

# ENGAGE™ 8450

Polyolefin Elastomer

The Dow Chemical Company

## Message:

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

General Information			
Forms	Pellets		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.902	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	3.0	g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 121°C)	10	MU	ASTM D1646
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Compression Molded	90		
Shore D, 1 sec, Compression Molded	41		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus - 100% Secant <sup>1</sup> (Compression Molded)	7.30	MPa	ASTM D638
Tensile Strength <sup>2</sup> (Break, Compression Molded)	22.4	MPa	ASTM D638
Tensile Elongation <sup>3</sup> (Break, Compression Molded)	750	%	ASTM D638
Flexural Modulus			ASTM D790
1% Secant : Compression Molded	76.3	MPa	
2% Secant : Compression Molded	75.6	MPa	
Elastomers	Nominal Value	Unit	Test Method
Tear Strength <sup>4</sup>	90.2	kN/m	ASTM D624
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-32.0	°C	Internal Method
Vicat Softening Temperature	84.0	°C	ASTM D1525
Melting Temperature (DSC) <sup>5</sup>	97.0	°C	Internal Method
Peak Crystallization Temperature (DSC)	80.0	°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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