Fortron® 1140E7

Polyphenylene Sulfide

Celanese Corporation

Message:

Fortron 1140E7 is an inherently flame-retardant grade exhibiting extremely low flash and fast cycle times. It has excellent electrical properties, high hardness and stiffness. This grade exhibits good high-temperature load-bearing capabilities. It is especially used for thinner walled and longer flow length parts requiring low flash behavior. Good weldability due to a modest filler level. Commonly used in electrical connectors and other thin wall/long flow length parts.

General Information	
UL YellowCard	E107854-237736
Filler / Reinforcement	Glass fiber reinforced material, 40% filler by weight
Features	Rigidity, high Weldable Fast molding cycle Good electrical performance Heat resistance, high High hardness Flame retardancy
Uses	Thin wall parts Electrical/Electronic Applications Connector
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	0.611	cm³/g	ASTM D792
Specimen Thickness - Shrinkage	3.18	mm	Internal method
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	103		ASTM D785
M scale	100		ISO 2039-2

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	15700	MPa	ISO 527-2/1A/1
Tensile Strength			
Fracture, 23°C	152	MPa	ASTM D638
Fracture	150	MPa	ISO 527-2/1A/5
Tensile Elongation			
Fracture, 23°C	1.4	%	ASTM D638
Fracture	1.2	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	15000	MPa	ISO 178
Flexural Stress [1]	230	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	7.0	kJ/m²	ISO 179/1eA
23°C	7.0	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	28	kJ/m²	ISO 179/1eU
23°C	28	kJ/m²	ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-30°C	7.0	kJ/m²	ISO 180/1A
23°C	7.0	kJ/m²	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	270	°C	ASTM D648, 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
--	282	°C	ASTM D3418
Linear thermal expansion coefficient			ISO 11359-2
Flow	2.0E-5	cm/cm/°C	ISO 11359-2
Lateral	4.1E-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+17	ohms·cm	ASTM D257
--	> 1.0E+15	ohms·cm	IEC 60093
Dielectric Strength	25	kV/mm	IEC 60243-1
Dielectric Constant			
1 kHz	3.70		ASTM D150
1 MHz	3.70		ASTM D150
1 MHz	4.70		IEC 60250

Dissipation Factor			
1 kHz	1.0E-3		ASTM D150
1 MHz	1.0E-3		ASTM D150
1 MHz	0.020		IEC 60250
Arc Resistance	134	sec	ASTM D495
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.850 mm	V-0		UL 94
1.50 mm	V-0		UL 94
Oxygen Index	47	%	ASTM D2863, ISO 4589-2
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		

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China


WECHAT