InStruc® FRPBTGF17

Americhem - *Polybutylene Terephthalate*

General Information

Product Description

InStruc FRPBTGF17 is a 17% glass fiber reinforced, flame retardant, Polybutylene Terephthalate (PBT). Used in injection molding, this grade has excellent chemical resistance and a UL94 V0 @ 0.04in (0.9mm) and V0 @ 0.12in (3.0mm). This material is well suited for electrical applications including connectors, relays, and bobbins. InStruc FRPBTGF17 can also be used in automotive and consumer products.

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Carbon Fiber, 17% Filler by Weight		
Features	• Filled • Good Dimensional Stability	• High Stiffness • High Strength	
Uses	• Automotive Applications • Battery Cases • Connectors • Consumer Applications	• Electrical/Electronic Applications • Engineering Parts • Household Goods • Housings	• Industrial Applications • Industrial Parts • Semiconductor Applications
Forms	• Pellets		
Processing Method	• Injection Molding		

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.46		ASTM D792
Molding Shrinkage - Flow	4.0E-3 to 9.0E-3	in/in	ASTM D955
Water Absorption (24 hr)	0.070	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	1.10E+6	psi	ASTM D638
Tensile Strength	15000	psi	ASTM D638
Tensile Elongation (Yield)	2.0 to 3.0	%	ASTM D638
Flexural Modulus	1.10E+6	psi	ASTM D790
Flexural Strength	22500	psi	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (0.125 in)	1.0	ft·lb/in	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (264 psi, Unannealed)	380	°F	ASTM D648
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.04 in	V-0		
0.12 in	V-0		

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	230	°F
Drying Time	4.0	hr
Processing (Melt) Temp	460 to 500	°F
Mold Temperature	200 to 230	°F
Back Pressure	50.0 to 100	psi
Screw Speed	40 to 70	rpm
Vent Depth	1.5E-3 to 3.0E-3	in