ENGAGE™ 8842
Polyolefin Elastomer

Overview

ENGAGE™ 8842 Polyolefin Elastomer is an ultra-low density ethylene-octene copolymer which offers exceptional properties of an ultra-low density elastomer with the added potential of handling this polymer in pellet form.

ENGAGE 8842 has excellent flow characteristics and provides superb impact properties in blends with polypropylene (PP) and polyethylene (PE). It performs well in TPO applications where superior low temperature impact properties are desired.

Main Characteristics:

- Pellet form
- Excellent flow characteristics
- Improved impact in polypropylene and polyethylene
- Talc dusted (untreated, 1 µm)

Applications:

- Injection molded industrial and consumer durable goods
- Impact modification of TPO

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.857	g/cm³	0.857	g/cm³	ASTM D792
Melt Index (190°C/2.16 kg)	1.0	g/10 min	1.0	g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 250°F (121°C))	25	MU	25	MU	ASTM D1646
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus - 100% Secant [1] (Compression Molded)	203	psi	1.40	MPa	ASTM D638
Tensile Strength [1] (Break, Compression Molded)	435	psi	3.00	MPa	ASTM D638
Tensile Elongation [1]					ASTM D638
Break, Compression Molded	1200	%	1200	%	
Flexural Modulus					ASTM D790
1% Secant : Compression Molded	653	psi	4.50	MPa	
2% Secant : Compression Molded	580	psi	4.00	MPa	
Elastomers	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tear Strength [2]	145	lbf/in	25.4	kN/m	ASTM D624
Hardness	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Durometer Hardness					ASTM D2240
Shore A, 1 sec, Compression Molded	54		54		
Shore D, 1 sec, Compression Molded	11		11		
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Glass Transition Temperature	-72.4	°F	-58.0	°C	Dow Method
Melting Temperature (DSC) [3]	100	°F	38.0	°C	Dow Method
Peak Crystallization Temperature (DSC)	68.0	°F	20.0	°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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