ULTEM™ RESIN 1110F

REGION ASIA

DESCRIPTION

Enhanced flow Polyetherimide (Tg 217C). ECO Conforming. US FDA and EU Food Contact compliant, NSF 51 listing. UL94 V0 and 5VA listing. Effective June 2007, this grade will no longer be supported with biocompatibility information and should not be used for medical applications which require biocompatibility. Alternative grade HU1110.

INDUSTRY	SUB INDUSTRY
Consumer	Home Decoration, Personal Accessory, Home Appliances, Personal Recreation, Commercial Appliance
Packaging	Flexible Food Packaging, Food & Beverage, Consumer Packaging

TYPICAL PROPERTY VALUES

Revision 20191031

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	110	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	70	%	ASTM D 638
Tensile Modulus, 5 mm/min	3720	MPa	ASTM D 638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	165	MPa	ASTM D 790
Flexural Modulus, 2.6 mm/min, 100 mm span	3720	MPa	ASTM D 790
IMPACT			
Izod Impact, Reverse Notched, 3.2 mm	1922	J/m	ASTM D 256
Gardner, 23°C	23	J	ASTM D 3029
THERMAL			
HDT, 1.82 MPa, 6.4 mm, unannealed	198	°C	ASTM D 648
Relative Temp Index, Elec [1]	170	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	170	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	170	°C	UL 746B
PHYSICAL			
Specific Gravity	1.36	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 337°C/6.6 kgf	16	g/10 min	ASTM D 1238
ELECTRICAL			
Arc Resistance, Tungsten {PLC}	5	PLC Code	ASTM D 495
High Voltage Arc Track Rate {PLC}	2	PLC Code	UL 746A
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	≥0.75	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 3	≥3	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 4	≥0.75	mm	UL 746A
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E121562-101048269	-	-
UL Recognized, 94-5VA Flame Class Rating	≥3	mm	UL 94

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
UL Recognized, 94V-0 Flame Class Rating	≥0.75	mm	UL 94
UL Recognized, 94V-2 Flame Class Rating	≥0.4	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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