RTP 178

Polypropylene

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.
RTP 170 Series materials were developed to combine good physical properties and moldability where straight glass filled, talc filled or mineral filled materials will not do the job. RTP 178 has reasonable strength, good rigidity, and heat resistance.

General Information			
Filler / Reinforcement	Glass \Mineral Glass beads		
Features	Rigidity, high Chemical coupling Good formability Thermal stability, good Medium strength		
RoHS Compliance	Contact manufacturer		
Appearance	Black Natural color		
Forms	Particle		
Processing Method	Injection molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.14	g/cm³	ASTM D792
Molding Shrinkage - Flow (3.18 mm)	0.50	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.030	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale)	100		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	4820	MPa	ASTM D638
Tensile Strength (Yield)	52.0	MPa	ASTM D638
Tensile Elongation (Break)	4.0	%	ASTM D638
Flexural Modulus	4130	MPa	ASTM D790
Flexural Strength (Yield)	79.3	MPa	ASTM D790
Compressive Strength	57.9	MPa	ASTM D695
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (3.18 mm)	59	J/m	ASTM D256

Unnotched Izod Impact (3.18 mm)	400	J/m	ASTM D4812
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	154	°C	ASTM D648
1.8 MPa, not annealed	143	°C	ASTM D648
CLTE - Flow	4.5E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.33	W/m/K	ASTM C177
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	1.0E+17	ohms·cm	ASTM D257
Dielectric Strength	20	kV/mm	ASTM D149
Dielectric Constant (1 MHz)	2.90		ASTM D150
Dissipation Factor (1 MHz)	3.0E-3		ASTM D150
Arc Resistance (1.59 mm)	125	sec	ASTM D495
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (1.59 mm, Values per RTP Company testing.)	HB		UL 94
Additional Information			
Molding Shrinkage, Linear-Flow, ASTM D955, 6.35mm: 5mm/m.			
Injection	**Nominal Value**	**Unit**	
Drying Temperature	82.2	°C	
Drying Time	2.0	hr	
Suggested Max Regrind	20	%	
Rear Temperature	218 - 274	°C	
Middle Temperature	218 - 274	°C	
Front Temperature	218 - 274	°C	
Mold Temperature	32.0 - 66.0	°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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