ULTEM™ Resin ATX3562R

REGION AMERICAS

DESCRIPTION

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

INDUSTRY	SUB INDUSTRY
Automotive	Heavy Truck, Automotive Under the Hood, Motorcycle, Recreational/Specialty Vehicles
Electrical and Electronics	Energy Management, Wireless Communication
Mass Transportation	Rail

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	125	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	125	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	2.5	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	2.5	%	ASTM D638
Tensile Modulus, 5 mm/min	14940	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	180	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	12900	MPa	ASTM D790
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
IMPACT			
Izod Impact, notched, 23°C	50	J/m	ASTM D256
Izod Impact, notched, -30°C	49	J/m	ASTM D256
Izod Impact, Reverse Notched, 3.2 mm	111	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	12	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	5	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	5	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	4	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	184	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	183	°C	ASTM D648
CTE, -40°C to 150°C, flow	1.6E-05	1/°C	ASTM E831
CTE, -40°C to 150°C, xflow	3.8E-05	1/°C	ASTM E831
CTE, 23°C to 150°C, flow	1.6E-05	1/°C	ISO 11359-2

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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
PHYSICAL			
Specific Gravity	1.69	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.2 – 0.3	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.3 – 0.5	%	SABIC method
Melt Flow Rate, 337°C/6.6 kgf	20	g/10 min	ASTM D1238
Density	1.69	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	0.1	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.04	%	ISO 62
Melt Volume Rate, MVR at 360°C/5.0 kg	20	cm³/10 min	ISO 1133
ELECTRICAL			
Volume Resistivity	6.E+15	Ω.cm	ASTM D257
Surface Resistivity	2.1E+15	Ω	ASTM D257
INJECTION MOLDING			
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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