

Fortron® 1342L4

Polyphenylene Sulfide

Celanese Corporation

Message:

Fortron 1342L4 is a low wear grade, ideally suited for bearings, gears and other sliding friction/wear applications. This product is glass fiber reinforced and contains PTFE.

General Information			
UL YellowCard	E107854-237742		
Filler / Reinforcement	Glass fiber reinforced material, 40% filler by weight		
Additive	PTFE lubricant		
Features	Good wear resistance		
Uses	Gear		
	Bearing		
RoHS Compliance	Contact manufacturer		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.70	g/cm ³	ASTM D792
--	1.69	g/cm ³	ISO 1183
Molding Shrinkage			
Flow	0.20 - 0.30	%	ASTM D955
Transverse flow	0.50 - 0.70	%	ASTM D955
Vertical flow direction	0.50	%	ISO 294-4
Flow direction	0.20	%	ISO 294-4
Water Absorption (Saturation, 23°C)	0.020	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	14400	MPa	ISO 527-2/1A/1
Tensile Strength			
Fracture, 23°C	152	MPa	ASTM D638
Fracture	165	MPa	ISO 527-2/1A/5
Tensile Elongation			
Fracture, 23°C	2.0	%	ASTM D638
Fracture	1.6	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	13700	MPa	ISO 178
Flexural Stress ¹	245	MPa	ISO 178
Coefficient of Friction			
Dynamic ²	0.21		ASTM D1894
Dynamic ³	0.28		ASTM D1894
Static ⁴	0.31		ASTM D1894

Static ⁵	0.27		ASTM D1894
With steel-dynamic ⁶	0.16		ASTM D1894
With steel-static ⁷	0.20		ASTM D1894
With steel-static	0.20		ISO 8295
Wear Factor ⁸			ASTM D3702
416 Stainless : 32°C	166	10 ⁻¹⁰ in ³ · min/ft · lb · hr	ASTM D3702
C-1018 Steel : 49°C	323	10 ⁻¹⁰ in ³ · min/ft · lb · hr	ASTM D3702
C-1018 Steel : 93°C	825	10 ⁻¹⁰ in ³ · min/ft · lb · hr	ASTM D3702
Specimen Thickness - Shrinkage	3.18	mm	Internal method
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	8.5	kJ/m ²	ISO 179/1eA
23°C	8.5	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	44	kJ/m ²	ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-30°C	8.5	kJ/m ²	ISO 180/1A
23°C	8.5	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, not annealed	268	°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 ⁹	90.0	°C	ISO 11357-2
Melting Temperature ¹⁰	280	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	2.2E-5	cm/cm/°C	ISO 11359-2
Lateral	4.0E-5	cm/cm/°C	ISO 11359-2
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
0.750 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. vs Fortron 1140L4, 73°F, 5 lbf, 5 in
3. vs Fortron 6165A4, 73°F, 5 lbf, 5 in
4. vs Fortron 6165A4, 73°F, 5 lbf, 5 in
5. vs Fortron 1140L4, 73°F, 5 lbf, 5 in
6. 73°F, 5 lbf, 5 in
7. 73°F, 5 lbf, 5 in
8. 16 μ-in, PV2000, 40 psi, 50ft/min
9. 10°C/min
10. 10°C/min

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