

CELANEX® 1642Z - PBT

Description

Celanex 1642Z is a general purpose, 20% fiberglass reinforced PBT with a good balance of mechanical properties and processability.

Physical properties	Value	Unit	Test Standard
Density	1450	kg/m ³	ISO 1183
Melt flow rate, MFR	9	g/10min	ISO 1133
MFR temperature	250	°C	ISO 1133
MFR load	2.16	kg	ISO 1133
Molding shrinkage, parallel	0.4 - 0.7	%	ISO 294-4, 2577
Molding shrinkage, normal	1.0 - 1.2	%	ISO 294-4, 2577
Water absorption, 23°C-sat	0.1	%	ISO 62

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	6250	MPa	ISO 527-2/1A
Tensile stress at break, 5mm/min	105	MPa	ISO 527-2/1A
Tensile strain at break, 5mm/min	4	%	ISO 527-2/1A
Flexural modulus, 23°C	5500	MPa	ISO 178
Flexural strength, 23°C	170	MPa	ISO 178
Charpy notched impact strength, 23°C	6.3	kJ/m ²	ISO 179/1eA
Izod impact notched, 23°C	7.5	kJ/m ²	ISO 180/1A

Thermal properties	Value	Unit	Test Standard
Coeff. of linear therm expansion, parallel	0.31	E-4/°C	ISO 11359-2
Coeff. of linear therm expansion, normal	1.2	E-4/°C	ISO 11359-2

Typical injection moulding processing conditions

Temperature	Value	Unit	Test Standard
Hopper temperature	20 - 50	°C	-
Feeding zone temperature	230 - 240	°C	-
Zone1 temperature	230 - 240	°C	-
Zone2 temperature	235 - 250	°C	-
Zone3 temperature	235 - 250	°C	-
Zone4 temperature	240 - 260	°C	-
Nozzle temperature	250 - 260	°C	-
Melt temperature	235 - 260	°C	-
Mold temperature	65 - 93	°C	-
Hot runner temperature	250 - 260	°C	-
Pressure	Value	Unit	Test Standard
Back pressure max.	3.5	bar	-

Other text information

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% prior to processing. Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-40°F (-40°C). Typical drying conditions are 250°F (121°C) for 4 hours. For subsequent storage of material in the dryer until processed, drying temperature should be lowered to 100 deg C and material should not kept in dryer for more than 60 hrs..

Injection molding

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. Up to 25% clean and dry regrind may be used.

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Characteristics

Special Characteristics

High viscosity

Processing

Injection molding

Product Categories

Glass reinforced

Delivery Form

Pellets