

Arnite® TV4 260 S

 Envalior - *Polybutylene Terephthalate*

General Information

Product Description

30% Glass Fiber Reinforced, Flame Retardant

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight
Features	• Flame Retardant
Processing Method	• Injection Molding
Resin ID	• PBT-GF30 FR(17)

 Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.69	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow : 0.118 in	1.4	%	
Flow : 0.118 in	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			ISO 527-1
--	1.67E+6	psi	
-40°F	1.74E+6	psi	
212°F	798000	psi	
248°F	725000	psi	
320°F	566000	psi	
356°F	493000	psi	
Tensile Stress			ISO 527-2
Break	19600	psi	
Break, -40°F	28300	psi	
Break, 212°F	10900	psi	
Break, 248°F	9430	psi	
Break, 320°F	7980	psi	
Break, 356°F	6530	psi	
Tensile Strain			ISO 527-2
Break	2.2	%	
Break, -40°F	2.0	%	
Break, 248°F	4.0	%	
Break, 320°F	5.0	%	
Break, 356°F	5.0	%	
Flexural Modulus			ISO 178
--	1.54E+6	psi	
248°F	711000	psi	
320°F	566000	psi	
Flexural Stress			ISO 178
--	28300	psi	
248°F	14500	psi	



320°F	10900 psi	
Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength		ISO 179/1eA
-22°F	3.8 ft·lb/in ²	
73°F	3.8 ft·lb/in ²	
Charpy Unnotched Impact Strength		ISO 179/1eU
-22°F	21 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	1.9E-5 in/in/°F	ISO 11359-2
CLTE - Transverse	3.9E-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	9.49E-5 in ² /s	
Electrical	Nominal Value Unit	Test Method
Volume Resistivity	> 1.0E+13 ohms·m	IEC 62631-3-1
Electric Strength	810 V/mil	IEC 60243-1
Relative Permittivity		IEC 62631-2-1
100 Hz	4.10	
1 MHz	3.90	
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	Test Method
Flame Rating		UL 94
0.06 in	V-0	
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	
Glow Wire Flammability Index		IEC 60695-2-12
0.030 in	1760 °F	
0.06 in	1760 °F	
Glow Wire Ignition Temperature		IEC 60695-2-13
0.030 in	1340 °F	
0.06 in	1380 °F	
Oxygen Index	36 %	ISO 4589-2
Fill Analysis	Nominal Value Unit	Test Method
Melt Density	1.44 g/cm ³	
Melt Specific Heat	0.416 Btu/lb/°F	
Melt Thermal Conductivity	1.1 Btu·in/hr/ft ² /°F	ASTM E1461

Notes

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

² 10°C/min

