

CELANEX® 3300FC

30% glass-fiber reinforced; high flow PBT grade; for use in food contact applications

Celanex 3300FC is a general purpose, 30% glass reinforced, polybutylene terephthalate that offers a superior combination of mechanical, electrical, and thermal properties. This grade provides outstanding processability and good chemical resistance.

Product information

Part Marking Code	PBT-GF30	ISO 11469
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Rheological properties

Melt volume-flow rate	16 cm ³ /10min	ISO 1133
Temperature	250 °C	
Load	2.16 kg	
Viscosity number	74 cm ³ /g	ISO 307, 1157, 1628
Moulding shrinkage range, parallel	0.3 - 0.7 %	ISO 294-4, 2577
Moulding shrinkage range, normal	0.7 - 1.1 %	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	9200 MPa	ISO 527-1/-2
Stress at break, 5mm/min	130 MPa	ISO 527-1/-2
Strain at break, 5mm/min	2.5 %	ISO 527-1/-2
Flexural Modulus	9700 MPa	ISO 178
Flexural Strength	210 MPa	ISO 178
Charpy impact strength, 23°C	46 kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	45 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	8.5 kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	8.5 kJ/m ²	ISO 179/1eA
Izod notched impact strength, 23°C	7.5 kJ/m ²	ISO 180/1A
Hardness, Rockwell, M-scale	90	ISO 2039-2

Thermal properties

Melting temperature, 10°C/min	225 °C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	60 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	205 °C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	225 °C	ISO 75-1/-2
Temp. of deflection under load, 8 MPa	150 °C	ISO 75-1/-2
Vicat softening temperature, 50°C/h, 50N	220 °C	ISO 306
Coeff. of linear therm. expansion, parallel	25 E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	100 E-6/K	ISO 11359-1/-2



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Flammability

Burning Behav. at thickness h	HB class	UL 94
Thickness tested	0.71 mm	UL 94
Oxygen index	20 %	ISO 4589-1/-2

Electrical properties

Relative permittivity, 100Hz	4.5	IEC 62631-2-1
Relative permittivity, 1MHz	4.1	IEC 62631-2-1
Dissipation factor, 100Hz	22 E-4	IEC 62631-2-1
Dissipation factor, 1MHz	160 E-4	IEC 62631-2-1
Volume resistivity	>1E13 Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15 Ohm	IEC 62631-3-2
Electric strength	31 kV/mm	IEC 60243-1
Comparative tracking index	PLC 1 PLC	UL 746A

Other properties

Humidity absorption, 2mm	0.2 %	Sim. to ISO 62
Water absorption, 2mm	0.4 %	Sim. to ISO 62
Density	1530 kg/m³	ISO 1183

Injection

Drying Temperature	120 - 130 °C
Drying Time, Dehumidified Dryer	4 h
Processing Moisture Content	0.02 %
Max. mould temperature	65 - 93 °C
Injection speed	medium-fast

Characteristics

Food contact	FDA 21 CFR
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Processing Texts

Pre-drying	To avoid hydrolytic degradation during processing, CELANEX resins have to be dried to a moisture level equal to or less than 0.02%. Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-40 °F (-40 °C) at 250 °F (121 °C) for 4 hours.
Longer pre-drying times/storage	For subsequent storage of the material in the dryer until processed (<= 60 h) it is necessary to lower the temperature to 100 °C.

