



ENGAGE™ HM 7289

Polyolefin Elastomer

Overview

- High elasticity with good elastic recovery
- High melt strength
- Good impact strength
- Good flow characteristics

ENGAGE™ HM 7289 Polyolefin Elastomer Resin is a unique olefinic composition for improved processability and material handling. This product is produced via gas phase polymerization from Dow. This is an ethylene-butene copolymer exhibiting high flexibility, elasticity, and high melt strength for film and extruded sheet applications.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.891 g/cm ³	0.891 g/cm ³	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, 302°F (150°C))	74 MU	74 MU	ASTM D1646
Total Crystallinity - %	27.5	27.5	Dow Method
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus - 100% Secant ¹ (Compression Molded)	406 psi	2.80 MPa	ASTM D638
Tensile Strength ¹ (Break, Compression Molded)	537 psi	3.70 MPa	ASTM D638
Tensile Elongation ¹ Break, Compression Molded	200 %	200 %	ASTM D638
Flexural Modulus			ASTM D790
1% Secant : Compression Molded	7120 psi	49.1 MPa	
2% Secant : Compression Molded	6310 psi	43.5 MPa	
Elastomers	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength ^{2, 3}			ASTM D412
Across Flow : Break, 0.0394 in (1.00 mm)	2050 psi	14.1 MPa	
Flow : Break, 0.0394 in (1.00 mm)	2990 psi	20.6 MPa	
Tensile Elongation ^{2, 3}			ASTM D412
Across Flow : Break, 0.0394 in (1.00 mm)	650 %	650 %	
Flow : Break, 0.0394 in (1.00 mm)	670 %	670 %	
Tear Strength ²			ASTM D624
-- ⁴	323 lbf/in	56.6 kN/m	
Across Flow : 0.0394 in (1.00 mm) ³	371 lbf/in	65.0 kN/m	
Flow : 0.0394 in (1.00 mm) ³	388 lbf/in	68.0 kN/m	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness			ASTM D2240
0.0394 in (1.00 mm), Extruded ³	88	88	
Shore A, Compression Molded	88	88	
Shore D, Compression Molded	31	31	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Glass Transition Temperature	-62.0 °F	-52.2 °C	Dow Method
Vicat Softening Temperature	127 °F	53.0 °C	ASTM D1525
Melting Temperature (DSC) ⁵	210 °F	98.9 °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 Extruded sheet

⁴ Compression Molded

⁵ 10°C/min, Dow method, complete protocols available upon request.

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