

ULTEM™ 2312 resin

Polyether Imide

SABIC Innovative Plastics

Message:

30% Milled glass filled, enhanced flow Polyetherimide (Tg 217C). Resin is RoHS compliant. UL94 V0 and 5VA listing.

General Information			
Filler / Reinforcement	Glass fiber with embossing, 30% filler by weight		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.51	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (360°C/5.0 kg)	12.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ¹	0.20 - 0.40	%	Internal method
Water Absorption			ISO 62
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)	160	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	6000	MPa	ISO 527-2/1
Tensile Stress (Break)	85.0	MPa	ISO 527-2/5
Tensile Strain (Break)	3.0	%	ISO 527-2/5
Flexural Modulus ²	6000	MPa	ISO 178
Flexural Stress	145	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	4.0	kJ/m ²	ISO 179/2C
Charpy Unnotched Impact Strength ³			ISO 179/1eU
-30°C	25	kJ/m ²	ISO 179/1eU
23°C	25	kJ/m ²	ISO 179/1eU
Unnotched Izod Impact Strength ⁴			ISO 180/1U
-30°C	20	kJ/m ²	ISO 180/1U
23°C	20	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁵			
0.45 MPa, unannealed, 100 mm span	206	°C	ISO 75-2/Be
1.8 MPa, unannealed, 100 mm span	192	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	220	°C	ISO 306/A50

--	211	°C	ISO 306/B50
--	213	°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	2.3E-5	cm/cm/°C	ISO 11359-2
Horizontal: 23 to 150°C	2.7E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.30	W/m/K	ISO 8302
RTI Elec	170	°C	UL 746
RTI Imp	170	°C	UL 746
RTI	170	°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
Relative Permittivity (1 MHz)	3.40		IEC 60250
Comparative Tracking Index	150	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.810 mm)	V-0		UL 94
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 sp=62mm		
4.	80*10*4		
5.	120*10*4 mm		

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