

CELANEX® 4309AR

CELANEX® PBT

Celanex 4309AR is a 30% glass reinforced PBT with enhanced resistance to hydrolysis, alkaline environments and salt water spray.

Product information

Resin Identification	PBT-I-GF30	ISO 1043
Part Marking Code	>PBT-I-GF30<	ISO 11469

Rheological properties

Melt mass-flow rate	13 g/10min	ISO 1133
Melt mass-flow rate, Temperature	265 °C	
Melt mass-flow rate, Load	5 kg	
Moulding shrinkage range, parallel	0.3 - 0.6 %	ISO 294-4, 2577
Moulding shrinkage range, normal	1.4 - 1.6 %	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	8100 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	100 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	3 %	ISO 527-1/-2
Flexural modulus	7600 MPa	ISO 178
Flexural strength	150 MPa	ISO 178
Charpy impact strength, 23°C	45 kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	50 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	10 kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	8.7 kJ/m ²	ISO 179/1eA
Izod notched impact strength, 23°C	9 kJ/m ²	ISO 180/1A
Izod impact strength, 23°C	40 kJ/m ²	ISO 180/1U
Hardness, Rockwell, M-scale	62	ISO 2039-2
Poisson's ratio	0.34 ^[C]	

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	220 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	191 °C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	217 °C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	23 E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	95 E-6/K	ISO 11359-1/-2

Flammability

Burning Behav. at thickness h	HB class	IEC 60695-11-10
Thickness tested	0.8 mm	IEC 60695-11-10

CELANEX® 4309AR

CELANEX® PBT

Physical/Other properties

Density	1440 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	250 °C
Min. melt temperature	240 °C
Max. melt temperature	260 °C
Screw tangential speed	0.1 - 0.3 m/s
Mold Temperature Optimum	80 °C
Min. mould temperature	60 °C
Max. mould temperature	130 °C
Ejection temperature	185 °C

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	Hydrolysis resistant

Additional information

Processing Notes

Pre-Drying

4 Hrs. at 250F, <0.02% moisture

Automotive

OEM
Honda

ADDITIONAL INFORMATION
Validated for Strut sensor by HGT