

# RTP 485 TFE 15

General Purpose Polystyrene

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	Carbon fiber reinforced material, 30% filler by weight		
Additive	PTFE lubricant (15%)		
Features	Lubrication		
RoHS Compliance	Contact manufacturer		
Appearance	Black		
	Natural color		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.31	g/cm <sup>3</sup>	ASTM D792
Molding Shrinkage - Flow (3.18 mm)	0.10	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.050	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	121		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	13800	MPa	ASTM D638
Tensile Strength	75.8	MPa	ASTM D638
Tensile Elongation (Break)	0.50	%	ASTM D638
Flexural Modulus	9650	MPa	ASTM D790
Flexural Strength	110	MPa	ASTM D790
Compressive Strength	82.7	MPa	ASTM D695
Coefficient of Friction (With Metal-Dynamic)	0.16		ASTM D1894
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.18 mm)	43	J/m	ASTM D256
Unnotched Izod Impact (3.18 mm)	130	J/m	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	116	°C	ASTM D648
1.8 MPa, not annealed	110	°C	ASTM D648

CLTE - Flow	3.6E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.79	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	50	ohms·cm	ASTM D257
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.59 mm, RTP Tested)	HB		UL 94

#### Additional Information

Mold Shrinkage, Linear-Flow, ASTM D-955, 0.25in.: 1mil/in.Wear Factor, K, ASTM D-3702: 25E-10in<sup>3</sup>/min/ft/lb/hrCoefficient of Friction, Dynamic, ASTM D-3702: 0.16The 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	82.2	°C
Drying Time	2.0	hr
Suggested Max Regrind	20	%
Rear Temperature	204 - 288	°C
Middle Temperature	204 - 288	°C
Front Temperature	204 - 288	°C
Mold Temperature	37.8 - 71.1	°C
Injection Pressure	68.9 - 103	MPa
Back Pressure	0.345	MPa

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#### Recommended distributors for this material

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