

Ultem* Resin AR9100

Americas: COMMERCIAL

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.

Property

TYPICAL PROPERTIES ⁽¹⁾			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yld, Type I, 5 mm/min	110	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	119	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	8	%	ASTM D 638
Tensile Modulus, 5 mm/min	4340	MPa	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	193	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	5030	MPa	ASTM D 790
IMPACT	Value	Unit	Standard
Izod Impact, notched, 23°C	69	J/m	ASTM D 256
Izod Impact, Reverse Notched, 3.2 mm	480	J/m	ASTM D 256
THERMAL	Value	Unit	Standard
HDT, 1.82 MPa, 6.4 mm, unannealed	207	°C	ASTM D 648
PHYSICAL	Value	Unit	Standard
Specific Gravity	1.32	-	ASTM D 792
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 D 1238
FLAME CHARACTERISTICS	Value	Unit	Standard
FAA Flammability, FAR 25.853 A/B	NATURAL	-	FAR 25.853
OSU total heat release (2 minute test)	5	kW-min/m ²	FAR 25.853
OSU peak heat release rate (5 minute test)	40	kW/m ²	FAR 25.853
Vertical Burn a (60s) passes at	0	sec	FAR 25.853
Vertical Burn b (12s) passes at	0	sec	FAR 25.853
NBS Smoke Density, Flaming, Dmax	5	-	ASTM E 662
NBS Smoke Density, Flaming, Ds 1.5 min	0	-	ASTM E 662
NBS Smoke Density, Flaming, Ds 4 min	5	-	ASTM E 662

Source GMD, last updated:01/13/2000

Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	150	°C
Drying Time	4 - 6	hrs
Drying Time (Cumulative)	24	hrs
Maximum Moisture Content	0.02	%
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

Source GMD, last updated:01/13/2000

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

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