ULTEM™ Resin 2110G

DESCRIPTION

ULTEM 2110G resin is a 10% glass fiber reinforced polyetherimide resin. This grade contains renewable feedstock through ISCC plus mass balance certification. The material is RoHS compliant and is intrinsically flame retardant without the use of FR modifiers. The material offers excellent dimension stability, strength, stiffness and creep resistance up to high temperature due to its high glass transition temperature of 217 °C. The material is opaque and can be custom colored.

GENERAL INFORMATION	
Features	Flame Retardant, Chemical Resistance, Good Processability, Hydrolytic Stability, Low Smoke and Toxicity, Thin Wall, Amorphous, IR Transparent, Bio-Renewable, Non halogenated flame retardant, Dimensional stability, High stiffness/Strength, High temperature resistance, No PFAS intentionally added
Fillers	Glass Fiber
Polymer Types	Polyetherimide (PEI)
Processing Techniques	Injection Molding, Extrusion, Compression molding

INDUSTRY	SUB INDUSTRY
Automotive	Automotive Under the Hood, Automotive Lighting
Electrical and Electronics	Energy Management, Electronic Components, Mobile Phone - Computer - Tablets, Wireless Communication
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20261103

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yld, Type I, 5 mm/min	114	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	115	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	6	%	ASTM D638
Tensile Modulus, 5 mm/min	4610	MPa	ASTM D638
Flexural Stress, brk, 2.6 mm/min, 100 mm span	199	MPa	ASTM D790
Flexural Modulus, 2.6 mm/min, 100 mm span	5240	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched, 23°C	48	J/m	ASTM D256
Izod Impact, Reverse Notched, 3.2 mm	400	J/m	ASTM D256
THERMAL [1]			
HDT, 1.82 MPa, 6.4 mm, unannealed	207	°C	ASTM D648
Relative Temp Index, Elec [2]	170	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	170	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	170	°C	UL 746B
PHYSICAL [1]			
Specific Gravity	1.34	-	ASTM D792
Melt Flow Rate, 337°C/6.6 kgf	11.3	g/10 min	ASTM D1238
ELECTRICAL [1]			
Comparative Tracking Index (UL) {PLC} [2]	4	PLC Code	UL 746A

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Hot-Wire Ignition (HWI), PLC 1 [2]	≥3	mm	UL 746A
Hot-Wire Ignition (HWI), PLC 2 [2]	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 3 [2]	≥1.5	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 4 [2]	≥3	mm	UL 746A
High Voltage Arc Track Rate {PLC} [2]	2	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D495
FLAME CHARACTERISTICS [2]			
UL Yellow Card Link	E45587-236982	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.38	mm	UL 94
UV-light, water exposure/immersion	F1	-	UL 746C
INJECTION MOLDING [3]			
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) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) 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.

(3) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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