

Fortron® 1342L4

Celanese Corporation - Polyphenylene Sulfide

Tuesday, November 19, 2013

General Information

Product Description

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

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Europe	• Latin America • North America	• South America
Filler / Reinforcement	• Glass Fiber Reinforcement, 40% Filler by Weight		
Additive	• PTFE Lubricant		
Features	• Good Wear Resistance		
Uses	• Bearings	• Gears	
RoHS Compliance	• Contact Manufacturer		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.70	g/cm ³	ASTM D792
Density	1.69	g/cm ³	ISO 1183
Molding Shrinkage - Flow	0.20 to 0.30	%	ASTM D955
Molding Shrinkage - Across Flow	0.50 to 0.70	%	ASTM D955
Molding Shrinkage			ISO 294-4
Across Flow	0.50	%	
Flow	0.20	%	
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 (Break, 23°C)	152	MPa	ASTM D638
Tensile Stress (Break)	165	MPa	ISO 527-2/1A/5
Tensile Elongation (Break, 23°C)	2.0	%	ASTM D638
Tensile Strain (Break)	1.6	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	13700	MPa	ISO 178
Flexural Strength ²	245	MPa	ISO 178
Coefficient of Friction			
vs. Steel - Dynamic ³	0.16		ASTM D1894
vs. Steel - Static	0.20		ISO 8295
vs. Steel - Static ³	0.20		ASTM D1894
vs. Unknown - Dynamic ⁴	0.21		ASTM D1894
vs. Unknown - Dynamic ⁵	0.28		ASTM D1894
vs. Unknown - Static ⁵	0.31		ASTM D1894
vs. Unknown - Static ⁴	0.27		ASTM D1894
Wear Factor ⁶			ASTM D3702
416 Stainless: 32°C	166	10 ⁻¹⁰ in ³ ·min/ft·lb·hr	
C-1018 Steel: 49°C	323	10 ⁻¹⁰ in ³ ·min/ft·lb·hr	
C-1018 Steel: 93°C	825	10 ⁻¹⁰ in ³ ·min/ft·lb·hr	

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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	8.5	kJ/m ²	
23°C	8.5	kJ/m ²	
Charpy Unnotched Impact Strength (23°C)	44	kJ/m ²	ISO 179/1eU
Notched Izod Impact Strength			ISO 180/1A
-30°C	8.5	kJ/m ²	
23°C	8.5	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	268	°C	
Heat Deflection Temperature (1.8 MPa, Unannealed)	270	°C	ISO 75-2/A
Heat Deflection Temperature (8.0 MPa, Unannealed)	215	°C	ISO 75-2/C
Glass Transition Temperature ⁷	90.0	°C	ISO 11357-2
Melting Temperature ⁷	280	°C	ISO 11357-3
CLTE - Flow	0.000022	cm/cm/°C	ISO 11359-2
CLTE - Transverse	0.000040	cm/cm/°C	ISO 11359-2
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.750 mm	V-0		
1.50 mm	V-0		
Additional Information	Nominal Value	Unit	Test Method
Specimen Thickness - Shrinkage	3.18	mm	Internal Method

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	130 to 140	°C
Drying Time	3.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Hopper Temperature	20.0 to 30.0	°C
Rear Temperature	290 to 300	°C
Middle Temperature	310 to 320	°C
Front Temperature	330 to 340	°C
Nozzle Temperature	310 to 330	°C
Processing (Melt) Temp	330 to 340	°C
Mold Temperature	140 to 160	°C
Injection Pressure	50.0 to 100	MPa
Injection Rate	Fast	
Holding Pressure	30.0 to 70.0	MPa
Back Pressure	0.00 to 3.00	MPa

Injection Notes

Manifold Temperature: 330 to 340°C
 Zone 4 Temperature: 330 to 340°C
 Feed Temperature: 60 to 80°C

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Notes

¹ Typical properties: these are not to be construed as specifications.

² Break

³ 73°F, 5 lbf, 5 in

⁴ vs Fortron 1140L4, 73°F, 5 lbf, 5 in

⁵ vs Fortron 6165A4, 73°F, 5 lbf, 5 in

⁶ 16 μ-in, PV2000, 40 psi, 50ft/min

⁷ 10°C/min