

Fortron® 1130L4

Polyphenylene Sulfide

Celanese Corporation

Message:

Fortron 1130L4 is a 30% glass-reinforced PPS that has excellent heat and chemical resistance. It is inherently flame-retardant and exhibits high hardness and a good balance of strength and stiffness. Especially used for thin walled parts requiring long flow lengths. This grade also exhibits excellent weldability in secondary operations due to its low filler content.

General Information			
UL YellowCard	E107854-237732		
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Features	Rigid, good		
	Weldable		
	Good strength		
	Good chemical resistance		
	Heat resistance, high		
	High hardness		
	Flame retardancy		
Uses	Thin wall parts		
RoHS Compliance	Contact manufacturer		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.60	g/cm³	ASTM D792
--	1.58	g/cm³	ISO 1183
Specific Volume	0.636	cm³/g	ASTM D792
Specimen Thickness - Shrinkage	3.18	mm	Internal method
Molding Shrinkage			
Flow	0.30 - 0.50	%	ASTM D955
Transverse flow	0.60 - 0.90	%	ASTM D955
Vertical flow direction	0.60 - 0.90	%	ISO 294-4
Flow direction	0.30 - 0.50	%	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	12000	MPa	ISO 527-2/1A/1
Tensile Strength			
Fracture, 23°C	172	MPa	ASTM D638

Fracture	170	MPa	ISO 527-2/1A/5
Tensile Elongation			
Fracture, 23°C	1.9	%	ASTM D638
Fracture	1.9	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	11000	MPa	ISO 178
Flexural Stress ¹	260	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	9.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	34	kJ/m ²	ISO 179/1eU
23°C	34	kJ/m ²	ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-30°C	9.0	kJ/m ²	ISO 180/1A
23°C	9.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	30	kJ/m ²	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	266	°C	ASTM D648
1.8 MPa, not annealed	255	°C	ISO 75-2/A
Glass Transition Temperature ²	90.0	°C	ISO 11357-2
Linear thermal expansion coefficient			ISO 11359-2
Flow	2.9E-5	cm/cm/°C	ISO 11359-2
Lateral	5.2E-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
Dissipation Factor			ASTM D150
1 kHz	1.0E-3		ASTM D150
1 MHz	1.0E-3		ASTM D150
Arc Resistance	127	sec	ASTM D495
Comparative Tracking Index	150	V	ASTM D3638
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.800 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°C Zone 4 Temperature: 330 to 340°C Feed Temperature: 60 to 80°C

NOTE

1. Break
2. 10°C/min

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