

# ULTEM™ RESIN ATX3562R

REGION ASIA

## DESCRIPTION

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

## TYPICAL PROPERTY VALUES

Revision 20170913

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 5 mm/min	125	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	125	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	2.5	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.5	%	ASTM D 638
Tensile Modulus, 5 mm/min	14940	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	180	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	12900	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	121	MPa	ISO 527
Tensile Stress, break, 5 mm/min	121	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	1.4	%	ISO 527
Tensile Strain, break, 5 mm/min	1.4	%	ISO 527
Tensile Modulus, 1 mm/min	14690	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	172	MPa	ISO 178
Flexural Modulus, 2 mm/min	13550	MPa	ISO 178
<b>IMPACT</b>			
Izod Impact, notched, 23°C	50	J/m	ASTM D 256
Izod Impact, notched, -30°C	49	J/m	ASTM D 256
Izod Impact, Reverse Notched, 3.2 mm	111	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	12	J	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	5	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	5	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	4	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	184	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	183	°C	ASTM D 648
CTE, -40°C to 150°C, flow	1.6E-05	1/°C	ASTME 831

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 150°C, xflow	3.8E-05	1/°C	ASTM E 831
CTE, 23°C to 150°C, flow	1.6E-05	1/°C	ISO 11359-2
CTE, 23°C to 150°C, xflow	3.8E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	Passes	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	187	°C	ISO 306
Vicat Softening Temp, Rate B/120	195	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	195	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	182	°C	ISO 75/Af
<b>PHYSICAL</b>			
Specific Gravity	1.69	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.2 – 0.3	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm (5)	0.3 – 0.5	%	SABIC method
Melt Flow Rate, 337°C/6.6 kgf	20	g/10 min	ASTM D 1238
Density	1.69	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/sat)	0.1	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.04	%	ISO 62
Melt Volume Rate, MVR at 360°C/5.0 kg	20	cm <sup>3</sup> /10 min	ISO 1133
<b>ELECTRICAL</b>			
Volume Resistivity	6.E+15	Ohm-cm	ASTM D 257
Surface Resistivity	2.1E+15	Ohm	ASTM D 257
<b>INJECTION MOLDING</b>			
Drying Temperature	135	°C	
Drying Time	4 – 6	hrs	
Drying Time (Cumulative)	10	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	350 – 370	°C	
Nozzle Temperature	350 – 370	°C	
Front - Zone 3 Temperature	350 – 370	°C	
Middle - Zone 2 Temperature	345 – 365	°C	
Rear - Zone 1 Temperature	340 – 360	°C	
Mold Temperature	135 – 165	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	40 – 60	%	
Vent Depth	0.025 – 0.076	mm	



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