



ENGAGE 8180

Polyolefin Elastomer

ENGAGE™ 8180 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 8180 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.

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
- Impact modification
- Thermoplastic olefins (TPO)
- Wire and cable

Properties⁽¹⁾

Typical Physical	Test Method	Value
Melt Index, 190°C/2.16 kg, dg/min	ASTM D 1238	0.5
Density, g/cm ³	ASTM D 792	0.863
Mooney Viscosity, ML 1 + 4 @ 121°C	ASTM D 1646	37
Typical Molded⁽²⁾		
Ultimate Tensile Strength, MPa	ASTM D 638 ⁽³⁾	6.3
Ultimate Tensile Elongation, %	ASTM D 638 ⁽³⁾	910
100% Modulus, MPa	ASTM D 638 ⁽³⁾	1.9
Hardness	ASTM D 2240	
Shore A		63
Shore D		16
Flexural Modulus, MPa	ASTM D 790	
1% Secant		8.5
2% Secant		7.7
Tear Strength, Type C, kN/m	ASTM D 624	32.0
Typical Thermal		
Vicat Softening Point, °C	ASTM D 1525	41
DSC Melting Point, 10°C/min rate, °C	Dow Method	47
Glass Transition Temperature, °C	Dow Method	-55
Tc Peak, °C	Dow Method	32

(1) These are typical properties only and are not to be regarded as sales specifications.

(2) Compression molded

(3) 508 mm/min

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