Technical Information

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/cm³	0.875	g/cm³	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]					ASTM D638
Break, Compression Molded	950	%	950	%	
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