

ULTEM™ HU2100 resin

Polyether Imide

SABIC Innovative Plastics

Message:

10% Glass fiber filled, standard flow Polyetherimide (Tg 217C). US FDA and European Food Contact approved. For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO 10993 or USP Class VI).

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 10% filler by weight		
Features	Biocompatibility		
	Compliance of Food Exposure		
Uses	Drug		
	Medical/nursing supplies		
Agency Ratings	FDA Food Exposure, Not Rated		
	ISO 10993		
	USP Class VI		
	European food contact, not rated		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.34	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (200°C/3.8 kg)	5.0	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (360°C/5.0 kg)	9.00	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.60	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	1.0	%	ISO 62
Equilibrium, 23°C, 50% RH	0.60	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	4680	MPa	ASTM D638
--	4500	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	114	MPa	ASTM D638
Yield	115	MPa	ISO 527-2/5
Fracture ³	115	MPa	ASTM D638
Fracture	115	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	6.0	%	ASTM D638

Yield	4.0	%	ISO 527-2/5
Fracture ⁵	6.0	%	ASTM D638
Fracture	4.0	%	ISO 527-2/5
Flexural Modulus			
50.0mm span ⁶	5500	MPa	ASTM D790
-- ⁷	4500	MPa	ISO 178
Flexural Stress			
--	185	MPa	ISO 178
Yield, 50.0mm span ⁸	160	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	7.0	kJ/m ²	ISO 179/1eA
Notched Izod Impact			ASTM D256
-30°C	53	J/m	ASTM D256
23°C	53	J/m	ASTM D256
Unnotched Izod Impact Strength ¹⁰			ISO 180/1U
-30°C	30	kJ/m ²	ISO 180/1U
23°C	30	kJ/m ²	ISO 180/1U
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	205	°C	ASTM D648
1.8 MPa, unannealed, 100 mm span ¹¹	205	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	223	°C	ASTM D1525 ¹²
--	212	°C	ISO 306/B50
--	217	°C	ISO 306/B120
Linear thermal expansion coefficient			
Flow: -40 to 40°C	3.2E-5	cm/cm/°C	ASTM E831
Flow: 23 to 150°C	2.6E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	6.0E-5	cm/cm/°C	ASTM E831
Horizontal: 23 to 150°C	6.0E-5	cm/cm/°C	ISO 11359-2
RTI Elec	170	°C	UL 746
RTI Imp	170	°C	UL 746
RTI	170	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength (3.20 mm, in Oil)	15	kV/mm	IEC 60243-1
Comparative Tracking Index	150	V	IEC 60112
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	340 - 395	°C
Middle Temperature	350 - 405	°C
Front Temperature	360 - 415	°C
Nozzle Temperature	350 - 405	°C
Processing (Melt) Temp	370 - 410	°C
Mold Temperature	140 - 180	°C

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.	120*10*4 mm
12.	标准 B (120°C/h), 载荷2 (50N)

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