

Arnitel® EM460
Envalior - Thermoplastic Copolyester Elastomer
General Information
Product Description

Injection Molding, Film Extrusion, Food Contact Quality

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	• North America
	• Asia Pacific	• Latin America	
Features	• Food Contact Acceptable		
Processing Method	• Extrusion	• Film Extrusion	• Injection Molding
Resin ID	• TPC-ET		

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.15	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	46	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.5	%	
Flow	1.3	%	
Water Absorption (Saturation, 73°F)	0.70	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.30	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	13100	psi	ISO 527-1
Tensile Stress			ISO 527-2
Break	3340	psi	
Across Flow : Break	2900	psi	
Tensile Stress			ISO 527-2
5.0% Strain	653	psi	
10% Strain	1020	psi	
50% Strain	1410	psi	
100% Strain	1330	psi	
300% Strain	1710	psi	
Tensile Strain			ISO 527-2
Break	> 300	%	
Across Flow : Break	860	%	
Nominal Tensile Strain at Break	900	%	ISO 527-2
Flexural Modulus	14200	psi	ISO 178
Elastomers	Nominal Value	Unit	Test Method
Tear Strength ²			ISO 34-1
Across Flow	697	lbf/in	
Flow	680	lbf/in	
Compression Set (158°F)	50	%	ISO 815
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	No Break		
73°F	No Break		
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	No Break		
73°F	No Break		



Notched Izod Impact Strength		ISO 180/1A
-4°F	No Break	
73°F	No Break	
Tensile Impact Strength ³ (73°F)	89.0 ft·lb/in ²	ISO 8256/1
Hardness	Nominal Value Unit	Test Method
Shore Hardness (Shore D, 3 sec)	40	ISO 868
Thermal	Nominal Value Unit	Test Method
Vicat Softening Temperature	122 °F	ISO 306/B50
Melting Temperature ⁴	372 °F	ISO 11357-3
CLTE - Flow	8.9E-5 in/in/°F	ISO 11359-2
CLTE - Transverse	8.9E-5 in/in/°F	ISO 11359-2
RTI Elec (0.06 in)	122 °F	UL 746B
RTI Imp (0.06 in)	122 °F	UL 746B
RTI Str (0.06 in)	122 °F	UL 746B
Effective Thermal Diffusivity	9.28E-5 in ² /s	
Electrical	Nominal Value Unit	Test Method
Volume Resistivity	1.0E+11 ohms·m	IEC 62631-3-1
Electric Strength	510 V/mil	IEC 60243-1
Relative Permittivity (1 MHz)	4.40	IEC 62631-2-1
Dissipation Factor (1 MHz)	0.035	IEC 62631-2-1
Comparative Tracking Index	600 V	IEC 60112
Flammability	Nominal Value Unit	Test Method
Flame Rating (0.06 in)	HB	UL 94
Flammability Classification (0.06 in)	HB	IEC 60695-11-10, -20
Fill Analysis	Nominal Value Unit	Test Method
Melt Density	0.928 g/cm ³	
Melt Specific Heat	0.430 Btu/lb/°F	
Melt Thermal Conductivity	0.69 Btu·in/hr/ft ² /°F	ASTM E1461

Notes

¹ Typical properties: these are not to be construed as specifications.

² Method B, Angle

³ notched

⁴ 10°C/min

