

# Vexel 5100 RD

Polybutylene Terephthalate

Custom Resins Group

## Message:

Vexel 5100 RD is a 15% glass reinforced polybutylene terephthalate polyester material that features an improved surface. Vexel products have exceptional electrical properties, are quite strong, and are especially stiff, but are typically more brittle than similar nylon products. Vexel PBT is typically used for electrical components, especially with higher voltage requirements, for high heat housings and brackets, and for other functional components where the moisture absorption of nylon may be problematic.

General Information			
Filler / Reinforcement	Glass Fiber,15% Filler by Weight		
Features	Good Electrical Properties		
	Good Stiffness		
	Good Surface Finish		
	High Heat Resistance		
	High Strength		
Uses	Electrical Housing		
	Electrical Parts		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.41	g/cm <sup>3</sup>	ASTM D792
Molding Shrinkage			ASTM D955
Flow	0.40 to 0.60	%	
Across Flow	0.50 to 0.80	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	93.1	MPa	ASTM D638
Flexural Modulus	4830	MPa	ASTM D790
Flexural Strength	145	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	53	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	210	°C	
1.8 MPa, Unannealed	191	°C	
Melting Temperature	227	°C	
Injection	Nominal Value	Unit	
Drying Temperature	121 to 138	°C	
Drying Time	2.0 to 4.0	hr	

Drying Time, Maximum	4.0	hr
Suggested Max Moisture	0.040	%
Suggested Shot Size	30 to 80	%
Suggested Max Regrind	25	%
Rear Temperature	227 to 243	°C
Middle Temperature	232 to 249	°C
Front Temperature	238 to 260	°C
Nozzle Temperature	238 to 254	°C
Processing (Melt) Temp	243 to 260	°C
Mold Temperature	71.1 to 93.3	°C
Injection Pressure	55.2 to 117	MPa
Injection Rate	Moderate-Fast	
Holding Pressure	41.4 to 96.5	MPa
Back Pressure	0.172 to 0.345	MPa

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#### Recommended distributors for this material

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