

ULTEM™ HU2310 resin

Polyether Imide

SABIC Innovative Plastics

Message:

30% Glass fiber filled, enhanced flow Polyetherimide (Tg 217°C). RoHS compliant. For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO 10993 or USP Class VI), food contact compliant. UL94 V0 and 5VA listed.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Features	Biocompatibility		
	Compliance of Food Exposure		
Uses	Drug		
	Medical/nursing supplies		
Agency Ratings	ISO 10993		
	USP Class VI		
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
Melt Mass-Flow Rate (MFR) (337°C/6.6 kg)	7.6	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (360°C/5.0 kg)	8.00	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	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
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	9240	MPa	ASTM D638
--	9500	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	169	MPa	ASTM D638
Yield	165	MPa	ISO 527-2/5
Fracture ³	159	MPa	ASTM D638
Fracture	165	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	3.0	%	ASTM D638
Yield	2.0	%	ISO 527-2/5

Fracture ⁵	3.0	%	ASTM D638
Fracture	2.0	%	ISO 527-2/5
Flexural Modulus			
50.0mm span ⁶	9250	MPa	ASTM D790
-- ⁷	8500	MPa	ISO 178
Flexural Stress			
--	225	MPa	ISO 178
Yield, 50.0mm span ⁸	220	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	10	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	90	J/m	ASTM D256
23°C	85	J/m	ASTM D256
-30°C ¹⁰	10	kJ/m ²	ISO 180/1A
23°C ¹¹	10	kJ/m ²	ISO 180/1A
Instrumented Dart Impact (23°C, Total Energy)	10.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, unannealed, 3.20mm	208	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	210	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹²	210	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	228	°C	ASTM D1525 ¹³
--	213	°C	ISO 306/B50
--	220	°C	ISO 306/B120
Linear thermal expansion coefficient			
Flow: -20 to 150°C	1.6E-5	cm/cm/°C	ASTM E831
Flow: 23 to 150°C	1.6E-5	cm/cm/°C	ISO 11359-2
Lateral: -20 to 150°C	4.1E-5	cm/cm/°C	ASTM E831
Horizontal: 23 to 150°C	4.1E-5	cm/cm/°C	ISO 11359-2
Injection	Nominal Value	Unit	
Drying Temperature	149	°C	
Drying Time	4.0 - 6.0	hr	
Drying Time, Maximum	24	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 - 60	%	
Rear Temperature	332 - 399	°C	
Middle Temperature	338 - 399	°C	
Front Temperature	343 - 399	°C	
Nozzle Temperature	343 - 399	°C	
Processing (Melt) Temp	349 - 399	°C	

Mold Temperature	135 - 163	°C
Back Pressure	0.345 - 0.689	MPa
Screw Speed	40 - 70	rpm
Vent Depth	0.025 - 0.076	mm

NOTE		
1.	5.0 mm/min	
2.	Type 1, 5.0 mm/min	
3.	Type 1, 5.0 mm/min	
4.	Type 1, 5.0 mm/min	
5.	Type 1, 5.0 mm/min	
6.	1.3 mm/min	
7.	2.0 mm/min	
8.	1.3 mm/min	
9.	80*10*4 sp=62mm	
10.	80*10*4	
11.	80*10*4	
12.	80*10*4 mm	
13.	标准 B (120°C/h), 载荷2 (50N)	

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