# RTP 1002 HI TFE 10

### 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. -Preliminary Product Data per RTP Co.-

General Information				
Filler / Reinforcement	Glass fiber reinforced material, 15% filler by weight			
Additive	PTFE lubricant (10%)	PTFE lubricant (10%)		
	Impact modifier			
Features	Impact modification			
	Impact resistance, high			
	Lubrication			
RoHS Compliance	Contact manufacturer			
Appearance	Black			
	Natural color			
Forms	Particle			
Processing Method	Injection molding			
Physical	Nominal Value	Unit	Test Method	
Specific Gravity	1.43	g/cm³	ASTM D792	
Molding Shrinkage - Flow (3.18 mm)	0.50	%	ASTM D955	
Water Absorption (23°C, 24 hr)	0.070	%	ASTM D570	
Hardness	Nominal Value	Unit	Test Method	
Rockwell Hardness (R-Scale)	117		ASTM D785	
Mechanical	Nominal Value	Unit	Test Method	
Tensile Modulus	5520	MPa	ASTM D638	
Tensile Strength	68.9	MPa	ASTM D638	
Tensile Elongation (Break)	3.0	%	ASTM D638	
Flexural Modulus	4830	MPa	ASTM D790	
Flexural Strength	117	MPa	ASTM D790	
Compressive Strength	68.9	MPa	ASTM D695	
Coefficient of Friction (With Metal-Dynamic)	0.20		ASTM D1894	
Impact	Nominal Value	Unit	Test Method	
Notched Izod Impact (3.18 mm)	130	J/m	ASTM D256	

Unnotched Izod Impact (3.18 mm)	750	J/m	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	204	°C	ASTM D648
1.8 MPa, not annealed	188	°C	ASTM D648
CLTE - Flow	4.9E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.16	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms•cm	ASTM D257
Volume Resistivity Dielectric Strength	1.0E+16 20	ohms∙cm kV/mm	ASTM D257 ASTM D149
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Dielectric Strength	20		ASTM D149
Dielectric Strength Dielectric Constant (1 MHz)	20 3.70		ASTM D149 ASTM D150
Dielectric Strength Dielectric Constant (1 MHz) Dissipation Factor (1 MHz)	20 3.70 0.015	kV/mm	ASTM D149 ASTM D150 ASTM D150
Dielectric Strength Dielectric Constant (1 MHz) Dissipation Factor (1 MHz) Arc Resistance	20 3.70 0.015 120	kV/mm sec	ASTM D149 ASTM D150 ASTM D150 ASTM D495

Mold Shrinkage, Linear-Flow, ASTM D-955, 0.25in.: 6mil/in.Tensile Elongation, ASTM D-638: 3-4%Wear Factor, K, ASTM D-3702: 23E-10in<sup>3</sup>/min/ft/lb/hrCoefficient of Friction, Dynamic, ASTM D-3702: 0.20The wear factor and coefficient of friction were both tested on a Falex Model No.6 Wear Testing Machine at 50 FPM, 2000 PV, against C1018 steel of hardness 15-25 Rockwell C, 14-17 micro smoothness.

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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#### Recommended distributors for this material

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