

ULTEM™ RESIN LTX300A

REGION EUROPE

DESCRIPTION

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

TYPICAL PROPERTY VALUES

Revision 20240702

| 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/m ² | ISO 180/1U |
| Izod Impact, unnotched 80°10°4 -30°C | NB | kJ/m ² | ISO 180/1U |
| Izod Impact, notched 80°10°4 +23°C | 7 | kJ/m ² | ISO 180/1A |
| Izod Impact, notched 80°10°4 -30°C | 5 | kJ/m ² | ISO 180/1A |
| Charpy 23°C, V-notch Edgew 80°10°4 sp=62mm | 7 | kJ/m ² | ISO 179/1eA |
| Charpy -30°C, V-notch Edgew 80°10°4 sp=62mm | 6 | kJ/m ² | ISO 179/1eA |
| Charpy 23°C, Unnotch Edgew 80°10°4 sp=62mm | NB | kJ/m ² | ISO 179/1eU |
| Charpy -30°C, Unnotch Edgew 80°10°4 sp=62mm | NB | kJ/m ² | 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 |

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|---|--------------------------------|-------------------------|----------------|
| 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⁾ | 140 | °C | UL 746B |
| Relative Temp Index, Mech w/impact ⁽¹⁾ | 115 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact ⁽¹⁾ | 140 | °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/cm ³ | 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 | cm ³ /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 | ≥0.75 | mm | UL 94 |
| INJECTION MOLDING | | | |
| Drying Temperature | 135 | °C | |
| Drying Time | 4 – 6 | Hrs | |
| Drying Time (Cumulative) | 10 | Hrs | |
| 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 | |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|-----------------------|----------------|-------|--------------|
| 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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