

# RTP 1000 GB 20

Polybutylene Terephthalate

RTP Company

Message:

Warning: The status of this material is 'Commercial: Limited Issue'  
The data for this material has not been recently verified.  
Please contact RTP Company for current information prior to specifying this grade.  
RTP 1000 GB Series are glass bead reinforced polybutylene terephthalate, PBT. They are characterized by easy flow, improved stability and warpage control.

General Information			
Filler / Reinforcement	Glass beads, 20% filler by weight		
Features	Good dimensional stability		
	Low warpage		
	High strength		
	Good electrical performance		
	Good liquidity		
	Thermal stability, good		
Uses	Application in Automobile Field		
RoHS Compliance	Contact manufacturer		
Appearance	Black		
	Natural color		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.45	g/cm <sup>3</sup>	ASTM D792
Molding Shrinkage - Flow (3.18 mm)	2.0	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.080	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	117		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3520	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield	48.3	MPa	ASTM D638
--	48.3	MPa	ASTM D638
Tensile Elongation (Break)	3.0	%	ASTM D638
Flexural Modulus	3450	MPa	ASTM D790
Flexural Strength			ASTM D790
--	82.7	MPa	ASTM D790

Yield	82.7	MPa	ASTM D790
Compressive Strength	51.0	MPa	ASTM D695
<b>Impact</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Notched Izod Impact (3.18 mm)	43	J/m	ASTM D256
Unnotched Izod Impact (3.18 mm)	270	J/m	ASTM D4812
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	177	°C	ASTM D648
1.8 MPa, not annealed	110	°C	ASTM D648
CLTE - Flow	7.6E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.17	W/m/K	ASTM C177
<b>Electrical</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	20	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	3.60		ASTM D150
Dissipation Factor (1 MHz)	0.014		ASTM D150
Arc Resistance (1.59 mm)	140	sec	ASTM D495
<b>Flammability</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Flame Rating (1.59 mm)	HB		UL 94
<b>Additional Information</b>			
The value listed as Flammability, UL 94, was tested in accordance with RTP test standards.Mold Shrinkage, Linear-Flow, ASTM D-955, 0.25in.: 22mil/in.			
<b>Injection</b>	<b>Nominal Value</b>	<b>Unit</b>	
Drying Temperature	121	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.030	%	
Suggested Max Regrind	20	%	
Rear Temperature	232 - 271	°C	
Middle Temperature	232 - 271	°C	
Front Temperature	232 - 271	°C	
Mold Temperature	37.8 - 121	°C	
Injection Pressure	68.9 - 103	MPa	
Back Pressure	0.172 - 0.517	MPa	
Screw Speed	60 - 90	rpm	
Clamp Tonnage	6.9 - 11	kN/cm <sup>2</sup>	

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