Celanese
The chemistry inside innovation™

CELANEX® 6400-2

CELANEX® PBT

40% glass/mineral reinforced polyester, providing warp resistance and improved surface finish.

Product information

Resin Identification	(PBT+PET)-(GF+MD)40	ISO 1043
Part Marking Code	>(PBT+PET)-(GF+MD)40<	ISO 11469

Rheological properties

Melt mass-flow rate	17	g/10min	ISO 1133
Melt mass-flow rate, Temperature	265	°C	
Melt mass-flow rate, Load	2.16	kg	
Viscosity number	70	cm^3/g	ISO 307, 1628
Moulding shrinkage range, parallel	0.1 - 0.2	%	ISO 294-4, 2577
Moulding shrinkage range, normal	0.4 - 0.6	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	12000	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	110	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2	%	ISO 527-1/-2
Flexural modulus	11000	MPa	ISO 178
Flexural strength	180	MPa	ISO 178
Charpy notched impact strength, 23°C	6.8	kJ/m^2	ISO 179/1eA
Izod notched impact strength, 23°C	6	kJ/m^2	ISO 180/1A
Izod notched impact strength, -30°C	6.0	kJ/m^2	ISO 180/1A
Poisson's ratio	0.33[C]		

[C]: Calculated

Thermal properties

Temperature of deflection under load, 1.8 MPa	200	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	220	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	220	°C	ISO 306
Coefficient of linear thermal expansion (CLTE), parallel	25	E-6/K	ISO 11359-1/-2

Physical/Other properties

Humidity absorption, 2mm	0.2	%	Sim. to ISO 62
Water absorption, 2mm	0.5	%	Sim. to ISO 62
Density	1660	kg/m^3	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	120	°C
Drying Time, Dehumidified Dryer	4	h
Processing Moisture Content	≤0.02	%
Melt Temperature Optimum	265	°C
Min. melt temperature	255	°C
Max. melt temperature	275	°C
Screw tangential speed	0.1 - 0.3	m/s
Mold Temperature Optimum	100	°C

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Min. mould temperature	90	°C
Max. mould temperature	130	°C

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Additives	Release agent
Special characteristics	High Gloss, Low Warpage

Additional information

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.

Automotive

OEM	ADDITIONAL INFORMATION
General Motors	Special Parts Approval, See Your CE Account Representative for Further Details.