ULTEM™ RESIN LTX300A

REGION AMERICAS

DESCRIPTION

High flow Polyetherimide blend with low toxicity, smoke and flame evolution. ECO Compliant, UL94 V0 listing in recognized colors.

GENERAL INFORMATION	
Features	Amorphous, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polyetherimide (PEI)
Processing Techniques	Injection Molding

TYPICAL PROPERTY VALUES

Revision 20250502

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	97	MPa	ASTM D638
Tensile Stress, brk, Type I, 5 mm/min	85	MPa	ASTM D638
Tensile Strain, yld, Type I, 5 mm/min	7	%	ASTM D638
Tensile Strain, brk, Type I, 5 mm/min	85	%	ASTM D638
Tensile Modulus, 5 mm/min	3310	MPa	ASTM D638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	145	MPa	ASTM D790
Flexural Modulus, 1.3 mm/min, 50 mm span	3240	MPa	ASTM D790
Taber Abrasion, CS-17, 1 kg	15	mg/1000cy	SABIC method
Tensile Stress, yield, 5 mm/min	90	MPa	ISO 527
Tensile Stress, break, 5 mm/min	75	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	6	%	ISO 527
Tensile Strain, break, 5 mm/min	25	%	ISO 527
Tensile Modulus, 1 mm/min	3200	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	130	MPa	ISO 178
Flexural Modulus, 2 mm/min	3200	MPa	ISO 178
Ball Indentation Hardness, H358/30	127	MPa	ISO 2039-1
IMPACT			
Izod Impact, unnotched, 23°C	2100	J/m	ASTM D4812
Izod Impact, notched, 23°C	69	J/m	ASTM D256
Izod Impact, Reverse Notched, 3.2 mm	2080	J/m	ASTM D256
Gardner, 23°C	35	J	ASTM D3029
Instrumented Dart Impact Total Energy, 23°C	40	J	ASTM D3763
Izod Impact, unnotched 80*10*4 +23°C	NB	kJ/m²	ISO 180/1U
Izod Impact, unnotched 80*10*4 -30°C	NB	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	7	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	5	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	7	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	6	kJ/m²	ISO 179/1eA

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm	NB	kJ/m²	ISO 179/1eU
THERMAL			
Vicat Softening Temp, Rate B/50	210	°C	ASTM D1525
HDT, 0.45 MPa, 3.2 mm, unannealed	201	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	187	°C	ASTM D648
HDT, 0.45 MPa, 6.4 mm, unannealed	204	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	189	°C	ASTM D648
CTE, -40°C to 150°C, flow	5.E-05	1/°C	ASTM E831
CTE, -40°C to 150°C, xflow	5.E-05	1/°C	ASTM E831
Thermal Conductivity	0.26	W/m-°C	ISO 8302
CTE, 23°C to 150°C, flow	5.E-05	1/°C	ISO 11359-2
CTE, 23°C to 150°C, xflow	5.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	Passes	-	IEC 60695-10-2
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/120	200	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	200	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	185	°C	ISO 75/Ae
Relative Temp Index, Elec [1]	150	°C	UL 746B
Relative Temp Index, Mech w/impact [1]	120	°C	UL 746B
Relative Temp Index, Mech w/o impact [1]	150	°C	UL 746B
PHYSICAL			
Specific Gravity	1.3	-	ASTM D792
Mold Shrinkage on Tensile Bar, flow	0.6 – 0.8	%	SABIC method
Mold Shrinkage, flow, 3.2 mm	0.5 – 0.7	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.5 – 0.7	%	SABIC method
Melt Flow Rate, 295°C/6.6 kgf	2.4	g/10 min	ASTM D1238
Density	1.3	g/cm³	ISO 1183
Water Absorption, (23°C/saturated)	1.25	%	ISO 62-1
Moisture Absorption (23°C / 50% RH)	0.7	%	ISO 62
Melt Volume Rate, MVR at 340°C/5.0 kg	15	cm³/10 min	ISO 1133
ELECTRICAL			
Comparative Tracking Index (UL) {PLC}	4	PLC Code	UL 746A
Hot-Wire Ignition (HWI), PLC 2	≥0.75	mm	UL 746A
High Amp Arc Ignition (HAI), PLC 0	≥0.75	mm	UL 746A
High Voltage Arc Track Rate {PLC}	2	PLC Code	UL 746A
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D495
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E121562-221074	-	-
UL Recognized, 94V-0 Flame Class Rating	≥0.3	mm	UL 94
INJECTION MOLDING			
Drying Temperature	135	°C	
Drying Time	4 – 6	Hrs	
Drying Time (Cumulative)	10	Hrs	

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Maximum Moisture Content	0.02	%	
Melt Temperature	350 – 370	°C	
Nozzle Temperature	350 – 370	°C	
Front - Zone 3 Temperature	350 – 370	°C	
Middle - Zone 2 Temperature	345 – 365	°C	
Rear - Zone 1 Temperature	340 – 360	°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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