

Technical Information



ENGAGE™ 8450 REN Polyolefin Elastomer

Polyolefin Elastomer

Overview

ENGAGE™ 8450 REN Polyolefin Elastomer is an ethylene-octene copolymer that performs well in a wide range of thermoplastic elastomer applications. It has excellent compatibility with other polyolefins, allowing for efficient blending and coextrusion.

ENGAGE™ 8450 REN provides excellent flow properties and is efficiently cross-linked by peroxide, silane, or irradiation. When cross-linked, it gives exceptional heat aging, compression set, and weather resistance properties.

Main Characteristics:

- Pellet form
- Excellent flow characteristics
- Excellent compatibility with other olefins
- Peroxide, silane, and radiation curable
- Exceptional heat aging, compression set, and weather resistance when cured

Applications:

- General purpose thermoplastic elastomers

Complies with:

- Europe Commission Regulation (EU) No 10/2011 (See NOTES)
- U.S. FDA 21 CFR 177.1520(c) 3.2c
- ISCC PLUS certification for renewable-based plastics

Consult the regulations for complete details

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.902 g/cm³	0.902 g/cm³	ASTM D792
Melt Index (190°C/2.16 kg)	3.0 g/10 min	3.0 g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 250°F (121°C))	10 MU	10 MU	ASTM D1646
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus - 100% Secant ¹ (Compression Molded)	1060 psi	7.30 MPa	ASTM D638
Tensile Strength ¹ (Break, Compression Molded)	3250 psi	22.4 MPa	ASTM D638
Tensile Elongation ¹ Break, Compression Molded	750 %	750 %	ASTM D638
Flexural Modulus 1% Secant : Compression Molded	11100 psi	76.3 MPa	ASTM D790
2% Secant : Compression Molded	11000 psi	75.6 MPa	
Elastomers	Nominal Value (English)	Nominal Value (SI)	Test Method
Tear Strength ²	515 lbf/in	90.2 kN/m	ASTM D624
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness			ASTM D2240
Shore A, 1 sec, Compression Molded	90	90	
Shore D, 1 sec, Compression Molded	41	41	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Glass Transition Temperature	-25.6 °F	-32.0 °C	Dow Method
Vicat Softening Temperature	183 °F	84.0 °C	ASTM D1525
Melting Temperature (DSC) ³	207 °F	97.0 °C	Dow Method
Peak Crystallization Temperature (DSC)	176 °F	80.0 °C	Dow Method



Notes

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

¹ 20 in/min (510 mm/min)

² Die C

³ 10°C/min



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PETROMALL INDUSTRY & TRADING CO

Additional Information

North America

U.S. & Canada:

1-800-441-4369

1-989-832-1426

Mexico:

+1-800-441-4369

Latin America

Argentina:

+54-11-4319-0100

Brazil:

+55-11-5188-9000

Colombia:

+57-1-219-6000

Mexico:

+52-55-5201-4700

Europe/Middle East

+800-3694-6367

+31-11567-2626

Italy:

+800-783-825

South Africa

+800-99-5078

Asia Pacific

+800-7776-7776

+603-7965-5392

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petromall.net



info@petromall.ps



+970 599 2020 64



Hebron - Palestine

فلسطين - الخليل

+972 2 2233840

