

CELANEX® 5202 - PBT

Description

Celanex 5202 is a 15% glass filled polyester blend that features improved surface gloss and has an excellent balance of mechanical properties, processability, and color stability under heat and UV exposure. A typical application for Celanex 5202 is oven handles.

Physical properties	Value	Unit	Test Standard
Density	1440	kg/m ³	ISO 1183
Melt flow rate, MFR	25	g/10min	ISO 1133
MFR temperature	265	°C	ISO 1133
MFR load	2.16	kg	ISO 1133
Molding shrinkage, parallel	0.1 - 0.6	%	ISO 294-4, 2577
Molding shrinkage, normal	0.7	%	ISO 294-4, 2577
Humidity absorption, 23°C/50%RH	0.17	%	ISO 62

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	6100	MPa	ISO 527-2/1A
Tensile stress at break, 5mm/min	100	MPa	ISO 527-2/1A
Tensile strain at break, 5mm/min	2.5	%	ISO 527-2/1A
Flexural modulus, 23°C	5300	MPa	ISO 178
Flexural strength, 23°C	150	MPa	ISO 178
Charpy impact strength, 23°C	15	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	17	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	4.7	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	4.5	kJ/m ²	ISO 179/1eA
Izod impact notched, 23°C	4.4	kJ/m ²	ISO 180/1A

Mechanical properties (TPE)	Value	Unit	Test Standard
Shore D hardness, 15s	83	-	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	50	°C	ISO 11357-1,-2,-3
DTUL at 1.8 MPa	180	°C	ISO 75-1, -2
DTUL at 0.45 MPa	215	°C	ISO 75-1, -2
Coeff. of linear therm expansion, parallel	0.42	E-4/°C	ISO 11359-2
Coeff. of linear therm expansion, normal	0.73	E-4/°C	ISO 11359-2
Flammability at thickness h	HB	class	UL 94
thickness tested (h)	0.80	mm	UL 94

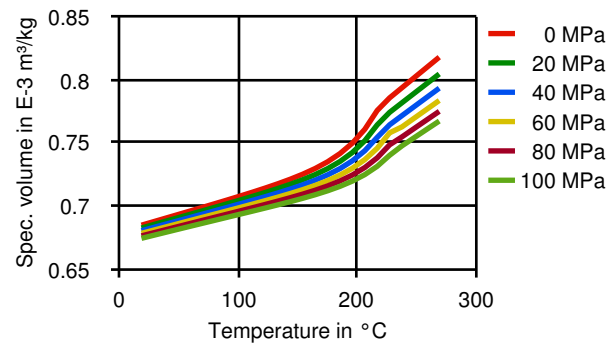
Electrical properties	Value	Unit	Test Standard
Relative permittivity, 100Hz	2.7	-	IEC 60250
Relative permittivity, 1MHz	2.7	-	IEC 60250
Dissipation factor, 1MHz	140	E-4	IEC 60250
Volume resistivity	7E14	Ohm*m	IEC 60093
Surface resistivity	4E15	Ohm	IEC 60093
Electric strength	17	kV/mm	IEC 60243-1
Comparative tracking index	225	-	IEC 60112



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Diagrams

Moldflow Specific volume-temperature (pvT)



Typical injection moulding processing conditions

	Value	Unit	Test Standard
Pre Drying			
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 - 250	°C	-
Zone1 temperature	230 - 250	°C	-
Zone2 temperature	235 - 255	°C	-
Zone3 temperature	235 - 255	°C	-
Zone4 temperature	240 - 260	°C	-
Nozzle temperature	250 - 265	°C	-
Melt temperature	235 - 270	°C	-
Mold temperature	65 - 93	°C	-
Hot runner temperature	250 - 265	°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	Delivery Form
Glass reinforced	Pellets
Processing	
Injection molding	

