

ULTEM™ ATX3562R resin

Polyether Imide + PCE

SABIC Innovative Plastics

Message:

50% Glass fiber and mineral filled, high flow Polyetherimide blend with internal mold release and enhanced dimensional stability. ECO Conforming.

General Information			
Filler / Reinforcement	Glass\Mineral,50% Filler by Weight		
Additive	Mold Release		
Features	ECO Compliant		
	Good Dimensional Stability		
	High Flow		
Agency Ratings	EU Eco		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.69	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (337°C/6.6 kg)	20	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (360°C/5.0 kg)	20.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.20 to 0.30	%	
Across Flow : 3.20 mm	0.30 to 0.50	%	
Water Absorption			ISO 62
Saturation, 23°C	0.10	%	
Equilibrium, 23°C, 50% RH	0.040	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	14900	MPa	ASTM D638
--	14700	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	125	MPa	ASTM D638
Yield	121	MPa	ISO 527-2/5
Break ³	125	MPa	ASTM D638
Break	121	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	2.5	%	ASTM D638
Yield	1.4	%	ISO 527-2/5
Break ⁵	2.5	%	ASTM D638
Break	1.4	%	ISO 527-2/5

Flexural Modulus			
50.0 mm Span ⁶	12900	MPa	ASTM D790
-- ⁷	13600	MPa	ISO 178
Flexural Stress			
--	172	MPa	ISO 178
Yield, 50.0 mm Span ⁸	180	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	4.8	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
-30°C	50	J/m	ASTM D256
23°C	50	J/m	ASTM D256
-30°C ¹⁰	5.4	kJ/m ²	ISO 180/1A
23°C ¹¹	5.6	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ¹² (23°C)	5.6	kJ/m ²	ISO 180/1U
Reverse Notch Izod Impact (3.20 mm)	110	J/m	ASTM D256
Instrumented Dart Impact (23°C, Total Energy)	12.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed, 64.0 mm Span ¹³	195	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	183	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁴	182	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	184	°C	ASTM D1525 ¹⁵
--	187	°C	ISO 306/B50
--	195	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			
Flow : -40 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 : -40 to 150°C	3.8E-5	cm/cm/°C	ASTM E831
Transverse : 23 to 150°C	3.8E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	2.1E+15	ohms	ASTM D257
Volume Resistivity	6.0E+15	ohms · cm	ASTM D257
Injection	Nominal Value	Unit	
Drying Temperature	135	°C	
Drying Time	4.0 to 6.0	hr	
Drying Time, Maximum	10	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 60	%	
Rear Temperature	338 to 360	°C	

Middle Temperature	343 to 366	°C
Front Temperature	349 to 371	°C
Nozzle Temperature	349 to 371	°C
Processing (Melt) Temp	349 to 371	°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.	80*10*4 sp=62mm
10.	80*10*4
11.	80*10*4
12.	80*10*4
13.	80*10*4 mm
14.	80*10*4 mm
15.	Rate B (120°C/h), Loading 2 (50 N)

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