

# ULTEM™ RESIN AR9100

REGION AMERICAS

## DESCRIPTION

10% Glass fiber filled, standard flow Polyetherimide (Tg 217C). Meets FAR 25.853 and OSU 65/65 with low toxicity, smoke, and flame evolution. ECO Conforming.

INDUSTRY	SUB INDUSTRY
Automotive	Aerospace
Mass Transportation	Rail

## TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 5 mm/min	110	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	119	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	8	%	ASTM D638
Tensile Modulus, 5 mm/min	4340	MPa	ASTM D638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	193	MPa	ASTM D790
Flexural Modulus, 2.6 mm/min, 100 mm span	5030	MPa	ASTM D790
<b>IMPACT</b>			
Izod Impact, notched, 23°C	69	J/m	ASTM D256
Izod Impact, Reverse Notched, 3.2 mm	480	J/m	ASTM D256
<b>THERMAL</b>			
HDT, 1.82 MPa, 6.4 mm, unannealed	207	°C	ASTM D648
<b>PHYSICAL</b>			
Specific Gravity	1.32	-	ASTM D792
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.6	%	SABIC method
Melt Flow Rate, 337°C/6.6 kgf	6.9	g/10 min	ASTM D1238
<b>FLAME CHARACTERISTICS</b>			
FAA Flammability, FAR 25.853 A/B	NATURAL	-	FAR 25.853
OSU total heat release (2 minute test)	5	kW-min/m <sup>2</sup>	FAR 25.853
OSU peak heat release rate (5 minute test)	40	kW/m <sup>2</sup>	FAR 25.853
Vertical Burn a (60s) passes at	0	Seconds	FAR 25.853
Vertical Burn b (12s) passes at	0	Seconds	FAR 25.853
NBS Smoke Density, Flaming, Dmax	5	-	ASTM E662
NBS Smoke Density, Flaming, Ds 1.5 min	0	-	ASTM E662
NBS Smoke Density, Flaming, Ds 4 min	5	-	ASTM E662
<b>INJECTION MOLDING</b>			
Drying Temperature	150	°C	
Drying Time	4 – 6	Hrs	
Drying Time (Cumulative)	24	Hrs	
Maximum Moisture Content	0.02	%	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Melt Temperature	365 – 390	°C	
Nozzle Temperature	360 – 380	°C	
Front - Zone 3 Temperature	365 – 390	°C	
Middle - Zone 2 Temperature	355 – 375	°C	
Rear - Zone 1 Temperature	345 – 365	°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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