



# ENGAGE™ 8187

## Polyolefin Elastomer

### Overview

ENGAGE 8187 Polyolefin Elastomer is a lower density, high performance ethylene-octene copolymer that has excellent flow characteristics and provides superb impact properties in blends with polypropylene (PP) and polyethylene (PE). It is widely used in TPO applications where excellent flow temperature impact properties are desired.

ENGAGE 8187 also provides high filler loading capability and excellent electrical properties. When cross-linked by peroxide, silane, or irradiation, it gives exceptional heat aging, compression set, and weather resistance properties.

Complies with:

- EU, No 10/2011
- U.S. FDA 21 CFR 177.1520(c) 3.2c

Consult the regulations for complete details.

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
- Talc dusted (untreated, 1 µm)

Applications:

- General purpose thermoplastic elastomers
- Impact modification
- Thermoplastic olefins (TPO)
- Wire and cable

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.863 g/cm <sup>3</sup>	0.863 g/cm <sup>3</sup>	ASTM D792
Melt Index (190°C/2.16 kg)	0.50 g/10 min	0.50 g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 250°F (121°C))	37 MU	37 MU	ASTM D1646
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength <sup>1</sup>			ASTM D638
Break, Compression Molded	914 psi	6.30 MPa	
100% Strain, Compression Molded	276 psi	1.90 MPa	
Tensile Elongation <sup>1</sup>			ASTM D638
Break, Compression Molded	910 %	910 %	
Flexural Modulus			ASTM D790
1% Secant : Compression Molded	1230 psi	8.50 MPa	
2% Secant : Compression Molded	1120 psi	7.70 MPa	
Elastomers	Nominal Value (English)	Nominal Value (SI)	Test Method
Tear Strength <sup>2</sup>	183 lbf/in	32.0 kN/m	ASTM D624
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Compression Molded	63	63	
Shore D, 1 sec, Compression Molded	16	16	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Glass Transition Temperature	-67.0 °F	-55.0 °C	Dow Method
Vicat Softening Temperature	106 °F	41.0 °C	ASTM D1525
Melting Temperature (DSC) <sup>3</sup>	117 °F	47.0 °C	Dow Method

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Peak Crystallization Temperature (DSC)	89.6 °F	32.0 °C	Dow Method

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**Additional Information**

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Properties measured on product without talc dusting.

**Notes**

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

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<sup>1</sup> 20 in/min (510 mm/min)

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<sup>2</sup> Die C

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<sup>3</sup> 10°C/min

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