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.

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Interiors, Automotive Under the Hood
Consumer	Personal Accessory, Home Appliance, Personal Recreation, Commercial Appliance, Recreational Vehicle
Electrical and Electronics	Electrical Devices and Displays, Electrical Components and Infrastructure
Hydrocarbon and Energy	Energy Storage
Industrial	Defense, Semiconductors, Servomotor, Electronic Material Handling, Composite, Electronic Material
Mass Transportation	Aircraft Interiors

TYPICAL PROPERTY VALUES

Revision 20190717

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
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
IMPACT			
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
THERMAL			
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 [1]	105	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	105	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	105	°C	UL 746B
PHYSICAL			
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	0.1 – 0.3	%	SABIC method
Melt Flow Rate, 337°C/6.6 kgf	5.5	g/10 min	ASTM D 1238
ELECTRICAL			
Volume Resistivity	1.5E+16	Ohm-cm	ASTM D 257

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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
Comparative Tracking Index (UL) {PLC}	4	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 0	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 4	≥1.5	mm	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D 495
FLAME CHARACTERISTICS (1)			
UL Yellow Card Link	E45587-236986	-	-
UL Recognized, 94-5VA Flame Class Rating	≥1.5	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating	≥0.25	mm	UL 94
Oxygen Index (LOI)	54	%	ASTM D 2863
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	

(1) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

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