Celanex® 3200-2FC

Polybutylene Terephthalate

Celanese Corporation

Message:

Celanex 3200-2FC is a general purpose, 15% glass reinforced polybutylene terephthalate with a good balance of mechanical properties and processability for use in food contact applications. Celanex 3200-2FC contains an internal lubricant.

General Information			
UL YellowCard	E45575-239376		
Filler / Reinforcement	Glass fiber reinforced material, 15% filler by weight		
Additive	Lubricant		
Features	Workability, good High liquidity Lubrication Compliance of Food Exposure General		
Uses	Non-specific food applications General		
RoHS Compliance	Contact manufacturer		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.41	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)	26	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	26.0	cm³/10min	ISO 1133
Molding Shrinkage			
Flow	0.50 - 0.70	%	ASTM D955
Flow direction	0.50 - 0.70	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.20	%	ISO 62
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	90		ISO 2039-2
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
-40°C	6410	MPa	ASTM D638
0°C	6210	MPa	ASTM D638
23°C	5520	MPa	ASTM D638
80°C	2450	MPa	ASTM D638
121°C	2070	MPa	ASTM D638
--	5800	MPa	ISO 527-2/1A/1

Tensile Strength			
Fracture, -40°C	108	MPa	ASTM D638
Fracture, 0°C	105	MPa	ASTM D638
Fracture, 23°C	93.1	MPa	ASTM D638
Fracture, 80°C	55.2	MPa	ASTM D638
Fracture, 121°C	44.8	MPa	ASTM D638
Fracture	100	MPa	ISO 527-2/1A/5
Tensile Elongation			
Fracture, -40°C	1.9	%	ASTM D638
Fracture, 0°C	2.0	%	ASTM D638
Fracture, 23°C	3.0	%	ASTM D638
Fracture, 80°C	6.3	%	ASTM D638
Fracture, 121°C	6.3	%	ASTM D638
Fracture	3.5	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	5200	MPa	ISO 178
Flexural Stress (23°C)	150	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	5.0	kJ/m^2	ISO 179/1eA
23°C	5.5	kJ/m^2	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	20	kJ/m^2	ISO 179/1eU
23°C	20	kJ/m^2	ISO 179/1eU
Notched Izod Impact (23°C)	5.0	kJ/m^2	ISO 180/1A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
0.45 MPa, not annealed	215	°C	ISO 75-2/B
0.45 MPa, annealed	213	°C	ASTM D648
1.8 MPa, not annealed	192	°C	ASTM D648
1.8 MPa, not annealed	195	°C	ISO 75-2/A
8.0 MPa, not annealed	90.0	°C	ISO 75-2/C
Glass Transition Temperature [1]	60.0	°C	ISO 11357-2
Vicat Softening Temperature	215	°C	ISO 306/B50
Melting Temperature [2]	225	°C	ISO 11357-3, ASTM D3418
Linear thermal expansion coefficient			ISO 11359-2
Flow	4.0E-5	cm/cm/°C	ISO 11359-2
Lateral	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			
--	1.0E+16	ohms·cm	ASTM D257
--	> 1.0E+15	ohms·cm	IEC 60093

Dielectric Strength			
-- [3]	18	kV/mm	ASTM D149
--	29	kV/mm	IEC 60243-1
Dielectric Constant			
1 MHz	3.50		ASTM D150
100 Hz	4.20		IEC 60250
1 MHz	3.80		IEC 60250
Dissipation Factor			
1 MHz	1.0E-3		ASTM D150
100 Hz	1.6E-3		IEC 60250
1 MHz	0.020		IEC 60250
Comparative Tracking Index	350	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.710 mm)	HB		UL 94
Oxygen Index	20	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	120 - 130	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.020	%	
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		
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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