

# ENGAGE™ 8100

## Polyolefin Elastomer

The Dow Chemical Company

### Message:

ENGAGE™ 8100 Polyolefin Elastomer is an ethylene-octene copolymer that has excellent flow characteristics and performs well in a wide range of general purpose thermoplastic elastomer applications.

ENGAGE 8100 provides superb impact properties in blends with polypropylene (PP) and polyethylene (PE). ENGAGE 8100 provides high filler loading capability and outstanding peroxide cure capability. When cross-linked by peroxide, silane, or irradiation, it gives exceptional heat aging, compression set, and weather resistance properties, and may be used to produce high performance electrical insulation.

#### Main Characteristics:

Pellet form

Excellent flow characteristics

Improved impact in polypropylene and polyethylene

High filler loading

Peroxide, silane, and radiation curable

Exceptional heat aging, compression set, and weather resistance when cured

#### Applications:

General purpose thermoplastic elastomers

Wire and cable

Impact modification

General Information			
Forms	Pellets		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.870	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)	24	MU	ASTM D1646
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Compression Molded	73		
Shore D, 1 sec, Compression Molded	22		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus - 100% Secant <sup>1</sup> (Compression Molded)	2.90	MPa	ASTM D638
Tensile Strength <sup>2</sup> (Break, Compression Molded)	9.76	MPa	ASTM D638
Tensile Elongation <sup>3</sup> (Break, Compression Molded)	810	%	ASTM D638
Flexural Modulus			ASTM D790
1% Secant : Compression Molded	14.3	MPa	
2% Secant : Compression Molded	13.1	MPa	
Elastomers	Nominal Value	Unit	Test Method
Tear Strength <sup>4</sup>	40.0	kN/m	ASTM D624
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-52.0	°C	Internal Method

Vicat Softening Temperature	45.0	°C	ASTM D1525
Melting Temperature (DSC) <sup>5</sup>	60.0	°C	Internal Method
Peak Crystallization Temperature (DSC)	45.0	°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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