

Clariant PBT PBT-1100

Polybutylene Terephthalate

Clariant Corporation

Message:

Clariant PBT PBT-1100 is a polybutene terephthalate (PBT) material. This product is available in North America and is processed by injection molding. The main features of Clariant PBT PBT-1100 are:

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

Typical application areas include:

- Electrical/electronic applications
- Wire and cable
- Automotive Industry

General Information			
Features	Good dimensional stability		
	Rigidity, high		
	High strength		
	Good chemical resistance		
	Heat resistance, high		
	Good toughness		
	General		
Uses	Computer components		
	Parts under the hood of a car		
Agency Ratings	UL 94		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.31	g/cm ³	ASTM D792
Molding Shrinkage - Flow (3.18 mm)	1.8	%	ASTM D955
Water Absorption (24 hr)	0.080	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
Class m	76		ASTM D785
Class r	116		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	58.6	MPa	ASTM D638
Tensile Elongation (Yield)	50	%	ASTM D638
Flexural Modulus	2280	MPa	ASTM D790

Flexural Strength	75.8	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.18 mm)	53	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	154	°C	ASTM D648
1.8 MPa, not annealed	67.2	°C	ASTM D648
Melting Temperature	220 - 225	°C	
CLTE - Flow	7.2E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	16	kV/mm	ASTM D149
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.794 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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