

ULTEM™ HU2310 resin

Polyether Imide

SABIC Innovative Plastics

Message:

30% Glass fiber filled, enhanced flow Polyetherimide (Tg 217C). ECO Conforming. For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO 10993 or USP Class VI), food contact compliant.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Features	Comply with ECO		
	Biocompatibility		
	Compliance of Food Exposure		
Uses	Drug		
	Medical/nursing supplies		
Agency Ratings	EU Eco		
	ISO 10993		
	USP Class VI		
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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