0.50 g/10 min	0.50 g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 250°F (121°C))	33 MU	33 MU	ASTM D1646
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus - 100% Secant ¹ (Compression Molded)	377 psi	2.60 MPa	ASTM D638
Tensile Strength ¹ (Break, Compression Molded)	1380 psi	9.50 MPa	ASTM D638
Tensile Elongation ¹ Break, Compression Molded	810 %	810 %	ASTM D638
Flexural Modulus			ASTM D790
1% Secant : Compression Molded	2200 psi	15.2 MPa	
2% Secant : Compression Molded	2090 psi	14.4 MPa	
Elastomers	Nominal Value (English)	Nominal Value (SI)	Test Method
Tear Strength ²	213 lbf/in	37.3 kN/m	ASTM D624
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Compression Molded	70	70	
Shore D, 1 sec, Compression Molded	20	20	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Glass Transition Temperature	-61.6 °F	-52.0 °C	Dow Method
Vicat Softening Temperature	115 °F	46.0 °C	ASTM D1525
Melting Temperature (DSC) ³	131 °F	55.0 °C	Dow Method
Peak Crystallization Temperature (DSC)	108 °F	42.0 °C	Dow Method

Additional Information

Properties measured on product without talc dusting.



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

