

ULTEM™ AR9100 resin

Polyether Imide

SABIC Innovative Plastics

Message:

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.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 10% filler by weight		
Features	Low smoke		
	Low toxicity		
	Comply with ECO		
Agency Ratings	EU Eco		
	FAR 25.853		
	OSU 65/65		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.32	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (337°C/6.6 kg)	6.9	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.50 - 0.60	%	Internal method
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	4340	MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	110	MPa	ASTM D638
Fracture	120	MPa	ASTM D638
Tensile Elongation ³ (Break)	8.0	%	ASTM D638
Flexural Modulus ⁴ (100 mm Span)	5030	MPa	ASTM D790
Flexural Strength ⁵ (Yield, 100 mm Span)	193	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	69	J/m	ASTM D256
Reverse Notch Izod Impact (3.20 mm)	480	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed, 6.40 mm)	208	°C	ASTM D648
Flammability	Nominal Value	Unit	Test Method
FAA Flammability ⁶	NATURAL		FAR 25.853
NBS Smoke Density			ASTM E662
Flaming, Dmax	5.00		ASTM E662
Flaming, Ds, 1.5 min	0.00		ASTM E662

Flaming, Ds, 4 min	5.00		ASTM E662
OSU peak heat release rate ⁷	40.0	kW/m ²	FAR 25.853
OSU total heat release ⁸	5.00	kW · min/m ²	FAR 25.853
Vertical Burn Test			FAR 25.853
Test a (60 s), passes at	0.0	hr	FAR 25.853
Test b (12 s), passes at	0.0	hr	FAR 25.853
Injection	Nominal Value	Unit	
Drying Temperature	149	°C	
Drying Time	4.0 - 6.0	hr	
Drying Time, Maximum	24	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 - 60	%	
Rear Temperature	343 - 366	°C	
Middle Temperature	354 - 377	°C	
Front Temperature	366 - 388	°C	
Nozzle Temperature	360 - 382	°C	
Processing (Melt) Temp	366 - 388	°C	
Mold Temperature	135 - 163	°C	
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	40 - 70	rpm	
Vent Depth	0.025 - 0.076	mm	
NOTE			
1.	5.0 mm/min		
2.	Type 1, 5.0 mm/min		
3.	Type 1, 5.0 mm/min		
4.	2.6 mm/min		
5.	2.6 mm/min		
6.	Method A/B		
7.	5 minute test		
8.	2 minute test		

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