



ULTEM™ Resin 2100N

Americas: OBSOLETE

10% Glass fiber filled, standard flow Polyetherimide (Tg 217C). ECO Conforming.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	1160	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	1180	kgf/cm ²	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	6	%	ASTM D 638
Tensile Modulus, 5 mm/min	47800	kgf/cm ²	ASTM D 638
Flexural Stress, brk, 2.6 mm/min, 100 mm span	2030	kgf/cm ²	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	52700	kgf/cm ²	ASTM D 790
Hardness, Rockwell M	114	-	ASTM D 785
IMPACT			
Izod Impact, unnotched, 23°C	49	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	5	cm-kgf/cm	ASTM D 256
Izod Impact, Reverse Notched, 3.2 mm	46	cm-kgf/cm	ASTM D 256
THERMAL			
Vicat Softening Temp, Rate B/50	223	°C	ASTM D 1525
HDT, 0.45 MPa, 6.4 mm, unannealed	210	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	208	°C	ASTM D 648
CTE, -20°C to 150°C, flow	3.24E-05	1/°C	ASTM E 831
PHYSICAL			
Specific Gravity	1.34	-	ASTM D 792
Water Absorption, 24 hours	0.21	%	ASTM D 570
Water Absorption, equilibrium, 23C	1.2	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.6	%	SABIC Method
Melt Flow Rate, 337°C/6.6 kgf	7	g/10 min	ASTM D 1238
ELECTRICAL			
Volume Resistivity	1.E+17	Ohm-cm	ASTM D 257
Dielectric Strength, in oil, 1.6 mm	27.5	kV/mm	ASTM D 149

(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
ELECTRICAL			
Relative Permittivity, 1 kHz	3.5	-	ASTM D 150
Dissipation Factor, 1 kHz	0.0014	-	ASTM D 150
Dissipation Factor, 2450 MHz	0.0046	-	ASTM D 150

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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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