

# ULTEM™ RESIN 2312

REGION ASIA

## DESCRIPTION

30% Milled glass filled, enhanced flow Polyetherimide (Tg 217C). ECO Conforming, UL94 V0 and 5VA listing.

## TYPICAL PROPERTY VALUES

Revision 20180905

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Tensile Stress, brk, Type I, 5 mm/min	103	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	3.5	%	ASTM D 638
Tensile Modulus, 5 mm/min	5990	MPa	ASTM D 638
Flexural Stress, brk, 2.6 mm/min, 100 mm span	179	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	6550	MPa	ASTM D 790
<b>IMPACT</b>			
Izod Impact, notched, 23°C	32	J/m	ASTM D 256
Izod Impact, Reverse Notched, 3.2 mm	309	J/m	ASTM D 256
<b>THERMAL</b>			
HDT, 1.82 MPa, 6.4 mm, unannealed	207	°C	ASTM D 648
CTE, -20°C to 150°C, flow	2.34E-05	1/°C	ASTM E 831
CTE, -20°C to 150°C, xflow	2.7E-05	1/°C	ASTM E 831
Relative Temp Index, Elec	170	°C	UL 746B
Relative Temp Index, Mech w/impact	170	°C	UL 746B
Relative Temp Index, Mech w/o impact	170	°C	UL 746B
<b>PHYSICAL</b>			
Specific Gravity	1.51	-	ASTM D 792
Water Absorption, 24 hours	0.18	%	ASTM D 570
Water Absorption, equilibrium, 23C	0.98	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm	0.3 – 0.4	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.45 – 0.55	%	SABIC method
Melt Flow Rate, 337°C/6.6 kgf	10.1	g/10 min	ASTM D 1238
<b>ELECTRICAL</b>			
Relative Permittivity, 1 kHz	3.7	-	ASTM D 150
Relative Permittivity, 1 MHz	3.49	-	ASTM D 150
Arc Resistance, Tungsten {PLC}	7	PLC Code	ASTM D 495
Hot Wire Ignition {PLC}	1	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	0	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	3	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	0.81	mm	UL 94
<b>INJECTION MOLDING</b>			
Drying Temperature	150	°C	
Drying Time	4 – 6	hrs	

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
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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