Fortron® 1140L6

Polyphenylene Sulfide

Celanese Corporation

Message:

Fortron 1140L6 is an easier flow version of Fortron 1140L4. It offers essentially the same characteristics of 1140L4. Especially used for thin walled parts with long flow lengths. Applications made of this grade include components for pumps and electronics.

General Information		
UL YellowCard	E107854-237735	E107854-237738
Filler / Reinforcement	Glass fiber reinforced material, 40% filler by weight	
Features	Good liquidity	
Uses	Thin wall parts Pump parts Electrical/Electronic Applications	
RoHS Compliance	Contact manufacturer	

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.60	g/cm³	ASTM D792
--	1.65	g/cm³	ISO 1183
Specific Volume	0.625	cm³/g	ASTM D792
Spiral Flow	21.5		Internal method
Specific Heat Capacity of Melt	1500	J/kg/°C	Internal method
CSA Rating (8.40E-7 mm)	A00		CSA F-1
Melt Mass-Flow Rate (MFR)	19	g/10 min	ASTM D1238
Molding Shrinkage			
Flow	0.20 - 0.30	%	ASTM D955
Transverse flow	0.50 - 0.70	%	ASTM D955
Vertical flow direction	0.40 - 0.60	%	ISO 294-4
Flow direction	0.20 - 0.60	%	ISO 294-4
Water Absorption (Saturation, 23°C)	0.020	%	ISO 62

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			
Class m	100		ASTM D785
M scale	100		ISO 2039-2

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	14700	MPa	ISO 527-2/1A/1
Tensile Strength			
Fracture, 23°C	200	MPa	ASTM D638
Fracture	195	MPa	ISO 527-2/1A/5

Tensile Elongation			
Fracture, 23°C	2.0	%	ASTM D638
Fracture	1.9	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	14500	MPa	ISO 178
Flexural Stress [1]	285	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	10	kJ/m²	ISO 179/1eA
23°C	10	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	53	kJ/m²	ISO 179/1eU
23°C	53	kJ/m²	ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-30°C	10	kJ/m²	ISO 180/1A
23°C	10	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	34	kJ/m²	ISO 180/1U
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	215	°C	ISO 75-2/C
Glass Transition Temperature [2]	90.0	°C	ISO 11357-2
Melting Temperature [3]	280	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	2.6E-5	cm/cm/°C	ISO 11359-2
Lateral	4.2E-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			
-- [4]	15	kV/mm	ASTM D149
--	28	kV/mm	IEC 60243-1
Dielectric Constant			
1 kHz	3.50		ASTM D150
1 MHz	3.50		ASTM D150
1 MHz	4.10		IEC 60250
Dissipation Factor			
1 kHz	1.0E-3		ASTM D150
1 MHz	1.0E-3		ASTM D150

1 MHz	2.0E-3		IEC 60250
Arc Resistance	134	sec	ASTM D495
Comparative Tracking Index	125	V	IEC 60112

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
4.	Method A (short time)

Recommended distributors for this material

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