



ENGAGE™ 8452 EL

Polyolefin Elastomer

Overview

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

- Wire and cable

Complies with:

- EU, No 10/2011
- Japan Hygienic Olefin and Styrene Plastics Association
- U.S. FDA 21 CFR 177.1520(c)3.2c

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.875 g/cm ³	0.875 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))	11 MU	11 MU	ASTM D1646
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus - 100% Secant ¹ (Compression Molded)	435 psi	3.00 MPa	ASTM D638
Tensile Strength ¹ (Break, Compression Molded)	1620 psi	11.2 MPa	ASTM D638
Tensile Elongation ¹ Break, Compression Molded	950 %	950 %	ASTM D638
Flexural Modulus			ASTM D790
1% Secant : Compression Molded	2390 psi	16.5 MPa	
2% Secant : Compression Molded	2440 psi	16.8 MPa	
Elastomers	Nominal Value (English)	Nominal Value (SI)	Test Method
Tear Strength ²	258 lbf/in	45.1 kN/m	ASTM D624
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness			ASTM D2240
Shore A, Compression Molded	74	74	
Shore D, Compression Molded	24	24	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Glass Transition Temperature	-59.8 °F	-51.0 °C	Dow Method
Vicat Softening Temperature	118 °F	48.0 °C	ASTM D1525
Melting Temperature (DSC) ³	151 °F	66.0 °C	Dow Method
Peak Crystallization Temperature (DSC)	118 °F	48.0 °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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Published: 2008-01-23

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