



CELANEX® 3300FC

CELANEX® PBT

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

Resin Identification	PBT-GF30	ISO 1043
Part Marking Code	>PBT-GF30<	ISO 11469

Rheological properties

cm ³ /10min ISO 1133
°C
kg
cm³/g ISO 307, 1628
ISO 307, 1628
% ISO 294-4, 2577
% ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	9200	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	130	MPa	ISO 527-1/-2
Tensile 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/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	8.5	kJ/m²	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/m²	ISO 180/1A
Izod impact strength, 23°C	24	kJ/m²	ISO 180/1U
Hardness, Rockwell, M-scale	90		ISO 2039-2
Poisson's ratio	0.34 ^[C]		

Thermal properties

[C]: Calculated

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

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Flammability

Burning Behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	0.71	mm	IEC 60695-11-10
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	425		IEC 60112

Physical/Other properties

Humidity absorption, 2mm	0.2 %	Sim. to ISO 62
Water absorption, 2mm	0.4 %	Sim. to ISO 62
Water absorption, Immersion 24h	0.07 %	Sim. to ISO 62
Density	1530 kg/m ³	ISO 1183

Injection

yes	
140	°C
4 - 6	h
≤0.01	%
240	°C
240	°C
250	°C
0.1 - 0.3	m/s
80	°C
60	°C
130	°C
	140 4 - 6 ≤0.01 240 240 250 0.1 - 0.3 80

Characteristics

Processing Injection Moulding

Delivery form Pellets

Additional information

Injection molding

To minimize the volatile content in the final product, dry the resin to ≤0.01% water content. In injection molding, use the lowest possible melt temperature (recommended 240 °C) and shortest feasible residence time (recommended 2-3 minutes). Store the parts in a ventilated, clean area before use. If assistance is needed please contact your Celanese account representative.

These recommendations are based on internal Celanese testing. For drying and injection molding conditions outside the above parameters, customer must test

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for and verify suitably low volatiles emissions on molded articles to confirm the final product is suitably pure for its intended use.

Processing Notes

Pre-Drying

To avoid hydrolytic degradation during processing, CELANEX resins have to be dried to a moisture level equal to or less than 0.01%. Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-40°C (-40°F) at 140°C (284°F) for 4-6 hours.

Storage

For subsequent storage of the material in the dryer until processed (\leq 60 h) it is necessary to lower the temperature to 100 $^{\circ}$ C.

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