Celanese
The chemistry inside innovation™

CELANEX® 3300SW1

CELANEX® PBT

Celanex 3300SW1 is a 30% glass filled PBT with excellent wear characteristics.

Product information

Resin Identification	(PBT+PTFE)-GF30	ISO 1043
Part Marking Code	>(PBT+PTFE)-GF30<	ISO 11469

Rheological properties

Melt mass-flow rate	17	g/10min	ISO 1133
Melt mass-flow rate, Temperature	250	°C	
Melt mass-flow rate, Load	2.16	kg	
Moulding shrinkage range, parallel	0.3 - 0.5	%	ISO 294-4, 2577
Moulding shrinkage range, normal	0.7 - 1	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	9600	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	125	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.8	%	ISO 527-1/-2
Flexural modulus	8950	MPa	ISO 178
Flexural strength	200	MPa	ISO 178
Charpy impact strength, 23°C	50	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	8	kJ/m²	ISO 179/1eA
Hardness, Rockwell, M-scale	88		ISO 2039-2
Poisson's ratio	0.34[C]		

[C]: Calculated

Tribological properties

Coefficient of static friction, against steel	0.22		ISO 8295

Thermal properties

Melting temperature, 10°C/min	224	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	212	°C	ISO 75-1/-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	≤0.02	%
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

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Max. mould temperature	130 °C

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	Low wear / Low friction

Additional information

Injection molding

Processing

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.

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 0.02%. Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-40°F (-40°C) at 250°F (121°C) for 4 hours.

Storage

For subsequent storage of the material in the dryer until processed (<= 60 h) it is necessary to lower the temperature to 100° C.