

RTP 1005 TFE 15 SI 2

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.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Additive	PTFE lubricant (15%)		
	Silicone lubricant (2%)		
Features	Lubrication		
RoHS Compliance	Contact manufacturer		
Appearance	Black		
	Natural color		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.65	g/cm ³	ASTM D792
Molding Shrinkage - Flow (3.18 mm)	0.20	%	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	8960	MPa	ASTM D638
Tensile Strength	110	MPa	ASTM D638
Tensile Elongation (Break)	2.1	%	ASTM D638
Flexural Modulus	8960	MPa	ASTM D790
Flexural Strength	172	MPa	ASTM D790
Compressive Strength	110	MPa	ASTM D695
Coefficient of Friction (With Metal-Dynamic)	0.14		ASTM D1894
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.18 mm)	80	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 (1.8 MPa, Unannealed)	210	°C	ASTM D648

CLTE - Flow	2.3E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.22	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)	4.00		ASTM D150
Dissipation Factor (1 MHz)	0.015		ASTM D150
Arc Resistance	110	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.: 3mil/in. Dielectric Strength, ASTM D-149, S/T: 500+ VPM Wear Factor, K, ASTM D-3702: 10E-10in³/min/ft/lb/hr Coefficient of Friction, Dynamic, ASTM D-3702: 0.14 The 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

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

