

Fortron® 4665B6

Polyphenylene Sulfide

Celanese Corporation

Message:

Fortron 4665B6 offers a high Comparative Tracking Index (CTI) for application requiring resistance to high voltage. The product exhibits good heat and chemical resistance as well as good electrical properties. This grade is also inherently flame-retardant. Due to the balance of mineral and glass fibers the warpage is very low. Applications include electronic components (i.e. lamp sockets, housings and position frames).

General Information			
UL YellowCard	E107854-237746		
Filler / Reinforcement	Glass \mineral, 65% filler by weight		
Features	Low warpage		
	Good electrical performance		
	Good chemical resistance		
	Heat resistance, high		
	Flame retardancy		
Uses	Electrical/Electronic Applications		
	Shell		
RoHS Compliance	Contact manufacturer		
Physical	Nominal Value	Unit	Test Method
Density	2.03	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.30 - 0.70	%	ISO 294-4
Flow direction	0.20 - 0.60	%	ISO 294-4
Water Absorption (Saturation, 23°C)	0.020	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	100		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	17300	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	110	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	1.2	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	16000	MPa	ISO 178
Flexural Stress ¹	180	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	6.0	kJ/m ²	ISO 179/1eA
23°C	6.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	18	kJ/m ²	ISO 179/1eU

23°C	18	kJ/m ²	ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-30°C	5.0	kJ/m ²	ISO 180/1A
23°C	5.0	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
1.8 MPa, not annealed	270	°C	ISO 75-2/A
8.0 MPa, not annealed	215	°C	ISO 75-2/C
Glass Transition Temperature ²	90.0	°C	ISO 11357-2
Melting Temperature ³	280	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	2.0E-5	cm/cm/°C	ISO 11359-2
Lateral	2.5E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Dielectric Strength	25	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	5.30		IEC 60250
Dissipation Factor (1 MHz)	2.0E-3		IEC 60250
Comparative Tracking Index	250	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.820 mm	V-0		UL 94
1.50 mm	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	130 - 140	°C	
Drying Time	3.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	20.0 - 30.0	°C	
Rear Temperature	290 - 300	°C	
Middle Temperature	310 - 320	°C	
Front Temperature	330 - 340	°C	
Nozzle Temperature	310 - 330	°C	
Processing (Melt) Temp	330 - 340	°C	
Mold Temperature	140 - 160	°C	
Injection Pressure	50.0 - 100	MPa	
Injection Rate	Fast		
Holding Pressure	30.0 - 70.0	MPa	
Back Pressure	0.00 - 3.00	MPa	
Injection instructions			
Manifold Temperature: 330 to 340°CZone 4 Temperature: 330 to 340°CFeed Temperature: 60 to 80°C			
NOTE			

1.	Break
2.	10°C/min
3.	10°C/min

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

