

RTP 407

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.

Glass Fiber reinforced polystyrene offers significant improvements in strength, moduli and dimensional stability over the base resin. The series of materials has very little tensile elongation.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 40% filler by weight		
Features	Good dimensional stability High strength		
RoHS Compliance	Contact manufacturer		
Appearance	Black Natural color		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.38	g/cm ³	ASTM D792
Molding Shrinkage - Flow (3.18 mm)	0.050	%	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	11700	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield	82.7	MPa	ASTM D638
--	82.7	MPa	ASTM D638
Tensile Elongation (Break)	8.0	%	ASTM D638
Flexural Modulus	11700	MPa	ASTM D790
Flexural Strength			ASTM D790
--	128	MPa	ASTM D790
Yield	131	MPa	ASTM D790
Compressive Strength	121	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.18 mm)	53	J/m	ASTM D256
Unnotched Izod Impact (3.18 mm)	160	J/m	ASTM D4812

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	110	°C	ASTM D648
1.8 MPa, not annealed	98.9	°C	ASTM D648
CLTE - Flow	3.1E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.32	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms·cm	ASTM D257
Dielectric Strength	18	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	3.50		ASTM D150
Dissipation Factor (1 MHz)	3.0E-3		ASTM D150
Arc Resistance (1.59 mm)	40.0	sec	ASTM D495
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.59 mm, RTP Tested)	HB		UL 94
Additional Information			
Molding Shrinkage, ASTM D955, 0.25in: 1 mil/in			
Injection	Nominal Value	Unit	
Drying Temperature	82.2	°C	
Drying Time	2.0	hr	
Suggested Max Re grind	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	
Screw Speed	50 - 90	rpm	
Clamp Tonnage	6.9 - 11	kN/cm ²	

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