

# ENGAGE™ 8157

Polyolefin Elastomer

The Dow Chemical Company

## Message:

ENGAGE™8157 polyolefin elastomer is an ethylene-octene copolymer with excellent flow properties. After blending with polypropylene (PP) and polyethylene (PE), the product has particularly excellent impact resistance and is widely used in TPO applications requiring excellent low-temperature impact resistance.

ENGAGE 8157 has high filler content and excellent peroxide curing performance. After being cured by peroxide, silane and irradiation, the product has excellent thermal aging properties, compression deformation and weather resistance, and may be used in the manufacture of high-performance electrical insulation products.

Main features:

pellets

Excellent flow characteristics

The impact resistance of polypropylene and polyethylene can be improved after addition

high filler addition

Peroxide, silane and irradiation can be used for curing

Excellent thermal aging performance, compression deformation and weather resistance after curing

Added talcum powder (untreated, 1 µm)

Application field:

general purpose thermoplastic elastomer

thermoplastic polyolefin (TPO)

Wires and cables

Impact modification

General Information			
Forms	Particle		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.868	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.50	g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 121°C)	33	MU	ASTM D1646
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 second, molded	70		ASTM D2240
Shore D, 1 second, molded	20		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus - 100% Secant <sup>1</sup> (Compression Molded)	2.60	MPa	ASTM D638
Tensile Strength <sup>2</sup> (Break, Compression Molded)	9.50	MPa	ASTM D638
Tensile Elongation <sup>3</sup> (Break, Compression Molded)	810	%	ASTM D638
Flexural Modulus			ASTM D790
1% secant: Molding	15.2	MPa	ASTM D790
2% secant: Molding	14.4	MPa	ASTM D790
Elastomers	Nominal Value	Unit	Test Method
Tear Strength <sup>4</sup>	37.3	kN/m	ASTM D624

Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-52.0	°C	Internal method
Vicat Softening Temperature	46.0	°C	ASTM D1525
Melting Temperature (DSC) <sup>5</sup>	55.0	°C	Internal method
Peak Crystallization Temperature (DSC)	42.0	°C	Internal method

#### Additional Information

对无滑石粉产品测量的属性.

#### NOTE

- |    |            |
|----|------------|
| 1. | 510 mm/min |
| 2. | 510 mm/min |
| 3. | 510 mm/min |
| 4. | C mould    |
| 5. | 10°C/min   |

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