

ULTEM™ 2210F resin

Polyether Imide

SABIC Innovative Plastics Europe

Message:

20% Glass fiber filled, enhanced flow Polyetherimide (Tg 217°C). Resin is RoHS compliant. US FDA and European Food Contact approved. Effective June, 2007 this grade will no longer be supported with biocompatibility information and should not be used for medical applications which require biocompatibility. Alternative grade HU2210.

General Information			
Filler / Reinforcement	Glass Fiber,20% Filler by Weight		
Features	Food Contact Acceptable		
Agency Ratings	EU Food Contact, Unspecified Rating		
	FDA Food Contact, Unspecified Rating		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.42	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (360°C/5.0 kg)	10.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ¹	0.30 to 0.50	%	Internal Method
Water Absorption			ISO 62
Saturation, 23°C	1.0	%	
Equilibrium, 23°C, 50% RH	0.55	%	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	150	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	6800	MPa	ISO 527-2/1
Tensile Stress (Break)	140	MPa	ISO 527-2/5
Tensile Strain (Break)	2.0	%	ISO 527-2/5
Flexural Modulus ²	6500	MPa	ISO 178
Flexural Stress	210	MPa	ISO 178
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	17.0	mg	Internal Method
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	9.0	kJ/m ²	ISO 179/2C
Charpy Unnotched Impact Strength ³			ISO 179/1eU
-30°C	35	kJ/m ²	
23°C	35	kJ/m ²	
Unnotched Izod Impact Strength ⁴			ISO 180/1U
-30°C	30	kJ/m ²	

23°C	30	kJ/m ²	
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁵			
0.45 MPa, Unannealed, 100 mm Span	210	°C	ISO 75-2/Be
1.8 MPa, Unannealed, 100 mm Span	205	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	223	°C	ISO 306/A50
--	212	°C	ISO 306/B50
--	218	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			ISO 11359-2
Flow : 23 to 150°C	2.5E-5	cm/cm/°C	
Transverse : 23 to 150°C	6.0E-5	cm/cm/°C	
Thermal Conductivity	0.28	W/m/K	ISO 8302
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	1.0E+15	ohms · cm	IEC 60093
Electric Strength			IEC 60243-1
0.800 mm, in Oil	34	kV/mm	
1.60 mm, in Oil	26	kV/mm	
3.20 mm, in Oil	16	kV/mm	
Relative Permittivity			IEC 60250
50 Hz	3.10		
60 Hz	3.10		
1 MHz	3.00		
Dissipation Factor			IEC 60250
50 Hz	8.0E-4		
60 Hz	8.0E-4		
1 MHz	2.5E-3		
2.45 GHz	4.9E-3		
Comparative Tracking Index			IEC 60112
--	150	V	
Solution B	100	V	
Flammability	Nominal Value	Unit	Test Method
Glow Wire Flammability Index (3.20 mm)	960	°C	IEC 60695-2-12
Oxygen Index	46	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	150	°C	
Drying Time	4.0 to 6.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	80.0 to 120	°C	
Rear Temperature	350 to 400	°C	

Middle Temperature	360 to 410	°C
Front Temperature	370 to 420	°C
Nozzle Temperature	360 to 410	°C
Processing (Melt) Temp	370 to 410	°C
Mold Temperature	140 to 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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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

