



Celanex® 3200HR

Celanese Corporation - Polybutylene Terephthalate

Monday, November 4, 2019

General Information

Product Description

Celanex 3200HR is a 15% glass filled polybutylene terephthalate which has an excellent hydrolysis resistance, mechanical properties and processability.

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • Asia Pacific • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 15% Filler by Weight
Features	• Good Processability • Hydrolysis Resistant
RoHS Compliance	• Contact Manufacturer

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.41		ASTM D792
Density	1.41	g/cm ³	ISO 1183
Molding Shrinkage - Flow	0.50 to 0.70	%	ISO 294-4
Water Absorption (Equilibrium, 73°F, 50% RH)	0.17	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	841000	psi	ISO 527-2/1A/1
Tensile Stress (Break)	14500	psi	ISO 527-2/1A/5
Tensile Strain (Break)	3.5	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	782000	psi	ISO 178
Flexural Stress (73°F)	21600	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	2.4	ft·lb/in ²	
73°F	2.6	ft·lb/in ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	9.5	ft·lb/in ²	
73°F	9.5	ft·lb/in ²	
Notched Izod Impact Strength (73°F)	2.5	ft·lb/in ²	ISO 180/1A
Unnotched Izod Impact Strength (73°F)	8.1	ft·lb/in ²	ISO 180/1U
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	90		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Unannealed)	428	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	383	°F	ISO 75-2/A
Heat Deflection Temperature (1160 psi, Unannealed)	194	°F	ISO 75-2/C
Vicat Softening Temperature	428	°F	ISO 306/B50
Peak Melting Temperature	437	°F	ASTM D3418
Melting Temperature ²	437	°F	ISO 11357-3

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Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength	740	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.20		
1 MHz	3.80		
Dissipation Factor			IEC 60250
100 Hz	1.6E-3		
1 MHz	0.020		
Comparative Tracking Index	350	V	IEC 60112

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	248 to 266	°F
Drying Time	4.0	hr
Suggested Max Moisture	0.020	%
Suggested Max Re grind	25	%
Hopper Temperature	68 to 122	°F
Rear Temperature	446 to 464	°F
Middle Temperature	455 to 482	°F
Front Temperature	455 to 482	°F
Nozzle Temperature	482 to 500	°F
Processing (Melt) Temp	455 to 500	°F
Mold Temperature	149 to 199	°F
Injection Rate	Moderate-Fast	
Back Pressure	0.00 to 50.0	psi

Injection Notes

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

Notes

¹ Typical properties: these are not to be construed as specifications.

² 10°C/min