

## Ultem\* Resin 2300

### Americas: COMMERCIAL

30% Glass fiber filled, standard flow Polyetherimide (Tg 217C). ECO Conforming, UL94 V0 and 5VA listing. NSF 51 listing, WRAS certification, KTW certification in recognized colors.

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	UNIT	STANDARD
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 0.2 in/min	24400	psi	ASTM D 638
Tensile Stress, brk, Type I, 0.2 in/min	22900	psi	ASTM D 638
Tensile Strain, brk, Type I, 0.2 in/min	3	%	ASTM D 638
Tensile Modulus, 0.2 in/min	1349000	psi	ASTM D 638
Flexural Stress, brk, 0.10 in/min, 4 in span	32900	psi	ASTM D 790
Flexural Modulus, 0.10 in/min, 4 in span	1299000	psi	ASTM D 790
Hardness, Rockwell M	114	-	ASTM D 785
<b>IMPACT</b>			
Izod Impact, unnotched, 73°F	8	ft-lb/in	ASTM D 4812
Izod Impact, notched, 73°F	1.6	ft-lb/in	ASTM D 256
Izod Impact, Reverse Notched, 73°F	9.2	ft-lb/in	ASTM D 256
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	442	°F	ASTM D 1525
HDT, 66 psi, 0.250", unannealed	414	°F	ASTM D 648
HDT, 264 psi, 0.250", unannealed	410	°F	ASTM D 648
CTE, flow, 0°F to 300°F	1.1E-05	1/°F	ASTM E 831
Relative Temp Index, Elec	180	°C	UL 746B
Relative Temp Index, Mech w/impact	170	°C	UL 746B
Relative Temp Index, Mech w/o impact	180	°C	UL 746B
<b>PHYSICAL</b>			
Specific Gravity	1.51	-	ASTM D 792
Water Absorption, 24 hours @ 73°F	0.16	%	ASTM D 570
Water Absorption, equilibrium, 73F	0.9	%	ASTM D 570
Mold Shrinkage, flow, 0.125"	0.2 - 0.4	%	SABIC Method

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume rate are measured on injection moulded samples. All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. 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) Own measurement according to UL.

Source, GMD, Last Update: 04/14/2003

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	UNIT	STANDARD
<b>PHYSICAL</b>			
Mold Shrinkage, xflow, 0.125"	0.2 - 0.4	%	SABIC Method
Melt Flow Rate, 337°C/6.6 kgf	5	g/10 min	ASTM D 1238
<b>ELECTRICAL</b>			
Volume Resistivity	3.E+16	Ohm-cm	ASTM D 257
Dielectric Strength, in air, 62 mils	630	V/mil	ASTM D 149
Dielectric Strength, in oil, 62 mils	770	V/mil	ASTM D 149
Relative Permittivity, 1 kHz	3.7	-	ASTM D 150
Dissipation Factor, 1 kHz	0.0015	-	ASTM D 150
Dissipation Factor, 2450 MHz	0.0053	-	ASTM D 150
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D 495
Hot Wire Ignition {PLC}	1	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	3	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	4	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	4	PLC Code	UL 746A
<b>FLAME CHARACTERISTICS</b>			
UL Recognized, 94V-0 Flame Class Rating (3)	0.01	in	UL 94
UL Recognized, 94-5VA Rating (3)	0.048	in	UL 94
CSA (See File for complete listing)	LS88480	File No.	CSA LISTED
Oxygen Index (LOI)	50	%	ASTM D 2863
NBS Smoke Density, Flaming, Ds 4 min	1.6	-	ASTM E 662

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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
<b>Injection Molding</b>		
Drying Temperature	300	°F
Drying Time	4 - 6	hrs
Drying Time (Cumulative)	24	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	660 - 750	°F
Nozzle Temperature	650 - 750	°F
Front - Zone 3 Temperature	650 - 750	°F
Middle - Zone 2 Temperature	640 - 750	°F
Rear - Zone 1 Temperature	630 - 750	°F
Mold Temperature	280 - 330	°F
Back Pressure	50 - 100	psi
Screw Speed	40 - 70	rpm
Shot to Cylinder Size	40 - 60	%
Vent Depth	0.001 - 0.003	in

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