Arnitel® Care L274E

Envalior - *Thermoplastic Copolyester Elastomer*

General Information

Product Description			
Injection Molding, Food Contact Quality, Medical grade			
General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Food Contact Acceptable		
Uses	• Medical/Healthcare Applications		
Agency Ratings	• USP Class VI		
Processing Method	• Injection Molding		
Resin ID	• TPC-ET		

Properties [1]

Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.29	g/cm³	ISO 1183
Apparent (Bulk) Density	0.83	g/cm³	ISO 60
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	18	cm³/10min	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/in²	
73°F	4.8	ft·lb/in²	
Charpy Unnotched Impact Strength (73°F)	No Break		ISO 179/1eU

Notched Izod Impact Strength (73°F)	4.3	ft·lb/in²	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	in²/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/cm³	
Melt Specific Heat	0.454	Btu/lb/°F	
Melt Thermal Conductivity	0.69	Btu·in/hr/ft²/°F	ASTM E1461

Notes

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

[2] Method B, Angle

[3] 10°C/min