

Arnitel® EL740
Envalior - Thermoplastic Copolyester Elastomer
General Information
Product Description

Injection Molding, 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	• Injection Molding
Resin ID	• TPC-ET

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.29	g/cm ³	ISO 1183
Apparent (Bulk) Density	0.83	g/cm ³	ISO 60
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	18	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	2.0	%	
Flow	1.8	%	
Water Absorption (Saturation, 73°F)	0.60	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.15	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	145000	psi	ISO 527-1
Tensile Stress			ISO 527-2
Break	5950	psi	
Across Flow : Break	5080	psi	
Tensile Stress			ISO 527-2
5.0% Strain	4640	psi	
10% Strain	4930	psi	
50% Strain	3630	psi	
100% Strain	3770	psi	
Tensile Strain			ISO 527-2
Break	> 300	%	
Across Flow : Break	400	%	
Nominal Tensile Strain at Break	350	%	ISO 527-2
Flexural Modulus	152000	psi	ISO 178
Elastomers	Nominal Value	Unit	Test Method
Tear Strength ²			ISO 34-1
Across Flow	1380	lbf/in	
Flow	1380	lbf/in	
Compression Set (158°F)	35	%	ISO 815
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	2.9	ft·lb/in ²	
73°F	4.8	ft·lb/in ²	
Charpy Unnotched Impact Strength (73°F)	No Break		ISO 179/1eU
Notched Izod Impact Strength (73°F)	4.3	ft·lb/in ²	ISO 180/1A
Hardness	Nominal Value	Unit	Test Method



Shore Hardness (Shore D, 3 sec)	70	ISO 868
Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	248 °F	ISO 75-2/B
Vicat Softening Temperature	320 °F	ISO 306/B50
Melting Temperature ³	430 °F	ISO 11357-3
CLTE - Flow	9.2E-5 in/in/°F	ISO 11359-2
CLTE - Transverse	9.2E-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	8.59E-5 in ² /s	
Electrical	Nominal Value Unit	Test Method
Volume Resistivity	1.0E+13 ohms·m	IEC 62631-3-1
Electric Strength	580 V/mil	IEC 60243-1
Relative Permittivity		IEC 62631-2-1
100 Hz	3.70	
1 MHz	3.30	
Dissipation Factor (1 MHz)	0.030	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
Glow Wire Ignition Temperature (0.04 in)	1560 °F	IEC 60695-2-13
Fill Analysis	Nominal Value Unit	Test Method
Melt Density	0.950 g/cm ³	
Melt Specific Heat	0.454 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 10°C/min

