

ULTEM™ 1110 resin

Polyether Imide

SABIC Innovative Plastics

Message:

Enhanced flow Polyetherimide (Tg 217C). Resin is RoHS compliant.

General Information			
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.37	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR)			ISO 1133
340°C/5.0 kg	12.0	cm ³ /10min	ISO 1133
360°C/5.0 kg	21.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ¹	0.40 - 0.60	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	1.2	%	ISO 62
Equilibrium, 23°C, 50% RH	0.65	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	145	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3500	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	110	MPa	ISO 527-2/50
Fracture	80.0	MPa	ISO 527-2/50
Tensile Strain			ISO 527-2/50
Yield	6.0	%	ISO 527-2/50
Fracture	10	%	ISO 527-2/50
Flexural Modulus ²	3300	MPa	ISO 178
Flexural Stress	140	MPa	ISO 178
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	10.0	mg	Internal method
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact ³			ISO 180/1A
-30°C	4.0	kJ/m ²	ISO 180/1A
23°C	4.0	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁴			
0.45 MPa, unannealed, 100 mm span	200	°C	ISO 75-2/Be
1.8 MPa, unannealed, 100 mm span	185	°C	ISO 75-2/Ae

Vicat Softening Temperature			
--	210	°C	ISO 306/A50
--	200	°C	ISO 306/B50
--	205	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ISO 11359-2
Flow: 23 to 150°C	5.0E-5	cm/cm/°C	ISO 11359-2
Horizontal: 23 to 150°C	5.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.26	W/m/K	ISO 8302
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+15	ohms·cm	IEC 60093
Dielectric Strength (3.20 mm, in Oil)	17	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	3.50		IEC 60250
60 Hz	3.50		IEC 60250
Dissipation Factor			IEC 60250
50 Hz	1.6E-3		IEC 60250
60 Hz	1.6E-3		IEC 60250
Comparative Tracking Index			IEC 60112
--	175	V	IEC 60112
Solution B	125	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.750 mm	V-0		UL 94
3.00 mm	5VA		UL 94
Glow Wire Flammability Index (3.20 mm)	960	°C	IEC 60695-2-12
Oxygen Index	47	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	150	°C	
Drying Time	4.0 - 6.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	80.0 - 100	°C	
Rear Temperature	340 - 380	°C	
Middle Temperature	360 - 400	°C	
Front Temperature	370 - 410	°C	
Nozzle Temperature	360 - 400	°C	
Processing (Melt) Temp	360 - 400	°C	
Mold Temperature	140 - 180	°C	
NOTE			
1.	Tensile Bar		
2.	2.0 mm/min		

3.	80*10*4
4.	120*10*4 mm

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