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 20260205

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
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
IMPACT			
Izod Impact, notched, 23°C	69	J/m	ASTM D256
Izod Impact, Reverse Notched, 3.2 mm	480	J/m	ASTM D256
THERMAL			
HDT, 1.82 MPa, 6.4 mm, unannealed	207	°C	ASTM D648
PHYSICAL			
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
FLAME CHARACTERISTICS			
FAA Flammability, FAR 25.853 A/B	NATURAL	-	FAR 25.853
OSU total heat release (2 minute test)	5	kW-min/m²	FAR 25.853
OSU peak heat release rate (5 minute test)	40	kW/m²	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
INJECTION MOLDING			
Drying Temperature	150	°C	
Drying Time	4 – 6	Hrs	
Drying Time (Cumulative)	24	Hrs	
Maximum Moisture Content	0.02	%	

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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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