ULTEM™ RESIN 3452

REGION ASIA

DESCRIPTION

45% Glass fiber and mineral filled, enhanced flow Polyetherimide (Tg 217C) with enhanced dimensional stability. ECO Conforming, UL94 V0 and 5VA listing in recognized colors.

INDUSTRY	SUB INDUSTRY
Automotive	Heavy Truck, Bus, Automotive Under the Hood
Consumer	Sport/Leisure, Recreational Vehicle
Electrical and Electronics	Electrical Components and Infrastructure
Hydrocarbon and Energy	Fossil
Industrial	Defense, Servomotor, Industrial Material Handling
Mass Transportation	Specialty Vehicles

TYPICAL PROPERTY VALUES

Revision 20190925

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	131	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	1.4	%	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	12410	MPa	ASTM D 790
IMPACT			
Izod Impact, notched, 23°C	58	J/m	ASTM D 256
Izod Impact, Reverse Notched, 3.2 mm	218	J/m	ASTM D 256
THERMAL			
HDT, 1.82 MPa, 6.4 mm, unannealed	212	°C	ASTM D 648
Relative Temp Index, Elec [1]	180	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	180	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	180	°C	UL 746B
PHYSICAL			
Specific Gravity	1.66	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.15 – 0.25	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.3 – 0.5	%	SABIC method
Melt Flow Rate, 337°C/6.6 kgf	4.6	g/10 min	ASTM D 1238
ELECTRICAL			
Comparative Tracking Index (UL) {PLC}	4	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 1	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 2	≥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]			

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
UL Yellow Card Link	E121562-221107	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.77	mm	UL 94
UL Recognized, 94-5VA Flame Class Rating	≥3	mm	UL 94
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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