



ENGAGE™ 8450 Polyolefin Elastomer

Overview ENGAGE™ 8450 Polyolefin Elastomer is an ethylene-octene copolymer that performs well in a wide range of thermoplastic elastomer applications. It has excellent compatibility with other polyolefins, allowing for efficient blending and coextrusion.

ENGAGE 8450 provides excellent flow properties and is efficiently cross-linked by peroxide, silane, or irradiation. When cross-linked, it gives exceptional heat aging, compression set, and weather resistance properties.

Main Characteristics:

- Pellet form
- Excellent flow characteristics
- Excellent compatibility with other olefins
- Peroxide, silane, and radiation curable
- Exceptional heat aging, compression set, and weather resistance when cured

Applications:

- General purpose thermoplastic elastomers

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.902 g/cm ³	0.902 g/cm ³	ASTM D792
Melt Index (190°C/2.16 kg)	3.0 g/10 min	3.0 g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 250°F (121°C))	10 MU	10 MU	ASTM D1646
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus - 100% Secant (Compression Molded)	1060 psi	7.30 MPa	ASTM D638 ¹
Tensile Strength (Break, Compression Molded)	3250 psi	22.4 MPa	ASTM D638 ¹
Tensile Elongation			ASTM D638 ¹
Break, Compression Molded	750 %	750 %	
Flexural Modulus			ASTM D790
1% Secant: Compression Molded	11100 psi	76.3 MPa	
2% Secant: Compression Molded	11000 psi	75.6 MPa	
Elastomers	Nominal Value (English)	Nominal Value (SI)	Test Method
Tear Strength	515 lbf/in	90.2 kN/m	ASTM D624 ²
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Compression Molded	80	80	
Shore D, 1 sec, Compression Molded	41	41	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Glass Transition Temperature (DSC)	-25.6 °F	-32.0 °C	Dow Method
Vicat Softening Temperature	183 °F	84.0 °C	ASTM D1525
Melting Temperature (DSC)	207 °F	97.0 °C	Dow Method ³
Peak Crystallization Temperature (DSC)	176 °F	80.0 °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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