

Clariant PBT PBT-1700G30

Polybutylene Terephthalate

Clariant Corporation

Message:

Clariant PBT PBT-1700G30 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-1700G30 are:

- flame retardant/rated flame
- Flame Retardant
- high strength
- Hard
- Good dimensional stability

Typical application areas include:

- Electrical/electronic applications
- Wire and cable

General Information			
UL YellowCard	E103015-218198		
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		
	Flame retardancy		
Uses	Electrical components		
Agency Ratings	UL 94		
Appearance	Natural color		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.66	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	86		ASTM D785
Class r	120		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	121	MPa	ASTM D638
Tensile Elongation (Break)	3.0	%	ASTM D638

Flexural Modulus	8960	MPa	ASTM D790
Flexural Strength	165	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.18 mm)	85	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	213	°C	ASTM D648
1.8 MPa, not annealed	199	°C	ASTM D648
Melting Temperature	220 - 225	°C	
CLTE - Flow	2.9E-5	cm/cm/°C	ASTM D696
RTI Elec (1.61 mm)	75.0	°C	UL 746
RTI Imp (1.61 mm)	75.0	°C	UL 746
RTI (1.61 mm)	75.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms · cm	ASTM D257
Dielectric Strength	19	kV/mm	ASTM D149
Arc Resistance (3.18 mm)	90.0	sec	ASTM D495
Comparative Tracking Index (CTI) (3.18 mm)	138	V	UL 746
High Amp Arc Ignition (HAI) (1.61 mm)	120		UL 746
High Voltage Arc Tracking Rate (HVTR) (3.18 mm)	150	mm/min	UL 746
Hot-wire Ignition (HWI)			UL 746
1.61 mm	45	sec	UL 746
3.18 mm	120	sec	UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.794 mm	V-0		UL 94
1.59 mm	V-0		UL 94
3.18 mm	V-0		UL 94
6.35 mm	V-0		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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