

Generic PC - Carbon Powder

Polycarbonate

Generic

Message:

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This information is provided for comparative purposes only.

General Information			
Filler / Reinforcement	Carbon powder		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.22 - 1.34	g/cm ³	ASTM D792
Molding Shrinkage			
Flow: 23°C	0.39 - 0.81	%	ASTM D955
Transverse flow: 23°C	0.40 - 0.82	%	ASTM D955
23°C	0.39 - 0.84	%	ISO 294-4
Water Absorption			
23°C, 24 hr	0.098 - 0.18	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.14 - 0.27	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	2480 - 3460	MPa	ASTM D638
23°C	2580 - 3750	MPa	ISO 527-2
Tensile Strength			
Yield, 23°C	59.8 - 67.7	MPa	ASTM D638
Yield, 23°C	55.0 - 64.2	MPa	ISO 527-2
Fracture, 23°C	49.8 - 64.6	MPa	ASTM D638
Fracture, 23°C	53.4 - 64.6	MPa	ISO 527-2
Tensile Elongation			
Yield, 23°C	1.2 - 4.9	%	ASTM D638
Yield, 23°C	4.1 - 4.6	%	ISO 527-2
Fracture, 23°C	3.7 - 11	%	ASTM D638
Fracture, 23°C	3.2 - 13	%	ISO 527-2
Flexural Modulus			
23°C	2710 - 3530	MPa	ASTM D790
23°C	2480 - 3520	MPa	ISO 178
Flexural Strength			
23°C	96.4 - 117	MPa	ASTM D790
23°C	102 - 109	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			

23°C	23 - 120	J/m	ASTM D256
23°C	2.4 - 9.7	kJ/m ²	ISO 180
Unnotched Izod Impact			
23°C	510 - 2400	J/m	ASTM D256
23°C	37 - 140	kJ/m ²	ISO 180
Instrumented Dart Impact			
23°C	1.93 - 39.4	J	ASTM D3763
23°C	0.700 - 36.1	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	86.7 - 142	°C	ASTM D648
0.45 MPa, not annealed	88.4 - 140	°C	ISO 75-2/B
1.8 MPa, not annealed	82.2 - 134	°C	ASTM D648
1.8 MPa, not annealed	82.0 - 132	°C	ISO 75-2/A
Linear thermal expansion coefficient			
Flow	5.2E-5 - 6.4E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral	5.2E-5 - 6.2E-5	cm/cm/°C	ASTM E831
Lateral	5.2E-5 - 5.7E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	3.0 - 1.3E+10	ohms	ASTM D257
Injection	Nominal Value	Unit	
Drying Temperature	82.2 - 121	°C	
Drying Time	4.0 - 5.0	hr	
Suggested Max Moisture	0.020 - 0.025	%	
Rear Temperature	254 - 299	°C	
Middle Temperature	260 - 316	°C	
Front Temperature	266 - 327	°C	
Processing (Melt) Temp	271 - 316	°C	
Mold Temperature	51.7 - 96.7	°C	
Back Pressure	0.258 - 0.265	MPa	
Screw Speed	45	rpm	
Injection instructions			

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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

