

Clariant PBT PBT-1700

Polybutylene Terephthalate

Clariant Corporation

Message:

Clariant PBT PBT-1700 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-1700 are:

- flame retardant/rated flame
- Flame Retardant
- Impact modification
- high strength
- Hard

Typical application areas include:

- Electrical/electronic applications
- engineering/industrial accessories

General Information			
Additive	Impact modifier		
Features	Good dimensional stability		
	Impact modification		
	Rigidity, high		
	High strength		
	Good chemical resistance		
	Heat resistance, high		
	Good toughness		
	Flame retardancy		
Uses	Engineering accessories		
	Connector		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.40	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	86		ASTM D785
Class r	120		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	53.8	MPa	ASTM D638
Tensile Elongation (Yield)	45	%	ASTM D638
Flexural Modulus	2620	MPa	ASTM D790

Flexural Strength	69.6	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.18 mm)	48	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	149	°C	ASTM D648
1.8 MPa, not annealed	71.1	°C	ASTM D648
Melting Temperature	220 - 225	°C	
CLTE - Flow	9.0E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	18	kV/mm	ASTM D149
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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