

# Vexel 3100

Polybutylene Terephthalate  
Custom Resins Group

Message:

Vexel 3100 is a general purpose polybutylene terephthalate polyester material. 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			
Features	General Purpose		
	Good Electrical Properties		
	Good Stiffness		
	High Strength		
Uses	Electrical Housing		
	Electrical Parts		
	General Purpose		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.31	g/cm <sup>3</sup>	ASTM D792
Molding Shrinkage			ASTM D955
Flow	0.90 to 1.6	%	
Across Flow	1.0 to 1.7	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	51.7	MPa	ASTM D638
Flexural Modulus	2340	MPa	ASTM D790
Flexural Strength	82.7	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	154	°C	
1.8 MPa, Unannealed	54.4	°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 238	°C
Middle Temperature	232 to 243	°C
Front Temperature	235 to 249	°C
Nozzle Temperature	238 to 249	°C
Processing (Melt) Temp	238 to 249	°C
Mold Temperature	26.7 to 65.6	°C
Injection Pressure	55.2 to 68.9	MPa
Injection Rate	Moderate-Fast	
Holding Pressure	34.5 to 55.2	MPa
Back Pressure	0.00 to 3.45	MPa

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#### Recommended distributors for this material

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