

ULTEM™ 2100R resin

Polyether Imide

SABIC Innovative Plastics

Message:

10% Glass fiber filled, standard flow Polyetherimide (Tg 217C) with internal mold release. ECO Conforming, UL94 V0 and 5VA listing.

General Information			
UL YellowCard	E121562-100732300	E121562-502535	
Filler / Reinforcement	Glass Fiber,10% Filler by Weight		
Additive	Mold Release		
Features	ECO Compliant		
Agency Ratings	EU Eco		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.34	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (337°C/6.6 kg)	7.8	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.60	%	Internal Method
Water Absorption			ASTM D570
24 hr	0.21	%	
Equilibrium, 23°C	1.2	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	114		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	4690	MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	114	MPa	
Break	116	MPa	
Tensile Elongation ³ (Break)	6.0	%	ASTM D638
Flexural Modulus ⁴ (100 mm Span)	5170	MPa	ASTM D790
Flexural Strength ⁵ (Break, 100 mm Span)	200	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	85	J/m	ASTM D256
Unnotched Izod Impact (23°C)	480	J/m	ASTM D4812
Reverse Notch Izod Impact (3.20 mm)	510	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	210	°C	
1.8 MPa, Unannealed, 6.40 mm	209	°C	
Vicat Softening Temperature	223	°C	ASTM D1525 ⁶
CLTE - Flow (-20 to 150°C)	3.2E-5	cm/cm/°C	ASTM E831

RTI Elec	170	°C	UL 746
RTI Imp	170	°C	UL 746
RTI Str	170	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+17	ohms·cm	ASTM D257
Dielectric Strength (1.60 mm, in Oil)	28	kV/mm	ASTM D149
Dielectric Constant (1 kHz)	3.50		ASTM D150
Dissipation Factor			ASTM D150
1 kHz	1.4E-3		
2.45 GHz	4.6E-3		
Arc Resistance ⁷	PLC 6		ASTM D495
Comparative Tracking Index (CTI)	PLC 4		UL 746
High Amp Arc Ignition (HAI)	PLC 4		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 2		UL 746
Hot-wire Ignition (HWI)	PLC 1		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.406 mm	V-0		
1.91 mm	5VA		
Oxygen Index	47	%	ASTM D2863
NBS Smoke Density - Flaming, Ds, 4 min	1.80		ASTM E662
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.	2.6 mm/min		
5.	2.6 mm/min		

6.	Rate B (120°C/h), Loading 2 (50 N)
7.	Tungsten Electrode

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