# ULTEM™ Resin 1100F

REGION ASIA

## DESCRIPTION

Standard flow Polyetherimide (Tg 217C). ECO Conforming. UL94 V0, V2 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 HU1100.

This material is food contact compliant in most jurisdictions – exceptions may exist, request a declaration for details.

| GENERAL INFORMATION | |
|---|---|
| **Features** | Flame Retardant, Chemical Resistance, Hydrolytic Stability, Low Warpage, Low Smoke and Toxicity, Amorphous, Bio-Renewable, Food contact, Non halogenated flame retardant, Creep resistant, Dimensional stability, High stiffness/Strength, High temperature resistance, No PFAS intentionally added |
| **Fillers** | Unreinforced |
| **Polymer Types** | Polyetherimide (PEI) |
| **Processing Techniques** | Injection Molding |

| INDUSTRY | SUB INDUSTRY |
|---|---|
| Automotive | Heavy Truck, Automotive Under the Hood, Aerospace, Motorcycle, Recreational/Specialty Vehicles |
| Building and Construction | Building Component, Water Management |
| Consumer | Consumer Goods, Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance, Furniture |
| Electrical and Electronics | Energy Management, Drone Solutions, Mobile Phone - Computer - Tablets, Circuit Boards/Additives, Lighting, Printer Copier, Speaker - Earphone, Wireless Communication |
| Hygiene and Healthcare | Personal and Professional Hygiene, Pharmaceutical Packaging and Drug Delivery, Surgical devices, General Healthcare, Patient Testing |
| Industrial | Electrical, Material Handling, Textile, Eyewear |
| Mass Transportation | Rail |
| Packaging | Industrial Packaging |

## TYPICAL PROPERTY VALUES

Revision 20250319

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| **MECHANICAL** | | | |
| **Tensile Stress, yld, Type I, 5 mm/min** | 110 | MPa | ASTM D638 |
| **Tensile Strain, brk, Type I, 5 mm/min** | 70 | % | ASTM D638 |
| **Tensile Modulus, 5 mm/min** | 3720 | MPa | ASTM D638 |
| **Flexural Stress, yld, 2.6 mm/min, 100 mm span** | 165 | MPa | ASTM D790 |
| **Flexural Modulus, 2.6 mm/min, 100 mm span** | 3720 | MPa | ASTM D790 |
| **IMPACT** | | | |
| **Izod Impact, notched, 23°C** | 37 | J/m | ASTM D256 |
| **Izod Impact, Reverse Notched, 3.2 mm** | 1548 | J/m | ASTM D256 |
| **Gardner, 23°C** | 21 | J | ASTM D3029 |
| **THERMAL** | | | |
| **HDT, 1.82 MPa, 6.4 mm, unannealed** | 198 | °C | ASTM D648 |
| **Relative Temp Index, Elec** [(1)] | 170 | °C | UL 746B |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| 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 D792 |
| Mold Shrinkage, flow, 3.2 mm | 0.5 – 0.7 | % | SABIC method |
| Melt Flow Rate, 337°C/6.6 kgf | 8.8 | g/10 min | ASTM D1238 |
| ELECTRICAL | | | |
| Arc Resistance, Tungsten {PLC} | 5 | PLC Code | ASTM D495 |
| 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 | E121562-101048254 | - | - |
| UL Recognized, 94-5VA Flame Class Rating | ≥3 | mm | UL 94 |
| 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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