

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/m ³	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/m ²	ISO 179/1eU
Charpy impact strength, -30°C	44	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	2.8	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	2.1	kJ/m ²	ISO 179/1eA
Izod impact notched, 23°C	3.1	kJ/m ²	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

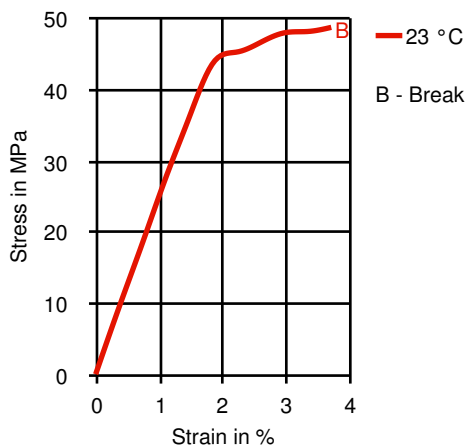
Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	225	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	60	°C	ISO 11357-1,-2,-3
DTUL at 1.8 MPa	57	°C	ISO 75-1, -2
DTUL at 0.45 MPa	155	°C	ISO 75-1, -2
Coeff. of linear therm expansion, parallel	1.1	E-4/°C	ISO 11359-2
Coeff.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

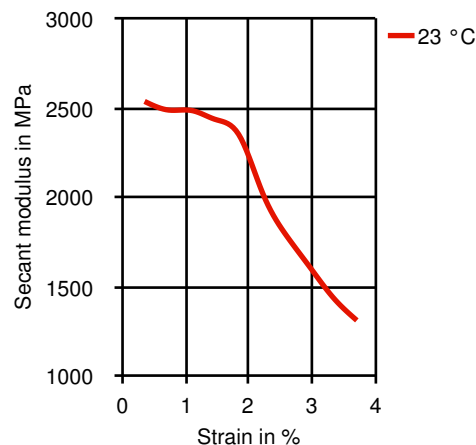
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Diagrams

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