

# ULTEM™ RESIN 2410R

REGION ASIA

## DESCRIPTION

40% Glass fiber filled, enhanced flow Polyetherimide (Tg 217C) with internal mold release. ECO Conforming, UL94 V0 and 5VA listing.

## TYPICAL PROPERTY VALUES

Revision 20180524

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Tensile Stress, brk, Type I, 5 mm/min	179	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.5	%	ASTM D 638
Tensile Modulus, 5 mm/min	11720	MPa	ASTM D 638
Flexural Stress, brk, 2.6 mm/min, 100 mm span	241	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	11720	MPa	ASTM D 790
Hardness, Rockwell M	114	-	ASTM D 785
<b>IMPACT</b>			
Izod Impact, unnotched, 23°C	427	J/m	ASTM D 4812
Izod Impact, notched, 23°C	112	J/m	ASTM D 256
Izod Impact, Reverse Notched, 3.2 mm	480	J/m	ASTM D 256
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	234	°C	ASTM D 1525
HDT, 0.45 MPa, 6.4 mm, unannealed	215	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	212	°C	ASTM D 648
CTE, -20°C to 150°C, flow	1.44E-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	1.61	-	ASTM D 792
Water Absorption, 24 hours	0.13	%	ASTM D 570
Water Absorption, equilibrium, 23C	0.9	%	ASTM D 570
Mold Shrinkage, flow, 3.2 mm (5)	0.1 – 0.3	%	SABIC method
Melt Flow Rate, 337°C/6.6 kgf	5.5	g/10 min	ASTM D 1238
<b>ELECTRICAL</b>			
Volume Resistivity	1.5E+16	Ohm-cm	ASTM D 257

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Dielectric Strength, in oil, 1.6 mm	24	kV/mm	ASTM D 149
Relative Permittivity, 1 kHz	3.7	-	ASTM D 150
Dissipation Factor, 1 kHz	0.002	-	ASTM D 150
Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D 495
Hot Wire Ignition {PLC}	0	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	4	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	5	PLC Code	UL 746A
<b>FLAME CHARACTERISTICS</b>			
UL Recognized, 94V-0 Flame Class Rating (3)	0.25	mm	UL 94
UL Recognized, 94-5VA Rating (3)	1.5	mm	UL 94
Oxygen Index (LOI)	54	%	ASTM D 2863
<b>INJECTION MOLDING</b>			
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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