



ULTEM™ Resin SF2250

Americas: COMMERCIAL

High flow ULTEM for thin wall application

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	1650	kgf/cm ²	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	3	%	ASTM D 638
Tensile Modulus, 5 mm/min	90700	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	2000	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	74000	kgf/cm ²	ASTM D 790
Tensile Stress, break, 5 mm/min	157	MPa	ISO 527
Tensile Strain, break, 5 mm/min	3	%	ISO 527
Flexural Modulus, 2 mm/min	7150	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	9	cm-kgf/cm	ASTM D 256
Izod Impact, notched 80*10*4 +23°C	9	kJ/m ²	ISO 180/1A
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	203	°C	ASTM D 648
CTE, -40°C to 150°C, flow	1.4E-05	1/°C	ASTM E 831
CTE, -40°C to 150°C, xflow	5.4E-05	1/°C	ASTM E 831
CTE, 23°C to 150°C, flow	1.8E-05	1/°C	ISO 11359-2
CTE, 23°C to 150°C, xflow	5.9E-05	1/°C	ISO 11359-2
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	208	°C	ISO 75/Ae
PHYSICAL			
Specific Gravity	1.44	-	ASTM D 792
Moisture absorption (23°C/50%)	0.07	%	-
Mold Shrinkage, flow (5)	0.46	%	SABIC Method
Mold Shrinkage, xflow (5)	0.54	%	SABIC Method
Melt Flow Rate, 337°C/6.6 kgf	19.7	g/10 min	ASTM D 1238

(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.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
PHYSICAL			
Density	1.44	g/cm ³	ISO 1183
Water Absorption, 23°C/24hrs	0.2	%	ISO 62-1
Melt Volume Rate, MVR at 345°C/10.0 kg	40	cm ³ /10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Compliant, 94V-0 Flame Class Rating (3)(4)	1.5	mm	UL 94 by SABIC-IP

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PROCESSING PARAMETERS	TYPICAL 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	350 - 400	°C
Nozzle Temperature	345 - 400	°C
Front - Zone 3 Temperature	345 - 400	°C
Middle - Zone 2 Temperature	340 - 400	°C
Rear - Zone 1 Temperature	330 - 400	°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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