



Developmental ENR 7086.01 Polyolefin Elastomer

Overview ENR™ 7086.01 Ethylene-Butene Copolymer is a revolutionary copolymer with a broader molecular weight distribution and much higher levels of long chain branching than other commercially available polyolefin elastomers. It is ideally suited for use alone or as an additive to enhance processing in blow molding, extrusion, and thermoforming applications where high levels of shear thinning and high melt strength may be required.

Main Characteristics:

- Pellet form
- Broad molecular weight distribution
- High melt strength
- Enhanced processability

Applications:

- Polymer modification
- Blow molding
- Thermoforming
- Reduced gloss TPOs
- Wire and cable
- Impact modification

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.901 g/cm ³	0.901 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, 250°F (121°C))	28 MU	28 MU	ASTM D1646
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			ASTM D638 ¹
Break, Compression Molded	3380 psi	23.3 MPa	
100% Strain, Compression Molded	1160 psi	8.00 MPa	
Tensile Elongation			ASTM D638 ¹
Break, Compression Molded	740 %	740 %	
Flexural Modulus			ASTM D790
1% Secant: Compression Molded	11300 psi	77.8 MPa	
2% Secant: Compression Molded	10900 psi	75.3 MPa	
Elastomers	Nominal Value (English)	Nominal Value (SI)	Test Method
Tear Strength	526 lbf/in	92.2 kN/m	ASTM D624 ²
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness			ASTM D2240
Shore A, Compression Molded	90	90	
Shore D, Compression Molded	41	41	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Glass Transition Temperature (DSC)	-27.4 °F	-33.0 °C	Dow Method
Vicat Softening Temperature	183 °F	84.0 °C	ASTM D1525
Melting Temperature (DSC)	203 °F	95.0 °C	Dow Method ³
Peak Crystallization Temperature (DSC)	178 °F	81.0 °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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