



CELANEX® 5200-2

CELANEX® PBT

Celanex 5200-2 is a 15% fiberglass reinforced polyester with improved surface finish. Celanex 5200-2 contains an internal lubricant.

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Resin Identification	(PBT+PET)-GF1	ISO 1043
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Part Marking Code	>(PBT+PET)-GF15<	ISO 11469

Rheological properties

Melt volume-flow rate	38 cm ³ /10min	ISO 1133
Temperature	265 °C	
Load	2.16 kg	
Melt mass-flow rate	28 g/10min	ISO 1133
Melt mass-flow rate, Temperature	265 °C	
Melt mass-flow rate, Load	2.16 kg	
Viscosity number	69 cm³/g	ISO 307, 1628
Moulding shrinkage range, parallel	0.4 - 0.6 %	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	6000	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	120	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	3	%	ISO 527-1/-2
Flexural modulus	8000	MPa	ISO 178
Flexural strength	180	MPa	ISO 178
Charpy impact strength, 23°C	35	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	35	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	8	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	8	kJ/m²	ISO 179/1eA
Izod notched impact strength, 23°C	7.1	kJ/m²	ISO 180/1A
Hardness, Rockwell, M-scale	91		ISO 2039-2
Poisson's ratio	0.35 ^[C]		

Thermal properties

[C]: Calculated

Melting temperature, 10°C/min	260	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	190	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	215	°C	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	65	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	210	°C	ISO 306
Coefficient of linear thermal expansion	35	E-6/K	ISO 11359-1/-2
(CLTF) parallel			

Flammability

Burning Behav. at thickness h	HB o	class	IEC 60695-11-10
Thickness tested	0.75 r	mm	IEC 60695-11-10
Oxygen index	20 %	%	ISO 4589-1/-2

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Electrical properties

Relative permittivity, 100Hz	4.3		IEC 62631-2-1
Relative permittivity, 1MHz	4		IEC 62631-2-1
Dissipation factor, 100Hz	11	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	190	E-4	IEC 62631-2-1
Volume resistivity	>1E13	Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15	Ohm	IEC 62631-3-2
Electric strength	28	kV/mm	IEC 60243-1
Comparative tracking index	325		IEC 60112

Physical/Other properties

Humidity absorption, 2mm	0.2 %	Sim. to ISO 62
Water absorption, 2mm	0.45 %	Sim. to ISO 62
Water absorption, Immersion 24h	0.05 %	Sim. to ISO 62
Density	1410 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
Min. mould temperature	90	°C
Max. mould temperature	130	°C

Characteristics

Processing Injection Moulding

Delivery form Pellets
Special characteristics High Gloss

Additional information

Processing Notes Pre-Drying

To avoid hydrolytic degradation during processing, CELANEX resins have to be dried to a moisture level less than 0.02%. Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-40 $^{\circ}$ F (-40 $^{\circ}$ C) at 250 $^{\circ}$ F (121 $^{\circ}$ 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.

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Automotive

OFM

Stellantis - Chrysler

STANDARD

MS.50103 / CPN-2425

ADDITIONAL INFORMATION

Black

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