

ENGAGE™ 8150

Polyolefin Elastomer

The Dow Chemical Company

Message:

ENGAGE™ 8150 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 8150 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

Impact modification

Thermoplastic olefins (TPO)

Wire and cable

General Information			
Forms	Pellets		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.868	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.50	g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 121°C)	33	MU	ASTM D1646
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Compression Molded	70		
Shore D, 1 sec, Compression Molded	20		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus - 100% Secant ¹ (Compression Molded)	2.60	MPa	ASTM D638
Tensile Strength ² (Break, Compression Molded)	9.50	MPa	ASTM D638
Tensile Elongation ³ (Break, Compression Molded)	810	%	ASTM D638
Flexural Modulus			ASTM D790
1% Secant : Compression Molded	15.2	MPa	
2% Secant : Compression Molded	14.4	MPa	
Elastomers	Nominal Value	Unit	Test Method
Tear Strength ⁴	37.3	kN/m	ASTM D624
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-52.0	°C	Internal Method

Vicat Softening Temperature	46.0	°C	ASTM D1525
Melting Temperature (DSC) ⁵	55.0	°C	Internal Method
Peak Crystallization Temperature (DSC)	42.0	°C	Internal Method

NOTE

- | | |
|----|------------|
| 1. | 510 mm/min |
| 2. | 510 mm/min |
| 3. | 510 mm/min |
| 4. | Die C |
| 5. | 10°C/min |

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