Celanese
The chemistry inside innovation™

CELSTRAN® PBT-GF40-08

CELSTRAN® Long Fibre

40% Long Glass Fiber Reinforced PBT

Product information

Resin Identification	PBT-LGF40	ISO 1043
Part Marking Code	>PBT-LGF40<	ISO 11469

Typical mechanical properties

Tensile modulus	13600	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	180	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.9	%	ISO 527-1/-2
Flexural modulus	12700	MPa	ISO 178
Flexural strength	270	MPa	ISO 178
Charpy notched impact strength, 23 °C	32	kJ/m²	ISO 179/1eA
Poisson's ratio	0.33[C]		

[C]: Calculated

Thermal properties

Temperature of deflection under load, 1.8 MPa	225	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	226	°C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	16	E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	87	E-6/K	ISO 11359-1/-2

Physical/Other properties

Density	1610	kg/m³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	120	°C
Drying Time, Dehumidified Dryer	4	h
Processing Moisture Content	≤0.04	%
Melt Temperature Optimum	250	°C
Min. melt temperature	240	°C
Max. melt temperature	260	°C
Screw tangential speed	0.1 - 0.3	m/s
Mold Temperature Optimum	80	°C
Min. mould temperature	60	°C
Max. mould temperature	130	°C

Characteristics

Processing	Injection Moulding
Delivery form	Pellets

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Additional information

Injection molding

Preprocessing

PBT Drying Requirements: 4 hrs. @ 120° C.
A dehumidifier or desiccant dryer is recommended.

Processing

Celstran can be processed on a standard injection molding unit.
A general purpose metering screw is recommended with a zone distribution of 40% feed, 40% transition, and 20% metering.
A free flowing check ring assembly is recommended.

Melt Temp.: 280 - 300° C.
Mold Temp.: 80 - 90° C.

Processing Notes

Pre-Drying

CELSTRAN PBT should in principle be predried. Because of the necessary low maximum residual moisture content the use of dry air dryers is recommended. The dew point should be =< -30°C. The time between drying and processing should be as short as possible