

Arnite® TV4 240 S

Envalior - Polybutylene Terephthalate

General Information

Product Description

20% Glass Fiber Reinforced, Flame Retardant

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • North America • Asia Pacific • Latin America
Filler / Reinforcement	• Glass Fiber, 20% Filler by Weight
Features	• Flame Retardant
Processing Method	• Injection Molding
Resin ID	• PBT-GF20 FR(17)

 Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.61	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	1.7	%	
Flow	0.60	%	
Water Absorption (Saturation, 73°F)	0.30	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.15	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1.23E+6	psi	ISO 527-1
Tensile Stress (Break)	16000	psi	ISO 527-2
Tensile Strain (Break)	2.5	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	4.3	ft·lb/in ²	
73°F	4.3	ft·lb/in ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	24	ft·lb/in ²	
73°F	24	ft·lb/in ²	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	428	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	410	°F	ISO 75-2/A
Melting Temperature ²	437	°F	ISO 11357-3
CLTE - Flow	2.2E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	4.4E-5	in/in/°F	ISO 11359-2
RTI Elec (0.030 in)	284	°F	UL 746B
RTI Imp (0.030 in)	266	°F	UL 746B
RTI Str (0.030 in)	284	°F	UL 746B
Effective Thermal Diffusivity	8.28E-5	in ² /s	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+13	ohms·m	IEC 62631-3-1
Electric Strength	690	V/mil	IEC 60243-1
Relative Permittivity			IEC 62631-2-1
100 Hz	3.90		
1 MHz	3.70		
Dissipation Factor			IEC 62631-2-1



100 Hz	2.0E-3	
1 MHz	0.015	
Comparative Tracking Index (CTI)	PLC 2	UL 746A
Comparative Tracking Index	250 V	IEC 60112
Flammability	Nominal Value	Unit
Flame Rating		Test Method
0.06 in	V-0	UL 94
0.12 in	V-0	
Flammability Classification		IEC 60695-11-10, -20
0.06 in	V-0	
0.12 in	V-0	
0.030 in	V-2	
Fill Analysis	Nominal Value	Unit
Melt Density	1.36	g/cm ³
Melt Specific Heat	0.447	Btu/lb/°F
Melt Thermal Conductivity	0.94	Btu·in/hr/ft ² /°F
		ASTM E1461

Notes

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

² 10°C/min

