Celanese
The chemistry inside innovation™

CELANEX® 1632Z

15% glass-fiber PBT; improved impact
Celanex 1632Z is a general purpose, 15% fiberglass reinforced polybutylene terephthalate with a good balance of mechanical properties and processability.

Rheological properties

Melt mass-flow rate	9	g/10min	ISO 1133
Melt mass-flow rate, Temperature	250	°C	
Melt mass-flow rate, Load	2.16	kg	
Moulding shrinkage range, parallel	0.4 - 0.6	%	ISO 294-4, 2577
Moulding shrinkage range, normal	0.9 - 1.1	%	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	5400	MPa	ISO 527-1/-2
Stress at break, 5mm/min	95	MPa	ISO 527-1/-2
Strain at break, 5mm/min	5.4	%	ISO 527-1/-2
Flexural Modulus	5200	MPa	ISO 178
Flexural Strength	155	MPa	ISO 178
Charpy notched impact strength, 23°C	5.4	kJ/m²	ISO 179/1eA
Izod notched impact strength, 23°C	5.3	kJ/m²	ISO 180/1A
Hardness, Rockwell, M-scale	90		ISO 2039-2

Thermal properties

Melting temperature, 10°C/min	225	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	60	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	189	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	217	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	40	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	110	E-6/K	ISO 11359-1/-2

Flammability

Burning Behav. at thickness h	HB	class	UL 94
Thickness tested	0.80	mm	UL 94

Other properties

Humidity absorption, 2mm	0.1	%	Sim. to ISO 62
Density	1410	kg/m³	ISO 1183

Injection

Drying Temperature	120 - 130	°C
Drying Time, Dehumidified Dryer	4	h
Processing Moisture Content	0.02	%
Max. mould temperature	65 - 93	°C
Back pressure		MPa

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Injection speed	medium-fast

Additional information

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.

Processing Texts

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.

Other Approvals

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OEM	Specification	Additional Information
Ford	WSK-M4D750-A	Natural, Black, Red