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CELANEX® 6500HF

CELANEX® PBT

6500HF is a high flow, 30% glass/mineral filled polybutylene terephthalate (PBT) with improved warp resistance and surface smoothness.

Product information

Resin Identification	(PBT+PET)-(GF+MD)30	ISO 1043
Part Marking Code	>(PBT+PET)-(GF+MD)30<	ISO 11469

Rheological properties

Melt mass-flow rate	42	g/10min	ISO 1133
Melt mass-flow rate, Temperature	265	°C	
Melt mass-flow rate, Load	2.16	kg	
Moulding shrinkage range, parallel	0 - 0.5	%	ISO 294-4, 2577
Moulding shrinkage range, normal	0.5 - 0.8	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	9700	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	125	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.2	%	ISO 527-1/-2
Flexural modulus	9500	MPa	ISO 178
Flexural strength	180	MPa	ISO 178
Charpy impact strength, 23°C	27	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	24	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	6.7	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	7.2	kJ/m²	ISO 179/1eA
Izod notched impact strength, 23°C	5.3	kJ/m²	ISO 180/1A
Hardness, Rockwell, M-scale	91		ISO 2039-2
Poisson's ratio	0.34[C]		
Shore D hardness, 15s	85		ISO 48-4 / ISO 868

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	225	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	54	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	202	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	223	°C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	28	E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	85	E-6/K	ISO 11359-1/-2

Electrical properties

Relative permittivity, 100Hz	3.3		IEC 62631-2-1
Relative permittivity, 1MHz	3.1		IEC 62631-2-1
Dissipation factor, 1MHz	120	E-4	IEC 62631-2-1
Volume resistivity	1E14	Ohm.m	IEC 62631-3-1
Surface resistivity	6E16	Ohm	IEC 62631-3-2
Electric strength	31	kV/mm	IEC 60243-1
Comparative tracking index	325		IEC 60112

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Physical/Other properties

Humidity absorption, 2mm	0.19	%	Sim. to ISO 62
Density	1550	kg/m³	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, High Flow, Low Warpage