

Clariant PBT PBT-1100G30

Polybutylene Terephthalate

Clariant Corporation

Message:

Clariant PBT PBT-1100G30 is a polybutene terephthalate (PBT) material, which contains a 30% glass fiber reinforced material. This product is available in North America and is processed by injection molding.

The main features of Clariant PBT PBT-1100G30 are:

- flame retardant/rated flame
- high strength
- Hard
- Good dimensional stability
- Good toughness

Typical application areas include:

- engineering/industrial accessories
- Wire and cable
- House

General Information			
UL YellowCard	E103015-218197		
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Features	Good dimensional stability		
	Rigidity, high		
	High strength		
	Good chemical resistance		
	Heat resistance, high		
	Good toughness		
Uses	Electric Motor Housings		
	Engineering accessories		
	Cam		
Agency Ratings	UL 94		
Appearance	Natural color		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.53	g/cm ³	ASTM D792
Molding Shrinkage - Flow (3.18 mm)	0.50	%	ASTM D955
Water Absorption (24 hr)	0.060	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
Class m	84		ASTM D785
Class r	119		ASTM D785
Mechanical	Nominal Value	Unit	Test Method

Tensile Strength	107	MPa	ASTM D638
Tensile Elongation (Break)	3.0	%	ASTM D638
Flexural Modulus	7580	MPa	ASTM D790
Flexural Strength	183	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.18 mm)	64	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	221	°C	ASTM D648
1.8 MPa, not annealed	207	°C	ASTM D648
Melting Temperature	220 - 225	°C	
CLTE - Flow	2.7E-5	cm/cm/°C	ASTM D696
RTI Elec (0.820 mm)	75.0	°C	UL 746
RTI Imp (0.820 mm)	75.0	°C	UL 746
RTI (0.820 mm)	75.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms · cm	ASTM D257
Dielectric Strength	17	kV/mm	ASTM D149
Arc Resistance (3.18 mm)	150	sec	ASTM D495
Comparative Tracking Index (CTI) (3.18 mm)	325	V	UL 746
High Amp Arc Ignition (HAI) (0.820 mm)	120		UL 746
High Voltage Arc Tracking Rate (HVTR) (3.18 mm)	52.5	mm/min	UL 746
Hot-wire Ignition (HWI)			UL 746
0.820 mm	23	sec	UL 746
1.58 mm	90	sec	UL 746
3.18 mm	120	sec	UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.820 mm	HB		UL 94
1.59 mm	HB		UL 94
3.18 mm	HB		UL 94
6.35 mm	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.020	%	
Rear Temperature	232 - 274	°C	
Middle Temperature	232 - 274	°C	
Front Temperature	232 - 274	°C	
Processing (Melt) Temp	232 - 246	°C	
Melt Temperature (Aim)	241	°C	

Mold Temperature	65.6 - 82.2	°C
Injection Rate	Fast	
Back Pressure	0.345 - 0.689	MPa
Screw Speed	20 - 80	rpm
Cushion	3.18 - 6.35	mm

Injection instructions

Injection Pressure: Use minimum pressure to achieve 95% fill during the boost inj. pressure phase. Hold Pressure: 30% to 75% of injection pressure. Mold Temp. Target: 165°F Screw Speed Target: 50 RPM

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