

RTP 1005 Z

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 Z Series materials have an outstanding balance of properties including good strengths, electrical properties, thermal properties and low water absorption. This can be a very cost effective series of materials formulated with FDA compliant ingredients.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Features	High strength		
	Low or no water absorption		
Agency Ratings	FDA not rated		
RoHS Compliance	Contact manufacturer		
Appearance	Black		
	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)	0.30	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.070	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	120		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	9650	MPa	ASTM D638
Tensile Strength	117	MPa	ASTM D638
Tensile Elongation (Break)	2.5	%	ASTM D638
Flexural Modulus	8270	MPa	ASTM D790
Flexural Strength	248	MPa	ASTM D790
Compressive Strength	121	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.18 mm)	75	J/m	ASTM D256
Unnotched Izod Impact (3.18 mm)	590	J/m	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	216	°C	ASTM D648

1.8 MPa, not annealed	213	°C	ASTM D648
CLTE - Flow	2.5E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.20	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	20	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	3.80		ASTM D150
Dissipation Factor (1 MHz)	0.015		ASTM D150
Arc Resistance	130	sec	ASTM D495
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.59 mm)	HB		UL 94

Additional Information

The value listed as Flammability, UL 94, was tested in accordance with RTP test standards.Mold Shrinkage, Linear-Flow, ASTM D-955, 0.25in.: 4mil/in.

Injection	Nominal Value	Unit
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

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