

Arnitel® EM400
Envalior - Thermoplastic Copolyester Elastomer
General Information
Product Description

Injection Molding, Film Extrusion, Food Contact Quality

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North 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	1.11	g/cm ³	ISO 1183
Apparent (Bulk) Density	0.69	g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	33	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.5	%	
Flow	1.5	%	
Water Absorption (Saturation, 73°F)	0.75	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.30	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	5800	psi	ISO 527-1
Tensile Stress			ISO 527-2
Break	2900	psi	
Across Flow : Break	2760	psi	
Tensile Stress			ISO 527-2
5.0% Strain	334	psi	
10% Strain	551	psi	
50% Strain	986	psi	
100% Strain	1090	psi	
Tensile Strain			ISO 527-2
Break	> 300	%	
Across Flow : Break	960	%	
Nominal Tensile Strain at Break	830	%	ISO 527-2
Flexural Modulus	7250	psi	ISO 178
Elastomers	Nominal Value	Unit	Test Method
Tear Strength ²			ISO 34-1
Across Flow	594	lbf/in	
Flow	605	lbf/in	
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)	104 ft·lb/in ²	ISO 8256/1
Hardness	Nominal Value Unit	Test Method
Shore Hardness (Shore D, 3 sec)	33	ISO 868
Thermal	Nominal Value Unit	Test Method
Glass Transition Temperature ⁴	-108 °F	ISO 11357-2
Melting Temperature ⁴	383 °F	ISO 11357-3
CLTE - Flow	1.2E-4 in/in/°F	ISO 11359-2
CLTE - Transverse	1.2E-4 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	1.02E-4 in ² /s	
Electrical	Nominal Value Unit	Test Method
Volume Resistivity	1.0E+13 ohms·m	IEC 62631-3-1
Electric Strength	510 V/mil	IEC 60243-1
Relative Permittivity		IEC 62631-2-1
100 Hz	4.10	
1 MHz	4.00	
Dissipation Factor		IEC 62631-2-1
100 Hz	1.0E-3	
1 MHz	0.017	
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	0.896 g/cm ³	
Melt Specific Heat	0.406 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

