

# ENGAGE™ 7457

Polyolefin Elastomer

The Dow Chemical Company

## Message:

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

General Information			
Forms	Particle		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.862	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	3.6	g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 121°C)	9	MU	ASTM D1646
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, Molded	50		ASTM D2240
Shore D, Molded	12		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus - 100% Secant <sup>1</sup> (Compression Molded)	1.31	MPa	ASTM D638
Tensile Strength <sup>2</sup> (Break, Compression Molded)	1.79	MPa	ASTM D638
Tensile Elongation <sup>3</sup> (Break, Compression Molded)	> 600	%	ASTM D638
Flexural Modulus			ASTM D790
1% secant: Molding	4.14	MPa	ASTM D790
2% secant: Molding	4.69	MPa	ASTM D790
Elastomers	Nominal Value	Unit	Test Method
Tear Strength <sup>4</sup>	19.3	kN/m	ASTM D624
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-56.1	°C	Internal method
Melting Temperature (DSC) <sup>5</sup>	40.0	°C	Internal method
NOTE			
1.	510 mm/min		
2.	510 mm/min		

3.	510 mm/min
4.	C mould
5.	10°C/min

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