

CELAPEX® PKX-201 - PEEK

Experimental Grade. Please contact your Celanese representative for further information.

Description

Celapex® PKX-201 is a developmental grade of ultra high flow glass fiber (30%) reinforced polyether ether ketone (PEEK) for injection molding. It has food contact compliance for US (FDA) & EU. The typical applications of this product include complex geometry (thin wall, long flow length, high precision) injection molded parts.

Physical properties	Value	Unit	Test Standard
Density	1530	kg/m ³	ISO 1183
Molding shrinkage, parallel	0.4	%	ISO 294-4, 2577
Molding shrinkage, normal	0.6	%	ISO 294-4, 2577

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	13000	MPa	ISO 527-2/1A
Tensile stress at break, 5mm/min	190	MPa	ISO 527-2/1A
Tensile strain at break, 5mm/min	2.1	%	ISO 527-2/1A
Flexural modulus, 23°C	11800	MPa	ISO 178
Flexural strength, 23°C	278	MPa	ISO 178
Charpy impact strength, 23°C	51	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	13	kJ/m ²	ISO 179/1eA

Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	343	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	143	°C	ISO 11357-1,-2,-3
DTUL at 1.8 MPa	327	°C	ISO 75-1, -2
CLTE below Tg, parallel	0.16	E-4/°C	ISO 11359-2
CLTE above Tg, parallel	0.1	E-4/°C	ISO 11359-2
CLTE below Tg, normal	0.46	E-4/°C	ISO 11359-2
CLTE above Tg, normal	1.02	E-4/°C	ISO 11359-2

Electrical properties	Value	Unit	Test Standard
Relative permittivity, 1MHz	3.9	-	IEC 60250
Dissipation factor, 1MHz	50	E-4	IEC 60250
Volume resistivity	>1E14	Ohm*m	IEC 60093
Electric strength	30	kV/mm	IEC 60243-1
CTI 100 drops value	150	-	IEC 60112

Typical injection moulding processing conditions

Pre Drying	Value	Unit	Test Standard
Necessary low maximum residual moisture content	0.03	%	-
Drying time	3 - 4	h	-
Drying temperature	140 - 150	°C	-
Temperature	Value	Unit	Test Standard
Zone1 temperature	350 - 370	°C	-
Zone2 temperature	360 - 380	°C	-
Zone3 temperature	360 - 380	°C	-
Nozzle temperature	360 - 380	°C	-
Melt temperature	360 - 400	°C	-
Mold temperature	160 - 190	°C	-
Pressure	Value	Unit	Test Standard
Back pressure max.	20	bar	-
Speed	Value	Unit	Test Standard
Injection speed	medium-fast	-	-
Screw Speed	Value	Unit	Test Standard
Screw speed diameter, 16mm	medium	RPM	-
Screw speed diameter, 25mm	medium	RPM	-



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Screw speed diameter, 40mm	medium	RPM	-
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Characteristics

Special Characteristics	Processing
High flow, Low warpage	Injection molding
Product Categories	Delivery Form
Glass reinforced	Pellets

