

Celanex® 5300-2

Polybutylene Terephthalate

Celanese Corporation

Message:

Celanex 5300-2 is a 30% fiberglass reinforced polyester with improved surface finish. Celanex 5300-2 contains an internal lubricant.

General Information			
UL YellowCard	E42337-234683	E45575-239404	
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Additive	Lubricant		
Features	Highlight		
	Lubrication		
	General		
	Excellent appearance		
Uses	General		
RoHS Compliance	Contact manufacturer		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.54	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)	17	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (265°C/2.16 kg)	20.0	cm³/10min	ISO 1133
Molding Shrinkage			
Flow	0.30 - 0.50	%	ASTM D955
Flow direction	0.30 - 0.50	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.20	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	93		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	10000	MPa	ISO 527-2/1A/1
Tensile Strength			
Fracture, 23°C	131	MPa	ASTM D638
Fracture	135	MPa	ISO 527-2/1A/5
Tensile Elongation			
Fracture, 23°C	2.0	%	ASTM D638
Fracture	3.0	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	9000	MPa	ISO 178
Flexural Stress (23°C)	200	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA

-30°C	9.0	kJ/m ²	ISO 179/1eA
23°C	9.5	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	48	kJ/m ²	ISO 179/1eU
23°C	49	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	8.3	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	220	°C	ISO 75-2/B
0.45 MPa, annealed	221	°C	ASTM D648
1.8 MPa, not annealed	206	°C	ASTM D648
1.8 MPa, not annealed	200	°C	ISO 75-2/A
8.0 MPa, not annealed	120	°C	ISO 75-2/C
Glass Transition Temperature ¹	60.0	°C	ISO 11357-2
Vicat Softening Temperature	225	°C	ISO 306/B50
Melting Temperature ²	225	°C	ISO 11357-3, ASTM D3418
Linear thermal expansion coefficient			ISO 11359-2
Flow	2.4E-5	cm/cm/°C	ISO 11359-2
Lateral	7.5E-5	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	21	kV/mm	ASTM D149
--	30	kV/mm	IEC 60243-1
Dielectric Constant			
1 MHz	3.80		ASTM D150
100 Hz	4.60		IEC 60250
1 MHz	4.20		IEC 60250
Dissipation Factor (1 MHz)	2.0E-3		ASTM D150
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 - 250	°C	

Middle Temperature	235 - 255	°C
Front Temperature	235 - 255	°C
Nozzle Temperature	250 - 265	°C
Processing (Melt) Temp	235 - 265	°C
Mold Temperature	65.0 - 93.0	°C
Injection Rate	Moderate-Fast	

Injection instructions

Manifold Temperature: 250 to 265°C Zone 4 Temperature: 240 to 260°C Feed Temperature: 230 to 250°C

NOTE

1. 10°C/min
2. 10°C/min
3. Method A (short time)

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