

ULTEM™ ATX200R resin

Polyether Imide + PCE

SABIC Innovative Plastics

Message:

High flow Polyetherimide blend with internal mold release. RoHS compliant. UL94 V0 Listing.

General Information			
UL YellowCard	E45329-100397331		
Additive	demoulding		
Features	High liquidity		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.26	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (337°C/6.6 kg)	24	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (340°C/5.0 kg)	16.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal method
Flow ¹	0.50 - 0.70	%	Internal method
Flow: 3.20mm	0.50 - 0.70	%	Internal method
Transverse flow: 3.20mm	0.50 - 0.70	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.90	%	ISO 62
Equilibrium, 23°C, 50% RH	0.50	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness (H 358/30)	125	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ²	3300	MPa	ASTM D638
--	3000	MPa	ISO 527-2/1
Tensile Strength			
Yield ³	97.0	MPa	ASTM D638
Yield	95.0	MPa	ISO 527-2/50
Fracture ⁴	85.0	MPa	ASTM D638
Fracture	75.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield ⁵	7.0	%	ASTM D638
Yield	6.5	%	ISO 527-2/50
Fracture ⁶	70	%	ASTM D638
Fracture	20	%	ISO 527-2/50

Flexural Modulus			
50.0mm span ⁷	3170	MPa	ASTM D790
-- ⁸	3100	MPa	ISO 178
Flexural Stress			
--	125	MPa	ISO 178
Yield, 50.0mm span ⁹	145	MPa	ASTM D790
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	20.0	mg	Internal method
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ¹⁰			ISO 179/1eA
-30°C	4.0	kJ/m ²	ISO 179/1eA
23°C	4.0	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	55	J/m	ASTM D256
23°C	53	J/m	ASTM D256
-30°C ¹¹	5.0	kJ/m ²	ISO 180/1A
23°C ¹²	5.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact (23°C)	2100	J/m	ASTM D4812
Reverse Notch Izod Impact (3.20 mm)	2700	J/m	ASTM D256
Instrumented Dart Impact (23°C, Total Energy)	50.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, unannealed, 100 mm span ¹³	195	°C	ISO 75-2/Be
1.8 MPa, unannealed, 3.20mm	187	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	191	°C	ASTM D648
1.8 MPa, unannealed, 100 mm span ¹⁴	180	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	209	°C	ASTM D1525 ¹⁵
--	210	°C	ISO 306/A50
--	200	°C	ISO 306/B50
--	205	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			
Flow: -40 to 150°C	5.0E-5	cm/cm/°C	ASTM E831
Flow: 23 to 150°C	5.0E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 150°C	5.0E-5	cm/cm/°C	ASTM E831
Horizontal: 23 to 150°C	5.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.23	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
Relative Permittivity			IEC 60250

50 Hz	2.90		IEC 60250
60 Hz	2.90		IEC 60250
1 MHz	2.90		IEC 60250
Dissipation Factor			IEC 60250
50 Hz	1.0E-3		IEC 60250
60 Hz	1.0E-3		IEC 60250
1 MHz	5.0E-3		IEC 60250
Comparative Tracking Index	150	V	IEC 60112
High Amp Arc Ignition (HAI)	PLC 4		UL 746
Hot-wire Ignition (HWI)	PLC 0		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.750 mm	V-2		UL 94
1.50 mm	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	130 - 140	°C	
Drying Time	3.0 - 4.0	hr	
Hopper Temperature	80.0 - 100	°C	
Rear Temperature	320 - 340	°C	
Middle Temperature	330 - 350	°C	
Front Temperature	340 - 360	°C	
Nozzle Temperature	340 - 360	°C	
Processing (Melt) Temp	340 - 380	°C	
Mold Temperature	125 - 140	°C	
NOTE			
1.	Tensile Bar		
2.	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.	Type 1, 5.0 mm/min		
7.	1.3 mm/min		
8.	2.0 mm/min		
9.	1.3 mm/min		
10.	80*10*4 sp=62mm		
11.	80*10*4		
12.	80*10*4		
13.	120*10*4 mm		
14.	120*10*4 mm		
15.	标准 B (120°C/h), 载荷2 (50N)		

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