# RTP 2105 TFE 15 Z

## Polyether Imide

### 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%)		
Features	Lubrication		
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	1.62	g/cm³	ASTM D792
Molding Shrinkage - Flow (3.18 mm)	0.10	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.18	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	123		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	10300	MPa	ASTM D638
Tensile Strength	128	MPa	ASTM D638
Tensile Elongation (Break)	1.0	%	ASTM D638
Flexural Modulus	8620	MPa	ASTM D790
Flexural Strength	176	MPa	ASTM D790
Compressive Strength	124	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)	69	J/m	ASTM D256
Unnotched Izod Impact (3.18 mm)	430	J/m	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	213	°C	ASTM D648
1.8 MPa, not annealed	210	°C	ASTM D648

CLTE - Flow	2.2E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.25	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)	3.90		ASTM D150
Dissipation Factor (1 MHz)	5.0E-3		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating	V-0		UL 94
Additional Information			

Additional Information

Flammability, ASTM D-635: SE in/min.Mold Shrinkage, Linear-Flow, ASTM D-955, 0.25in.: 2mil/in.Tensile Elongation, ASTM D-638: 1-2%Wear Factor, K, ASTM D-3702: 50E-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 thrust washer apparatus at 300 FPM, 8500 PV, against 1141 Ryex steel of hardness 18-22 Rockwell C, 12-16 micro smoothness.

Injection	Nominal Value	Unit
Drying Temperature	149	°C
Drying Time	4.0	hr
Suggested Max Moisture	0.020	%
Suggested Max Regrind	20	%
Rear Temperature	316 - 399	°C
Middle Temperature	316 - 399	°C
Front Temperature	316 - 399	°C
Mold Temperature	93.3 - 177	°C
Injection Pressure	103 - 138	MPa
Back Pressure	0.345 - 0.517	MPa
Clamp Tonnage	6.9 - 11	kN/cm²

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#### Recommended distributors for this material

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