



Technical Data Sheet

ENGAGE™ PV 8680 Polyolefin Elastomer

Overview

ENGAGE™ PV 8680 Polyolefin Elastomer is an ethylene-butene copolymer that offers excellent performance in photovoltaic module encapsulant applications.

ENGAGE™ PV 8680 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:

- Photovoltaic module encapsulant

Sustainability Attribute:



Physical Properties

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Density	0.872	g/cm ³	0.872	g/cm ³	ASTM D792
Melt Index (190°C/2.16 kg)	5.0	g/10 min	5.0	g/10 min	ASTM D1238
Mechanical					
Tensile Modulus - 100% Secant ² (Compression Molded)	239	psi	1.65	MPa	ASTM D638
Tensile Strength ² (Break, Compression Molded)	772	psi	5.32	MPa	ASTM D638
Tensile Elongation ² Break, Compression Molded	1300	%	1300	%	ASTM D638



Physical Properties (Cont.)

Mechanical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Flexural Modulus					ASTM D790
1% Secant : Compression Molded	972	psi	6.70	MPa	
2% Secant : Compression Molded	943	psi	6.50	MPa	
Elastomers					
Tear Strength ³	158	lbf/in	27.6	kN/m	ASTM D624
Hardness					
Durometer Hardness					ASTM D2240
Shore A, Compression Molded	67		67		
Shore D, Compression Molded	17		17		
Thermal					
Glass Transition Temperature	-50.8	°F	-46.0	°C	Dow Method
Vicat Softening Temperature	102	°F	39.0	°C	ASTM D1525
Melting Temperature (DSC) ⁴	149	°F	65.0	°C	Dow Method
Peak Crystallization Temperature (DSC)	117	°F	47.0	°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

