

CELANEX® 4306

30% glass-fiber reinforced PBT+PC blend; impact modified; low warp grade
Celanex 4306 is a 30% glass reinforced, toughened, low warpage thermoplastic polyester.

Product information

Part Marking Code	(PBT- I+PC)-GF30	ISO 11469
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Rheological properties

Moulding shrinkage range, parallel	0.4 - 0.6 %	ISO 294-4, 2577
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Typical mechanical properties

Tensile Modulus	9200 MPa	ISO 527-1/-2
Stress at break, 5mm/min	120 MPa	ISO 527-1/-2
Strain at break, 5mm/min	3 %	ISO 527-1/-2
Flexural Modulus	8500 MPa	ISO 178
Flexural Strength	180 MPa	ISO 178
Charpy impact strength, 23°C	60 kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	45 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	12 kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	11 kJ/m ²	ISO 179/1eA
Izod notched impact strength, 23°C	12 kJ/m ²	ISO 180/1A
Hardness, Rockwell, M-scale	73	ISO 2039-2

Thermal properties

Melting temperature, 10°C/min	225 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	164 °C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	210 °C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	20 E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	87 E-6/K	ISO 11359-1/-2

Other properties

Density	1500 kg/m ³	ISO 1183
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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



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Additional information

Injection molding

Rear Temperature 450-470(230-240) deg F (deg C)
Center Temperature 460-480(235-250) deg F (deg C)
Front Temperature 470-500(240-260) deg F (deg C)
Nozzle Temperature 480-500(250-260) deg F (deg C)
Melt Temperature 460-500(235-260) deg F (deg C)
Mold Temperature 150-200(65-93) deg F (deg C)
Back Pressure 0-50 psi
Screw Speed Medium
Injection Speed Fast

Injection speed, injection pressure and holding pressure have to be optimized to the individual article geometry. To avoid material degradation during processing low back pressure and minimum screw speed have to be used. Overheating of the material has to be avoided, in particular for flame retardant grades. Up to 25% clean and dry regrind may be used.

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.

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Injection molding Preprocessing

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Other Approvals

Other Approvals

OEM	Specification	Additional Information
GM	GMW17249	Natural & Black

