Celanese
The chemistry inside innovation™

CELANEX® 3300-2FC

30% glass-fiber reinforced, high flow, lubricated grade, for use in food contact applications
Celanex 3300-2FC is a general purpose, 30% glass reinforced, polybutylene terephthalate that offers a superior combination of mechanical, electrical, and thermal properties for food contact applications. This grade provides outstanding processability and good chemical resistance. Celanex 3300-2FC is a high flow material that contains an internal lubricant.

Product information

Part Marking Code	> PBT-GF30 <	ISO 11469

Rheological properties

Melt volume-flow rate	16	cm^3/10min	ISO 1133
Temperature	250	°C	
Load	2.16	kg	
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

Flammability

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

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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

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.