ENGAGE™ 8003 EL

Polyolefin Elastomer

The Dow Chemical Company

Message:

ENGAGE™ 8003 EL Polyolefin Elastomer is an ethylene-octene copolymer that has excellent flow characteristics and performs well in a wide variety of Wire & Cable elastomer applications. ENGAGE 8003 EL provides superb impact properties and also provides high filler loading capability and outstanding peroxide cure capability. When cross-linked by peroxide, silane, or irradiation, it gives exceptional heat aging, compression set, and weather resistance properties, and may be used to produce high performance electrical insulation and jacketing.
Main Characteristics:
Pellet form
Excellent flow characteristics
High filler loading
Peroxide, silane, and radiation curable
Exceptional heat aging, compression set, and weather resistance when cured
Applications:
Wire and cable
Complies with:
EU, No 10/2011
Japan Hygienic Olefin and Styrene Plastics Association
NSF/ANSI Standard 51-Food Equipment Materials
U.S. FDA 21 CFR 177.1520(c)3.2c

General Information			
Uses	Blending Building Wire Insulation Building Wire Jacketing Compounding Low Voltage Insulation Wire & Cable Applications		
Agency Ratings	EU No 10/2011 FDA 21 CFR 177.1520(c) 3.2c JHOSPA Unspecified Rating NSF Unspecified Rating		
Forms	Pellets		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	0.885	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 121°C)	22	MU	ASTM D1646
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, Compression Molded	84		
Shore D, Compression Molded	31		
Mechanical	**Nominal Value**	**Unit**	**Test Method**

Tensile Modulus - 100% Secant [1] (Compression Molded)	4.80	MPa	ASTM D638
Tensile Strength [2] (Break, Compression Molded)	18.2	MPa	ASTM D638
Tensile Elongation [3] (Break, Compression Molded)	640	%	ASTM D638
Flexural Modulus			ASTM D790
1% Secant : Compression Molded	33.7	MPa	
2% Secant : Compression Molded	32.6	MPa	
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tear Strength [4]	61.0	kN/m	ASTM D624
Thermal	**Nominal Value**	**Unit**	**Test Method**
Glass Transition Temperature	-46.0	°C	Internal Method
Vicat Softening Temperature	63.0	°C	ASTM D1525
Melting Temperature (DSC) [5]	77.0	°C	Internal Method
Peak Crystallization Temperature (DSC)	60.0	°C	Internal Method
NOTE			
1.	510 mm/min		
2.	510 mm/min		
3.	510 mm/min		
4.	Die C		
5.	10°C/min		

Recommended distributors for this material

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