Technical Information

ENGAGE™ 7457
Polyolefin Elastomer

Overview

ENGAGE 7457 Polyolefin Elastomer is an ethylene butene copolymer developed for use as a high efficiency impact modifier for thermoplastic polyolefin (TPO) applications.

This product is delivered with a nominal talc partitioning agent to assist in material handling.

Main Characteristics:

- Excellent polypropylene dispersion
- Enhanced impact performance
- Pellet form
- Talc dusted (untreated, 1µm)

Applications

- TPO Impact Modification

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.862	g/cm³	0.862	g/cm³	ASTM D792
Melt Index (190°C/2.16 kg)	3.6	g/10 min	3.6	g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 250°F (121°C))	9	MU	9	MU	ASTM D1646
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus - 100% Secant [1] (Compression Molded)	190	psi	1.31	MPa	ASTM D638
Tensile Strength [1] (Break, Compression Molded)	260	psi	1.79	MPa	ASTM D638
Tensile Elongation [1]					ASTM D638
Break, Compression Molded	> 600	%	> 600	%	
Flexural Modulus					ASTM D790
1% Secant : Compression Molded	600	psi	4.14	MPa	
2% Secant : Compression Molded	680	psi	4.69	MPa	
Elastomers	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tear Strength [2]	110	lbf/in	19.3	kN/m	ASTM D624
Hardness	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Durometer Hardness					ASTM D2240
Shore A, Compression Molded	50		50		
Shore D, Compression Molded	12		12		
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Glass Transition Temperature	-69.0	°F	-56.1	°C	Dow Method
Melting Temperature (DSC) [3]	104	°F	40.0	°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