

ULTEM™ 2310F resin

Polyether Imide

SABIC Innovative Plastics

Message:

30% Glass fiber filled, enhanced flow Polyetherimide (Tg 217C). ECO Conforming. US FDA Food Contact compliant in recognized colors.

General Information			
UL YellowCard	E121562-221099		
Filler / Reinforcement	Glass Fiber,30% Filler by Weight		
Features	ECO Compliant		
	Food Contact Acceptable		
	Good Flow		
Agency Ratings	EU Eco		
	FDA Food Contact, Unspecified Rating		
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			Internal Method
Flow : 3.20 mm	0.20 to 0.40	%	
Across Flow : 3.20 mm	0.20 to 0.40	%	
Water Absorption			ISO 62
Saturation, 23°C	0.90	%	
Equilibrium, 23°C, 50% RH	0.50	%	
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
Break ³	159	MPa	ASTM D638
Break	165	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	3.0	%	ASTM D638
Yield	2.0	%	ISO 527-2/5

Break ⁵	3.0	%	ASTM D638
Break	2.0	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁶	9250	MPa	ASTM D790
-- ⁷	8500	MPa	ISO 178
Flexural Stress			
--	225	MPa	ISO 178
Yield, 50.0 mm Span ⁸	220	MPa	ASTM D790
Break, 100 mm Span ⁹	221	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ¹⁰ (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 ¹¹	10	kJ/m ²	ISO 180/1A
23°C ¹²	10	kJ/m ²	ISO 180/1A
Reverse Notch Izod Impact (3.20 mm)	440	J/m	ASTM D256
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, 3.20 mm	208	°C	ASTM D648
1.8 MPa, Unannealed, 6.40 mm	210	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹³	210	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	228	°C	ASTM D1525 ¹⁴
--	213	°C	ISO 306/B50
--	220	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			
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
Transverse : -20 to 150°C	4.1E-5	cm/cm/°C	ASTM E831
Transverse : 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 to 6.0	hr	
Drying Time, Maximum	24	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 60	%	
Rear Temperature	332 to 399	°C	
Middle Temperature	338 to 399	°C	

Front Temperature	343 to 399	°C
Nozzle Temperature	343 to 399	°C
Processing (Melt) Temp	349 to 399	°C
Mold Temperature	135 to 163	°C
Back Pressure	0.345 to 0.689	MPa
Screw Speed	40 to 70	rpm
Vent Depth	0.025 to 0.076	mm

NOTE

1.	5.0 mm/min
2.	Type I, 5.0 mm/min
3.	Type I, 5.0 mm/min
4.	Type I, 5.0 mm/min
5.	Type I, 5.0 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	2.6 mm/min
10.	80*10*4 sp=62mm
11.	80*10*4
12.	80*10*4
13.	80*10*4 mm
14.	Rate B (120°C/h), Loading 2 (50 N)

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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