ULTEM™ Resin LTX300AG

DESCRIPTION

ULTEM LTX300AG resin provides an exceptional dual combination of UL94 V-0 flame rating and 150°C long-term heat resistance at 0.3mm. This grade contains renewable feedstock through ISCC PLUS mass-balance certification.

GENERAL INFORMATION	
Features	Low Smoke and Toxicity, Thin Wall, Bio-Renewable, High temperature resistance, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polyetherimide (PEI)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Electrical and Electronics	Electronic Components

TYPICAL PROPERTY VALUES

Revision 20260907

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Modulus, 5 mm/min	3310	MPa	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	85	%	ASTM D638
Tensile Stress, yld, Type I, 5 mm/min	97	MPa	ASTM D638
Flexural Modulus, 1.3 mm/min, 50 mm span	3240	MPa	ASTM D790
Flexural Stress, yld, 1.3 mm/min, 50 mm span	145	MPa	ASTM D790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	141	MPa	ASTM D790
IMPACT [1]			
Izod impact, notched			
80*10*4 +23°C	7	kJ/m²	ISO 180/1A
23°C, 2mm	69	J/m	ASTM D256
Izod Impact, Unnotched			
80*10*4 +23°C	N.B.	kJ/m²	ISO 180/1U
23°C	2100	J/m	ASTM D4812
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	7	kJ/m²	ISO 179/1eA
Izod Impact, Reverse Notched, 3.2 mm	2080	J/m	ASTM D256
THERMAL [1]			
HDT, 1.82 MPa, 6.4 mm, unannealed	189	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	187	°C	ASTM D648
HDT, 0.45 MPa, 3.2 mm, unannealed	201	°C	ASTM D648
Vicat Softening Temp, Rate A/50	210	°C	ISO 306
Vicat Softening Temp, Rate B/50	200	°C	ISO 306
Vicat Softening Temp, Rate B/50	210	°C	ASTM D1525
CTE, -40°C to 150°C, flow	0.00005	1/°C	ASTM E831

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 150°C, xflow	0.00005	1/°C	ASTM E831
Relative Temp Index, Elec [2]	150	°C	UL 746B
Relative Temp Index, Mech w/impact [2]	120	°C	UL 746B
Relative Temp Index, Mech w/o impact [2]	150	°C	UL 746B
PHYSICAL [1]			
Density	1.3	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH) [3]	0.7	%	ISO 62
Water Absorption, (23°C/saturated) [3]	1.25	%	ISO 62-1
Mold Shrinkage, flow, 3.2 mm [4]	0.5 – 0.7	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm [4]	0.5 – 0.7	%	SABIC method
Melt Volume Rate, MVR at 340°C/5.0 kg	15	cm³/10 min	ISO 1133
Specific Gravity	1.3	-	ASTM D792
Melt Flow Rate, 295°C/6.6 kgf	2.4	g/10 min	ASTM D1238
ELECTRICAL [1]			
Comparative Tracking Index (UL) {PLC} [2]	4	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 2 [2]	0.75	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0 [2]	0.75	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	E121562	-	-
UL Recognized, 94V-0 Flame Class Rating	0.25	mm	UL 94
INJECTION MOLDING [5]			
Drying Temperature	135 – 145	°C	
Drying Time	4 – 6	Hrs	
Drying Time (Cumulative)	10	Hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	350 – 370	°C	
Rear - Zone 1 Temperature	340 – 360	°C	
Middle - Zone 2 Temperature	345 – 365	°C	
Front - Zone 3 Temperature	350 – 370	°C	
Nozzle Temperature	350 – 370	°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) Based on internal method similar to ISO 62

(4) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(5) 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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ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentionally PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

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