



Celanex® 2004-2

Celanese Corporation - Polybutylene Terephthalate

Monday, November 4, 2019

General Information

Product Description

Celanex 2004-2 is an unfilled polyester that has an excellent combination of flowability and toughness. A typical application for Celanex 2004-2 is electrical connectors containing latches. Celanex 2004-2 contains an internal lubricant.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Lubricant		
Features	• Good Flow	• Good Toughness	• Lubricated
Uses	• Connectors		
RoHS Compliance	• Contact Manufacturer		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.30	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (250°C/0.33 kg)	5.5	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	33	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.5 to 1.8	%	
Flow	1.6 to 2.0	%	
Water Absorption (Saturation, 73°F)	0.45	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	348000	psi	ISO 527-2/1A
Tensile Stress (Yield)	7830	psi	ISO 527-2/1A/50
Tensile Strain (Yield)	8.0	%	ISO 527-2/1A/50
Nominal Tensile Strain at Break	37	%	ISO 527-2/1A/50
Flexural Modulus (73°F)	334000	psi	ISO 178
Flexural Stress (73°F)	10000	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	2.1	ft·lb/in ²	
73°F	2.1	ft·lb/in ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	21	ft·lb/in ²	
73°F, Partial Break	100	ft·lb/in ²	
Notched Izod Impact Strength			ISO 180/1A
-22°F	2.2	ft·lb/in ²	
73°F	2.2	ft·lb/in ²	
Unnotched Izod Impact Strength (73°F)	No Break		ISO 180/1U
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D, 15 sec)	81		ISO 868

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Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Unannealed)	331	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	129	°F	ISO 75-2/A
Glass Transition Temperature ²	140	°F	ISO 11357-2
Vicat Softening Temperature	347	°F	ISO 306/B50
Melting Temperature ²	437	°F	ISO 11357-3
CLTE - Flow	6.1E-5	in/in/°F	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
Relative Permittivity			IEC 60250
100 Hz	3.70		
1 MHz	3.50		
Dissipation Factor			IEC 60250
100 Hz	3.0E-3		
1 MHz	0.021		
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.04 in)	HB		UL 94

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

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