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	482	°F	
Melt mass-flow rate, Load	4.76	lb	
Molding shrinkage range, parallel	0.3 - 0.5	%	ISO 294-4, 2577
Molding shrinkage range, normal	0.7 - 1	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	1.39E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	18100	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.8	%	ISO 527-1/-2
Flexural modulus	1.3E6	psi	ISO 178
Flexural strength	28300	psi	ISO 178
Charpy impact strength, 23°C	23.8	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	3.81	ftlb/in²	ISO 179/1eA
Hardness, Rockwell, M-scale	88		ISO 2039-2

Tribological properties

Coefficient of static friction, against steel	0.22	ISO 8295
Coefficient of dynamic friction, against steel	0.17	ISO 8295

Thermal properties

Melting temperature, 10°C/min	435	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	414	°F	ISO 75-1/-2

Physical/Other properties

Density	0.0581	lb/in³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	248	°F
Drying Time, Dehumidified Dryer	4	h
Processing Moisture Content	≤0.02	%
Melt Temperature Optimum	482	°F
Min. melt temperature	464	°F
Max. melt temperature	500	°F
Max. screw tangential speed	0.1 - 0.3	m/s
Mold Temperature Optimum	176	°F
Min. mold temperature	140	°F
Max. mold temperature	266	°F

Revised: 2025-05-16 Source: Celanese Materials Database

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Characteristics

Processing	Injection Molding
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.

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