Technical Data Sheet

ENGAGE™ PV 8688 Polyolefin Elastomer

Overview

ENGAGE™ PV 8688 Polyolefin Elastomer is an ethylene-butene copolymer that offers excellent performance in photovoltaic module encapsulant applications.

ENGAGE™ PV 8688 Polyolefin Elastomer provides high transmittance, excellent electrical properties, and exceptional anti-damp heat aging, anti-UV aging, and weather resistance properties.

Sustainability Attribute:

Resoursa™ Advancing resource efficiency with Dow

Main Characteristics:

- Pellet form
- High volume resistivity
- High transmittance
- Low water vapor transmission rate
- Exceptional anti-damp heat aging, anti-UV aging, and weather resistance when cured

Applications:

- Photovoltaic module encapsulant

Physical Properties

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method[1]
Density	0.873	g/cm³	0.873	g/cm³	ASTM D792
Melt Index (190°C/2.16 kg)	14	g/10 min	14	g/10 min	ASTM D1238
Mechanical					
Tensile Modulus — 100% Secant[2] (Compression Molded)	235	psi	1.62	MPa	ASTM D638
Tensile Strength[2] (Break, Compression Molded)	627	psi	4.32	MPa	ASTM D638
Tensile Elongation[2] Break, Compression Molded	1300	%	1300	%	ASTM D638

1. ASTM: American Society for Testing and Materials
2. 20 in/min (510 mm/min)

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

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Physical Properties (Cont.)

Mechanical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Flexural Modulus					ASTM D790
1% Secant, Compression Molded	899	psi	6.20	MPa	
2% Secant, Compression Molded	856	psi	5.90	MPa	
Elastomers					
Tear Strength[3]	158	lbf/in	27.6	kN/m	ASTM D624
Hardness					
Durometer Hardness					ASTM D2240
Shore A, 1 sec, Compression Molded	66		66		
Shore D, 1 sec, Compression Molded	17		17		
Thermal					
Glass Transition Temperature	-45.4	°F	-43.0	°C	Dow Method
Vicat Softening Temperature	98.2	°F	36.8	°C	ASTM D1525
Melting Temperature (DSC)[4]	153	°F	67.0	°C	Dow Method
Peak Crystallization Temperature (DSC)	118	°F	48.0	°C	Dow Method
Electrical					
Volume Resistivity	> 1.0E+15	ohms·cm	> 1.0E+15	ohms·cm	Dow Method

3. Die C
4. 10°C/min

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Medical Applications Policy (Cont.)

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