

High performance thermoplastic, reinforced PolyEtherEtherKetone (PEEK) with Carbon Fiber, granules with different viscosities for variety of applications, colour black.

Properties	Test standard	Test conditions	Unit	Carbon Fiber Reinforced Series						
				8200 CF20	8200 CF25	8200 CF30	8800 CF20	8800 CF30	8800 CF40	FB988
Mechanical properties										
Tensile strength	ISO 527	Breakage, 23°C	Mpa	220	245	255	235	260	275	375
		Yield, 23°C	Mpa	/	/	/	/	/	/	/
Elogation at break	ISO 527	Breakage, 23°C	%	3	2,5	2,2	2,8	1.8	1.8	30
Bending strength	ISO 178	Breakage, 23°C	Mpa	/	/	380	/	385	405	560
		Yield, 23°C	Mpa	355	370	/	355	/	/	/
Bending modulus	ISO 178	23°C	Gpa	19	17	23	19	23	33	38
Impact strength of simply supported beam	ISO 179/ IeA	With notch	kJ.m ⁻²	9,5	9.0	9.0	8,5	8.0	10	11
		Without notch	kJ.m ⁻²	50	50	55	50	55	60	90
Thermal properties										
Fusing point	ISO 11357	-	°C	343	343	343	343	343	343	343
Glass transition	ISO 11357	Start	°C	143	143	143	143	143	143	143
Thermal expansion coefficient	ISO 11359	Lower than Tg along the flow direction	ppm. K ⁻¹	8	6	5	8	5	5	5
		Higher than Tg along the flow direction	ppm. K ⁻¹	8	6	6	8	6	6	6
Thermal deformation temperature	ISO 75A-f	1.8 Mpa	°C	325	330	336	325	336	343	343
Electrical properties										
Volume resistivity	IEC 60093	23°C, 1V	Ω· cm	10 ⁷	10 ⁷	10 ⁵	10 ⁷	10 ⁵	10 ⁴	10 ⁴
		275°C	Ω· cm	/	/	/	/	/	/	/
Surface resistivity	IEC 61340	23°C, 100V	Ω	/	/	/	/	/	/	/
Others properties										
Density	ISO 1183	crystalline	g/cm ³	1.37	1,39	1,41	1,37	1,41	1,45	1,45
		Non-crystalline	g/cm ³	/	/	/	/	/	/	/
Shore D hardness	ISO 868	23°C	-	88	89	90	/	90	/	91
Molding shrinkage	ISO 294-4	Parallel to the flow direction	%	0,2	0,2	0,1	0,2	0,1	0,1	0,1
		Perpendicular to the flow direction	%	0,7	0,6	0,6	0,7	0,5	0,5	0,5

Important notes:

- 1) Processing conditions are typical of those used in our processing laboratories
- 2) Data are produced in accordance with prevailing national, international and internal standards, and should be used for material comparison. Actual property values are highly dependent on part geometry, mould configuration and processing conditions. Properties may also differ for along flow and across flow direction.

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The specified values are established from average values of several tests and they correspond to our today's knowledge. They are only to be used as information about our products and as help for the material selection. With these values, we do not ensure specific properties, or the suitability for certain application, therefore we do not assume any legal responsibility for an improper usage. The used test pieces have been machined from extruded semi-finished material. Since the plastics' properties depend on the manufacturing process (extrusion, injection moulding), on the dimensions of the semi finished material and on the degree of crystallinity, the actual properties of a specific product may slightly deviate from the tested ones. For information about divergent properties do not hesitate to contact us. On request we advise you regarding the most appropriate component design and the definition of material specifications more suitable to your application data. Notwithstanding, the customer bears all the responsibility for the thorough examination of suitability, efficiency, efficacy and safety of the chosen products in pharmaceutical applications, medical devices or other end uses.

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