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/cm³	0.902	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))	10	MU	10	MU	ASTM D1646
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus - 100% Secant [1] (Compression Molded)	1060	psi	7.30	MPa	ASTM D638
Tensile Strength [1] (Break, Compression Molded)	3250	psi	22.4	MPa	ASTM D638
Tensile Elongation [1]					ASTM D638
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 [2]	515	lbf/in	90.2	kN/m	ASTM D624
Hardness	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Durometer Hardness					ASTM D2240
Shore A, 1 sec, Compression Molded	90		90		
Shore D, 1 sec, Compression Molded	41		41		
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Glass Transition Temperature	-25.6	°F	-32.0	°C	Dow Method
Vicat Softening Temperature	183	°F	84.0	°C	ASTM D1525
Melting Temperature (DSC) [3]	207	°F	97.0	°C	Dow Method
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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Additional Information

North America		**Europe/Middle East**	+800-3694-6367
U.S. & Canada:	1-800-441-4369		+31-11567-2626
	1-989-832-1426	Italy:	+800-783-825
Mexico:	+1-800-441-4369		
Latin America		**South Africa**	+800-99-5078
Argentina:	+54-11-4319-0100		
Brazil:	+55-11-5188-9000		
Colombia:	+57-1-219-6000	**Asia Pacific**	+800-7776-7776
Mexico:	+52-55-5201-4700		+603-7965-5392

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