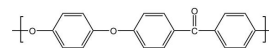


Polyetheretherketone(PEEK)

Description

Polyetheretherketone(PEEK) stands as the most superior variety among polyaryletherketone polymers, exhibiting outstanding properties such as excellent rigidity, heat resistance, radiation resistance, and corrosion resistance. Valiant is one of China's PEEK resin manufacturers (achieving full industrial chain coverage), with its product trademark.



Typical properties

Physical properties	unit	Test standard	VAT10G	VAT20G	VAT80G	VAT130G	VAT170G
Density	g/cm ³	ISO 1183	1.3	1.3	1.3	1.3	1.3
Hardness(Shore D)	-	ISO 868	84.5	85	85	85	85
Mould Shrinkage(MD/TD)	%	ISO 2577,294-4	0.9/1.3	1.0/1.3	1.0/1.3	1.0/1.3	1.0/1.3
Water Absorption(Saturation, 23 °C)	%	ISO 62	0.45	0.4	0.4	0.4	0.4
Melt Flow Rate (337°C, 6.7Kg)		ISO 1133	10	20	80	130	170
Flammability (1.6 mm)		IEC 60695					
Mechanical Properties							
Tensile Strength	MPa	ISO 527	100	100	100	105	110
Tensile Modulus	MPa	ISO 527	4000	4000	4000	4000	4100
Elongation at Break	%	ISO 527	45	45	25	20	10
Flexural Strength	MPa	ISO 178	165	170	175	175	180
Flexural Modulus	MPa	ISO 178	4000	4200	4300	4300	4400
Compressive Stress	MPa	ISO 604	125	125	130	130	130
Izod Notched Impact Strength	kJ/m ²	ISO 180	7.5	6.5	5	4.5	3.5
Thermal Properties							
Melting Temp.	°C	ISO 11357	343	343	343	343	343
Glass Transition Temp.	°C	ISO 11357	143	143	143	143	143
CLTE-Flow<Tg	ppm/°C	ISO 11359	45	45	50	50	50
CLTE-Flow>Tg	ppm/°C	ISO 11359	120	120	120	120	120
CLTE-Average<Tg	ppm/°C	ISO 11359	55	55	55	55	55
CLTE-Average>Tg	ppm/°C	ISO 11359	140	140	140	140	140
Thermal Conductivity	W/mK	ISO 22007	0.29	0.29	0.29	0.29	0.29
HDT (1.8 MPa)	°C	ISO 75	156	156	156	156	156
Electrical properties							
Dielectric Strength(Air, 2 mm)	KV/mm	IEC 60243-1	23	23	23	23	23
Comparative Tracking Index	V	IEC 60112	150	150	150	150	150
Dielectric Constant(1 KHZ)	-	IEC 60250	3.1	3.1	3.1	3.1	3.1
Dissipation Factor(1 MHZ)	-	IEC 60250	0.004	0.004	0.004	0.004	0.004
Volume resistivity(100V)	Ω ·cm	IEC 60093	10 ¹⁶	10 ¹⁶	10 ¹⁶	10 ¹⁶	10 ¹⁶
Surface Resistivity	Ω	IEC 60093					
Injection Molding							
Drying Temp. /Time	°C/h		150/>3	150/>3	150/>3	150/>3	150/>3
Hopper Temp.	°C		≤100	≤100	≤100	≤100	≤100
Rear Temp.	°C		340~350	180 ~ 210	340 ~ 350	340 ~ 350	340 ~ 350
Middle Temp.	°C		345 ~ 355		345 ~ 355	345 ~ 355	345 ~ 355
Front Temp.	°C		355 ~ 365		355 ~ 365	350 ~ 360	350 ~ 360
Nozzle Temp.	°C		365 ~ 375		365 ~ 375	360 ~ 370	360 ~ 370
Mould Temp.	°C		180 ~ 210		180 ~ 210	180 ~ 210	180 ~ 210

Contact information goes here:

Quilliant Tech Co.,Ltd.
 HQ:Room 2023, Building B
 Zhongjinguoji Square,No.333, North
 Caoxi Road,Shanghai China.

Quilliant Advanced Material Pte Ltd.
 Registration office: 133 New Bridge
 Road #10-03 China Town point
 Singapore 059413

Email: info@quilliant-tech.com
www.quilliant-tech.com

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Gate - >2 mm/0.5*part thickness