Celanex® 3309HRHF

Celanese Corporation - Polybutylene Terephthalate

Monday, November 4, 2019

General Information

Product Description

Celanex 3309HRHF is a 30% fiberglass reinforced Polybutylene Terephthalate which has excellent hydrolysis resistance, mechanical properties and improved flow.

General		
Material Status	• Commercial: Active	
Availability	• North America	
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight	
Features	• Good Flow	• Hydrolysis Resistant
RoHS Compliance	• Contact Manufacturer	
Automotive Specifications	• FORD WSS-M4D1017-A1	

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.53	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (250°C/2.16 kg)	31	g/10 min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	0.70 to 1.2	%	
Flow	0.10 to 0.30	%	
Water Absorption (Equilibrium, 73°F, 50% RH)	0.16	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	1.51E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	21800	psi	ISO 527-2/1A/5
Tensile Strain (Break)	2.6	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	1.41E+6	psi	ISO 178
Flexural Stress (73°F)	31900	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	4.3	ft·lb/in²	
73°F	3.8	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	19	ft·lb/in²	
73°F	21	ft·lb/in²	
Notched Izod Impact Strength (73°F)	4.3	ft·lb/in²	ISO 180/1A
Unnotched Izod Impact Strength (73°F)	21	ft·lb/in²	ISO 180/1U
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (66 psi, Unannealed)	432	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	410	°F	ISO 75-2/A
Melting Temperature [2]	437	°F	ISO 11357-3
CLTE - Flow	1.1E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	5.6E-5	in/in/°F	ISO 11359-2

Celanex® 3309HRHF

Celanese Corporation - Polybutylene Terephthalate

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	2.0E+15	ohms	IEC 60093
Volume Resistivity	2.0E+17	ohms·cm	IEC 60093
Electric Strength	560	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	2.80		
1 MHz	3.20		
Dissipation Factor (1 MHz)	0.014		IEC 60250

Processing Information

Injection	Nominal Value	Unit
Suggested Max Regrind	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	Fast	
Back Pressure	0.00 to 50.0	psi

Injection Notes

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

Notes

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

[2] 10°C/min