



Technical Data Sheet

ENGAGE™ PV 8669 Polyolefin Elastomer

Overview

ENGAGE™ PV 8669 Polyolefin Elastomer is an ethylene-octene copolymer that offers excellent performance in photovoltaic module encapsulant applications.

ENGAGE™ PV 8669 Polyolefin Elastomer provides high transmittance, excellent electrical properties, and exceptional anti-damp heat aging, anti-UV aging, and weather resistance properties.

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

- PV module encapsulant

Typical Properties

Physical	Nominal Value (English)	Unit (English)	Nominal Value (SI)	Unit (SI)	Test Method ¹
Density	0.873	g/cm ³	0.873	g/cm ³	ASTM D792
Melt Index (190°C/2.16 kg)	14	g/10 min	14	g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 250°F (121°C))	3	MU	3	MU	ASTM D1646
Mechanical					
Tensile Modulus – 100% Secant (Compression Molded) ²	413	psi	2.85	MPa	ASTM D638
Tensile Strength ³ (Break, Compression Molded)	863	psi	5.95	MPa	ASTM D638
Tensile Elongation ³ Break, Compression Molded	> 1100	%	> 1100	%	ASTM D638
Flexural Modulus					ASTM D790
1% Secant: Compression Molded	6630	psi	45.7	MPa	
2% Secant: Compression Molded	4890	psi	33.7	MPa	

1. ASTM: American Society for Testing and Materials
2. 510 mm/min
3. 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.



Typical Properties (Cont.)

Elastomers	Nominal Value (English)	Unit (English)	Nominal Value (SI)	Unit (SI)	Test Method
Tear Strength ⁴	230	lbf/in	40.2	kN/m	ASTM D624
Hardness					
Durometer Hardness					ASTM D2240
Shore A, 1 sec, Compression Molded	68		68		
Shore D, 1 sec, Compression Molded	13		13		
Thermal					
Glass Transition Temperature	-63.4	°F	-53.0	°C	Dow Method
Vicat Softening Temperature	104	°F	40.0	°C	ASTM D1525
Melting Temperature (DSC) ⁵	169	°F	76.0	°C	Dow Method
Peak Crystallization Temperature	126	°F	52	°C	Dow Method
Electrical					
Volume Resistivity	> 1.0E+15	ohms-cm	> 1.0E+15	ohms-cm	Dow Method

4. Die C
5. 10°C/min

