

# ENGAGE™ 8842

Polyolefin Elastomer

The Dow Chemical Company

## Message:

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

General Information			
Forms	Pellets		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.857	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 121°C)	25	MU	ASTM D1646
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Compression Molded	54		
Shore D, 1 sec, Compression Molded	11		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus - 100% Secant <sup>1</sup> (Compression Molded)	1.40	MPa	ASTM D638
Tensile Strength <sup>2</sup> (Break, Compression Molded)	3.00	MPa	ASTM D638
Tensile Elongation <sup>3</sup> (Break, Compression Molded)	1200	%	ASTM D638
Flexural Modulus			ASTM D790
1% Secant : Compression Molded	4.50	MPa	
2% Secant : Compression Molded	4.00	MPa	
Elastomers	Nominal Value	Unit	Test Method
Tear Strength <sup>4</sup>	25.4	kN/m	ASTM D624
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-58.0	°C	Internal Method
Melting Temperature (DSC) <sup>5</sup>	38.0	°C	Internal Method
Peak Crystallization Temperature (DSC)	20.0	°C	Internal Method
NOTE			

1.	510 mm/min
2.	510 mm/min
3.	510 mm/min
4.	Die C
5.	10°C/min

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