Celanex® 2004-2

Polybutylene Terephthalate

Celanese Corporation

Message:

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 Information			
UL YellowCard	E45575-239362		
Additive	Lubricant		
Features	Good liquidity Good toughness Lubrication		
Uses	Electrical/Electronic Applications Connector		
RoHS Compliance	Contact manufacturer		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.30	g/cm³	ASTM D792, ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	33.0	cm³/10min	ISO 1133
Molding Shrinkage - Flow	1.8 - 2.0	%	ISO 294-4
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2400	MPa	ISO 527-2/1A/1
Tensile Strength			
Yield, 23°C	53.1	MPa	ASTM D638
Yield	54.0	MPa	ISO 527-2/1A/50
Tensile Elongation			
Yield, 23°C	3.9	%	ASTM D638
Yield	8.0	%	ISO 527-2/1A/50
Fracture, 23°C	180	%	ASTM D638
Nominal Tensile Strain at Break	37	%	ISO 527-2/1A/50
Flexural Modulus (23°C)	2300	MPa	ISO 178
Flexural Stress (23°C)	69.0	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	4.5	kJ/m²	ISO 179/1eA
23°C	4.5	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	45	kJ/m²	ISO 179/1eU

23°C, local fracture	220	kJ/m²	ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-30°C	4.6	kJ/m²	ISO 180/1A
23°C	4.6	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	No Break		ISO 180/1U
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
0.45 MPa, not annealed	166	°C	ISO 75-2/B
0.45 MPa, annealed	162	°C	ASTM D648
1.8 MPa, not annealed	56.1	°C	ASTM D648
1.8 MPa, not annealed	54.0	°C	ISO 75-2/A
Glass Transition Temperature [1]	60.0	°C	ISO 11357-2
Vicat Softening Temperature	175	°C	ISO 306/B50
Melting Temperature [2]	225	°C	ISO 11357-3, ASTM D3418
CLTE - Flow	1.1E-4	cm/cm/°C	ISO 11359-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity			
--	1.2E+17	ohms·cm	ASTM D257
--	> 1.0E+15	ohms·cm	IEC 60093
Dielectric Strength [3]	15	kV/mm	ASTM D149
Dielectric Constant			
1 MHz	3.33		ASTM D150
100 Hz	3.70		IEC 60250
1 MHz	3.50		IEC 60250
Dissipation Factor			
1 MHz	0.021		ASTM D150, IEC 60250
100 Hz	3.0E-3		IEC 60250
Arc Resistance	181	sec	ASTM D495
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (1.00 mm)	HB		UL 94
Injection	**Nominal Value**	**Unit**	
Drying Temperature	120 - 130	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.020	%	
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	Moderate-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
3.	Method A (short time)

Recommended distributors for this material

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