



ULTEM™ Resin UC1200

Asia Pacific: COMMERCIAL

12% carbon fiber reinforced Polyetherimide (Tg 217C). ECO Conforming. UL94 V0 listing in recognized colors.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	1330	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	1330	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	5.1	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	5.1	%	ASTM D 638
Tensile Modulus, 5 mm/min	82900	kgf/cm ²	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	2250	kgf/cm ²	ASTM D 790
Flexural Stress, brk, 2.6 mm/min, 100 mm span	1960	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	79800	kgf/cm ²	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	84300	kgf/cm ²	ASTM D 790
IMPACT			
Izod Impact, unnotched, 23°C	42	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	3	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	63	cm-kgf	ASTM D 3763
THERMAL			
Vicat Softening Temp, Rate B/50	214	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	213	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	208	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	210	°C	ASTM D 648
CTE, -40°C to 40°C, flow	1.44E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	3.24E-05	1/°C	ASTM E 831
CTE, -20°C to 150°C, flow	1.44E-05	1/°C	ASTM E 831
CTE, -20°C to 150°C, xflow	3.96E-05	1/°C	ASTM E 831
Relative Temp Index, Elec	105	°C	UL 746B



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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
Relative Temp Index, Mech w/impact	105	°C	UL 746B
Relative Temp Index, Mech w/o impact	105	°C	UL 746B
PHYSICAL			
Specific Gravity	1.32	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.12 - 0.22	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	0.3 - 0.5	%	SABIC Method
Melt Flow Rate, 337°C/6.6 kgf	7.5	g/10 min	ASTM D 1238
ELECTRICAL			
Volume Resistivity	4.E+02	Ohm-cm	ASTM D 257
Surface Resistivity	2.E+05	Ohm	ASTM D 257
Hot Wire Ignition {PLC}	2	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	2	PLC Code	UL 746A
Static Decay, 5000V to <50V	0.01	< seconds	FTMS101B
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating (3)	1.57	mm	UL 94



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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	380 - 425	°C
Nozzle Temperature	375 - 420	°C
Front - Zone 3 Temperature	380 - 425	°C
Middle - Zone 2 Temperature	370 - 420	°C
Rear - Zone 1 Temperature	360 - 405	°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