

Celanex® 3300HR

Polybutylene Terephthalate

Celanese Corporation

Message:

Celanex 3300HR is a 30% glass reinforced polybutylene terephthalate which has excellent hydrolysis resistance, mechanical properties and processability

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Features	Workability, good		
	Hydrolysis resistance		
RoHS Compliance	Contact manufacturer		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.53	g/cm ³	ASTM D792
--	1.54	g/cm ³	ISO 1183
Molding Shrinkage			
Flow	0.30 - 0.50	%	ASTM D955
Transverse flow	0.11 - 0.70	%	ISO 294-4
Flow	0.11 - 0.30	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	9200	MPa	ISO 527-2/1A/1
Tensile Strength			
Fracture, 23°C	136	MPa	ASTM D638
Fracture	139	MPa	ISO 527-2/1A/5
Tensile Elongation			
Fracture, 23°C	2.7	%	ASTM D638
Fracture	2.7	%	ISO 527-2/1A/5
Flexural Modulus			
23°C	8480	MPa	ASTM D790
23°C	9200	MPa	ISO 178
Flexural Strength			
23°C	211	MPa	ASTM D790
23°C	210	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	8.5	kJ/m ²	ISO 179/1eA
23°C	8.5	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU

-30°C	45	kJ/m ²	ISO 179/1eU
23°C	46	kJ/m ²	ISO 179/1eU
Notched Izod Impact			
23°C	110	J/m	ASTM D256
23°C	12	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	35	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	221	°C	ASTM D648
0.45 MPa, not annealed	225	°C	ISO 75-2/B
1.8 MPa, not annealed	207	°C	ASTM D648
1.8 MPa, not annealed	205	°C	ISO 75-2/A
Glass Transition Temperature	60.0	°C	ISO 11357-2
Vicat Softening Temperature	220	°C	ISO 306/B50
Melting Temperature ¹	225	°C	ISO 11357-3, ASTM D3418
Linear thermal expansion coefficient			ISO 11359-2
Flow	2.5E-5	cm/cm/°C	ISO 11359-2
Lateral	1.0E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Dielectric Strength	31	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.50		IEC 60250
1 MHz	4.10		IEC 60250
Dissipation Factor			IEC 60250
100 Hz	2.2E-3		IEC 60250
1 MHz	0.016		IEC 60250
Comparative Tracking Index	425	V	IEC 60112
Injection	Nominal Value	Unit	
Drying Temperature	120 - 130	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Max Regrind	25	%	
Rear Temperature	230 - 240	°C	
Middle Temperature	235 - 250	°C	
Front Temperature	235 - 250	°C	
Nozzle Temperature	250 - 260	°C	
Processing (Melt) Temp	235 - 260	°C	
Mold Temperature	65 - 93	°C	
Injection Rate	Moderate-Fast		
Injection instructions			

Feed Temperature: 230 to 240°C Zone 4 Temperature: 240 to 260°C Manifold Temperature: 250 to 260°C

NOTE

1. 10°C/min

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