

Celanex® 3425HRT

Polybutylene Terephthalate

Celanese Corporation

Message:

Celanex 3425HRT is a non-lubricated, 40% fiberglass reinforced PBT copolymer that has excellent hydrolysis resistance, toughness, improved flow, and improved elongation at break.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 40% filler by weight		
Features	Good liquidity		
	Hydrolysis resistance		
	Good toughness		
RoHS Compliance	Contact manufacturer		
Physical	Nominal Value	Unit	Test Method
Density	1.58	g/cm ³	ISO 1183
Molding Shrinkage			
Flow	0.20 - 0.40	%	ASTM D955
Vertical flow direction	0.60 - 0.90	%	ISO 294-4
Flow direction	0.0 - 0.50	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.12	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	9100	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	107	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	3.0	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	8500	MPa	ISO 178
Flexural Stress (23°C)	165	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	9.4	kJ/m ²	ISO 179/1eA
23°C	11	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	44	kJ/m ²	ISO 179/1eU
23°C	53	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	11	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	202	°C	ISO 75-2/B
1.8 MPa, not annealed	175	°C	ISO 75-2/A
Glass Transition Temperature ¹	20.0	°C	ISO 11357-2

Melting Temperature ²	225	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	2.0E-5	cm/cm/°C	ISO 11359-2
Lateral	1.2E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	3.0E+17	ohms	IEC 60093
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Dielectric Strength	31	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.21		IEC 60250
1 MHz	4.13		IEC 60250
Dissipation Factor (1 MHz)	0.020		IEC 60250
Comparative Tracking Index	375	V	IEC 60112
Injection	Nominal Value	Unit	
Suggested Max Regrind	25	%	
Hopper Temperature	20.0 - 50.0	°C	
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	65.0 - 93.0	°C	
Injection Rate	Fast		
Back Pressure	0.00 - 0.345	MPa	
Injection instructions			
Manifold Temperature: 250 to 260°CZone 4 Temperature: 240 to 260°CFeed Temperature: 230 to 240°C			
NOTE			
1.	10°C/min		
2.	10°C/min		

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