

Arnitel® UM551
Envalior - Thermoplastic Copolyester Elastomer
General Information
Product Description

Due to limited hydrolysis resistance, this material should only be used in dry environments.

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Processing Method	• Extrusion • Injection Molding
Resin ID	• TPC-ES

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.26	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	14	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	14	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.4	%	
Flow	1.5	%	
Water Absorption (Saturation, 73°F)	0.60	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.25	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	22900	psi	ISO 527-1
Tensile Stress (Yield)	2180	psi	ISO 527-2
Tensile Stress (Break)	5220	psi	ISO 527-2
Tensile Stress			ISO 527-2
10% Strain	1570	psi	
50% Strain	2070	psi	
100% Strain	2050	psi	
300% Strain	3050	psi	
Tensile Strain (Yield)	22	%	ISO 527-2
Tensile Strain (Break)	> 300	%	ISO 527-2
Nominal Tensile Strain at Break	• > 50 % • 660		ISO 527-2
Elastomers	Nominal Value	Unit	Test Method
Tear Strength ²	942	lbf/in	ISO 34-1
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	2.9	ft-lb/in ²	
73°F	No Break		
Charpy Unnotched Impact Strength (-22°F)	2.9	ft-lb/in ²	ISO 179/1eU
Hardness	Nominal Value	Unit	Test Method
Shore Hardness			ISO 868
Shore D, 3 sec	55		
Shore D, 15 sec	55		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	176	°F	ISO 75-2/B
Vicat Softening Temperature	185	°F	ISO 306/B50
Melting Temperature ³	392	°F	ISO 11357-3



CLTE - Flow	8.9E-5 in/in/°F	ISO 11359-2
RTI Elec		UL 746B
0.030 in	320 °F	
0.12 in	320 °F	
RTI Imp		UL 746B
0.030 in	248 °F	
0.12 in	248 °F	
RTI Str		UL 746B
0.030 in	302 °F	
0.12 in	302 °F	
Electrical	Nominal Value Unit	Test Method
Comparative Tracking Index	600 V	IEC 60112
Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
0.06 in	HB	
0.12 in	HB	
Flammability Classification		IEC 60695-11-10, -20
0.030 in	HB	
0.06 in	HB	
0.12 in	HB	

Notes

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

² Method B, Angle

³ 10°C/min

