Celanese
The chemistry inside innovation™

CELANEX® 2008FC - PBT

Description

Celanex 2008FC is a general purpose, unreinforced polybutylene terephthalate with a good balance of mechanical properties and processability for use in melt blown applications with food contact.

Physical properties	Value	Unit	Test Standard
Density	**1310**	kg/m³	ISO 1183
Melt flow rate, MFR	**275**	g/10min	ISO 1133
MFR temperature	**250**	°C	ISO 1133
MFR load	**2.16**	kg	ISO 1133
Molding shrinkage, parallel	**1.8 - 2.0**	%	ISO 294-4, 2577
Molding shrinkage, normal	**1.8 - 2.0**	%	ISO 294-4, 2577
Water absorption, 23°C-sat	**0.45**	%	ISO 62
Humidity absorption, 23°C/50%RH	**0.2**	%	ISO 62

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	**2600**	MPa	ISO 527-2/1A
Tensile stress at break, 50mm/min	**47**	MPa	ISO 527-2/1A
Tensile stress at break, 5mm/min	**60**	MPa	ISO 527-2/1A
Tensile strain at break, 50mm/min	**2**	%	ISO 527-2/1A
Tensile strain at break, 5mm/min	**5**	%	ISO 527-2/1A
Flexural modulus, 23°C	**2200**	MPa	ISO 178
Flexural strength, 23°C	**80**	MPa	ISO 178
Charpy impact strength, 23°C	**38**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	**44**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	**2.8**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	**2.1**	kJ/m²	ISO 179/1eA
Izod impact notched, 23°C	**3.1**	kJ/m²	ISO 180/1A
Rockwell hardness (M-Scale)	**72**	M-Scale	ISO 2039-2

Mechanical properties (TPE)	Value	Unit	Test Standard
Shore D hardness, 15s	**81**	-	ISO 868

Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	**225**	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	**60**	°C	ISO 11357-1,-2,-3
DTUL at 1.8 MPa	**57**	°C	ISO 75-1, -2
DTUL at 0.45 MPa	**155**	°C	ISO 75-1, -2
Coeff. of linear therm expansion, parallel	**1.1**	E-4/°C	ISO 11359-2
Coeff. of linear therm expansion, normal	**1**	E-4/°C	ISO 11359-2

Electrical properties	Value	Unit	Test Standard
Relative permittivity, 100Hz	**3.3**	-	IEC 60250
Relative permittivity, 1MHz	**3.2**	-	IEC 60250
Dissipation factor, 1MHz	**200**	E-4	IEC 60250
Volume resistivity	**>1E13**	Ohm*m	IEC 60093
Surface resistivity	**>1E15**	Ohm	IEC 60093
Electric strength	**15**	kV/mm	IEC 60243-1
Comparative tracking index	**350**	-	IEC 60112

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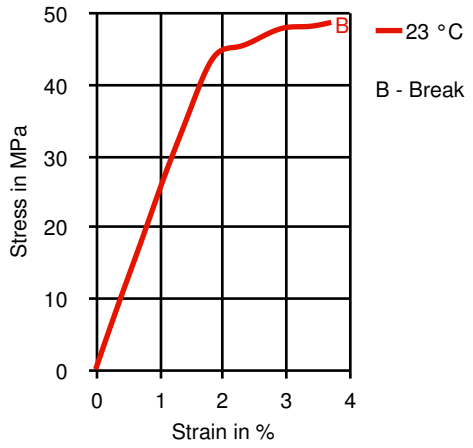
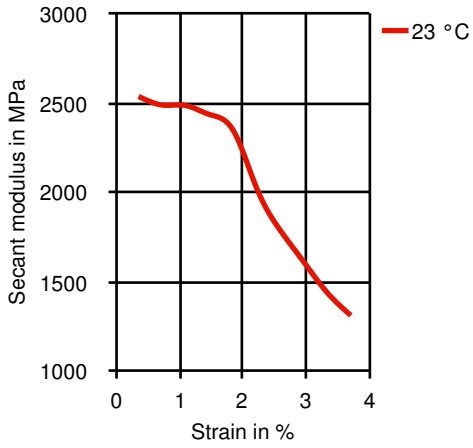
Diagrams

Stress-strain



Secant modulus-strain



Typical injection moulding processing conditions

Pre Drying	Value	Unit	Test Standard
Necessary low maximum residual moisture content	**0.02**	%	-
Drying time	**4**	h	-
Drying temperature	**120 - 130**	°C	-
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	-
Speed	**Value**	**Unit**	**Test Standard**
Injection speed	**medium-fast**	-	-

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

Longer pre-drying times/storage

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

Characteristics

Product Categories

Unfilled

Delivery Form

Pellets

Processing

Injection molding, Other extrusion