

Fortron® 1140L7

Polyphenylene Sulfide

Celanese Corporation

Message:

One of the easiest flowing 40% glass reinforced grade in the Fortron product line. This material can be processed at fast cycle times due to the unique crystallization characteristics. This product offers good heat and chemical resistance, as well as, good electrical properties. The product is inherently flame-retardant and exhibits high hardness and rigidity.

General Information			
UL YellowCard	E107854-237735	E107854-237738	
Filler / Reinforcement	Glass fiber reinforced material, 40% filler by weight		
Features	Rigidity, high		
	Fast molding cycle		
	Good electrical performance		
	Good liquidity		
	Good chemical resistance		
	High hardness		
	Flame retardancy		
Uses	Electrical/Electronic Applications		
RoHS Compliance	Contact manufacturer		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.64	g/cm ³	ASTM D792
--	1.65	g/cm ³	ISO 1183
Specific Volume	0.611	cm ³ /g	ASTM D792
Molding Shrinkage			
Flow	0.20	%	ASTM D955
Transverse flow	0.50	%	ASTM D955
Vertical flow direction	0.50 - 0.70	%	ISO 294-4
Flow direction	0.10 - 0.30	%	ISO 294-4
Water Absorption (Saturation, 23°C)	0.020	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			
Class m	103		ASTM D785
M scale	100		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	14500	MPa	ISO 527-2/1A/1
Tensile Strength			
Fracture, 23°C	145	MPa	ASTM D638
Fracture	170	MPa	ISO 527-2/1A/5

Tensile Elongation			
Fracture, 23°C	1.2	%	ASTM D638
Fracture	1.6	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	14500	MPa	ISO 178
Flexural Stress ¹	260	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ISO 180/1A
-30°C	8.0	kJ/m ²	ISO 180/1A
23°C	8.0	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, annealed	280	°C	ASTM D648
1.8 MPa, not annealed	265	°C	ASTM D648
1.8 MPa, not annealed	270	°C	ISO 75-2/A
8.0 MPa, not annealed	200	°C	ISO 75-2/C
Glass Transition Temperature ²	90.0	°C	ISO 11357-2
Melting Temperature ³	280	°C	ISO 11357-3
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Dielectric Strength	26	kV/mm	IEC 60243-1
Dielectric Constant			ASTM D150
1 kHz	3.70		ASTM D150
1 MHz	3.70		ASTM D150
Dissipation Factor			ASTM D150
1 kHz	1.0E-3		ASTM D150
1 MHz	1.0E-3		ASTM D150
Arc Resistance	134	sec	ASTM D495
Comparative Tracking Index			
--	125	V	IEC 60112
--	150	V	ASTM D3638
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.380 mm	V-0		UL 94
1.50 mm	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	130 - 140	°C	
Drying Time	3.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	20.0 - 30.0	°C	
Rear Temperature	290 - 300	°C	
Middle Temperature	310 - 320	°C	

Front Temperature	330 - 340	°C
Nozzle Temperature	310 - 330	°C
Processing (Melt) Temp	330 - 340	°C
Mold Temperature	140 - 160	°C
Injection Pressure	50.0 - 100	MPa
Injection Rate	Fast	
Holding Pressure	30.0 - 70.0	MPa
Back Pressure	0.00 - 3.00	MPa

Injection instructions

Manifold Temperature: 330 to 340°CZone 4 Temperature: 330 to 340°CFeed Temperature: 60 to 80°C

NOTE

1.	Break
2.	10°C/min
3.	10°C/min

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