Technical Information

ENGAGE™ 8440
Polyolefin Elastomer

Overview

ENGAGE™ 8440 Polyolefin Elastomer is an ethylene-octene copolymer that performs well in a wide range of thermoplastic elastomer applications. It is an excellent thermoplastic elastomer for blending and compounding.

Main Characteristics:

- Pellet form

Applications:

- Thermoplastic elastomers
- Compounding

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.897	g/cm³	0.897	g/cm³	ASTM D792
Melt Index (190°C/2.16 kg)	1.6	g/10 min	1.6	g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 250°F (121°C))	13	MU	13	MU	ASTM D1646
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus - 100% Secant [1] (Compression Molded)	914	psi	6.30	MPa	ASTM D638
Tensile Strength [1] (Break, Compression Molded)	2960	psi	20.4	MPa	ASTM D638
Tensile Elongation [1]					ASTM D638
Break, Compression Molded	690	%	690	%	
Flexural Modulus					ASTM D790
1% Secant : Compression Molded	7860	psi	54.2	MPa	
2% Secant : Compression Molded	7880	psi	54.3	MPa	
Elastomers	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tear Strength [2]	451	lbf/in	78.9	kN/m	ASTM D624
Hardness	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Durometer Hardness					ASTM D2240
Shore A, 1 sec, Compression Molded	86		86		
Shore D, 1 sec, Compression Molded	36		36		
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Glass Transition Temperature	-27.4	°F	-33.0	°C	Dow Method
Vicat Softening Temperature	167	°F	75.0	°C	ASTM D1525
Melting Temperature (DSC) [3]	199	°F	93.0	°C	Dow Method
Peak Crystallization Temperature (DSC)	169	°F	76.0	°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