

ENGAGE™ 8452

Polyolefin Elastomer

The Dow Chemical Company

Message:

ENGAGE™ 8452 Polyolefin Elastomer is an ethylene-octene copolymer that offers excellent toughness, softness, and optical properties. It has excellent compatibility with other polyolefins, allowing for efficient blending and coextrusion.

ENGAGE 8452 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

Good clarity, toughness, and flexibility

Excellent compatibility with polyolefins

Exceptional heat aging, compression set, and weather resistance when cured

Applications:

Blends

General Information			
Forms	Pellets		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.875	g/cm ³	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)	11	MU	ASTM D1646
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Compression Molded	74		
Shore D, 1 sec, Compression Molded	24		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus - 100% Secant ¹ (Compression Molded)	3.00	MPa	ASTM D638
Tensile Strength ² (Break, Compression Molded)	11.2	MPa	ASTM D638
Tensile Elongation ³ (Break, Compression Molded)	950	%	ASTM D638
Flexural Modulus			ASTM D790
1% Secant : Compression Molded	16.5	MPa	
2% Secant : Compression Molded	16.8	MPa	
Elastomers	Nominal Value	Unit	Test Method
Tear Strength ⁴	45.1	kN/m	ASTM D624
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-51.0	°C	Internal Method
Vicat Softening Temperature	48.0	°C	ASTM D1525
Melting Temperature (DSC) ⁵	66.0	°C	Internal Method
Peak Crystallization Temperature (DSC)	48.0	°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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