

ULTEM™ 2310R resin

Polyether Imide

SABIC Innovative Plastics

Message:

30% Glass fiber filled, enhanced flow Polyetherimide (Tg 217C) with internal mold release. Resin is RoHS compliant. UL94 V0 and 5VA listing.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Additive	demoulding		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.51	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage - Flow ¹	0.20 - 0.40	%	Internal method
Water Absorption			
24 hr	0.18	%	ASTM D570
Saturated, 23°C	0.90	%	ISO 62
Equilibrium, 23°C, 50% RH	0.50	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	165	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	9500	MPa	ISO 527-2/1
Tensile Stress (Break)	165	MPa	ISO 527-2/5
Tensile Strain (Break)	2.0	%	ISO 527-2/5
Flexural Modulus ²	8500	MPa	ISO 178
Flexural Stress	225	MPa	ISO 178
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	20.0	mg	Internal method
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	10	kJ/m ²	ISO 179/2C
Charpy Unnotched Impact Strength ³			ISO 179/1eU
-30°C	40	kJ/m ²	ISO 179/1eU
23°C	40	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	100	J/m	ASTM D256
Unnotched Izod Impact			
23°C	430	J/m	ASTM D4812
-30°C ⁴	40	kJ/m ²	ISO 180/1U
23°C ⁵	40	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁶			

0.45 MPa, unannealed, 100 mm span	215	°C	ISO 75-2/Be
1.8 MPa, unannealed, 100 mm span	210	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	228	°C	ASTM D1525 ⁷
--	225	°C	ISO 306/A50
--	213	°C	ISO 306/B50
--	220	°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	2.0E-5	cm/cm/°C	ISO 11359-2
Horizontal: 23 to 150°C	6.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.30	W/m/K	ISO 8302
RTI Elec	180	°C	UL 746
RTI Imp	170	°C	UL 746
RTI	180	°C	UL 746
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			IEC 60243-1
0.800mm, in oil	35	kV/mm	IEC 60243-1
1.60mm, in oil	26	kV/mm	IEC 60243-1
3.20mm, in oil	15	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	3.30		IEC 60250
60 Hz	3.30		IEC 60250
1 MHz	3.40		IEC 60250
Dissipation Factor			IEC 60250
50 Hz	1.6E-3		IEC 60250
60 Hz	1.6E-3		IEC 60250
1 kHz	1.5E-3		IEC 60250
1 MHz	2.3E-3		IEC 60250
2.45 GHz	5.3E-3		IEC 60250
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.250 mm	V-0		UL 94
1.20 mm	5VA		UL 94
Glow Wire Flammability Index (3.20 mm)	960	°C	IEC 60695-2-12
Oxygen Index	48	%	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 - 120	°C
Rear Temperature	350 - 400	°C
Middle Temperature	360 - 410	°C
Front Temperature	370 - 420	°C
Nozzle Temperature	360 - 410	°C
Processing (Melt) Temp	370 - 410	°C
Mold Temperature	140 - 180	°C

NOTE		
1.	Tensile Bar	
2.	2.0 mm/min	
3.	80*10*4 sp=62mm	
4.	80*10*4	
5.	80*10*4	
6.	120*10*4 mm	
7.	标准 B (120°C/h), 载荷2 (50N)	

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