



## ULTEM™ Resin 2110

### Americas: COMMERCIAL

10% Glass fiber filled, enhanced flow Polyetherimide (Tg 217°C). ECO Conforming, UL94 V0 and 5VA listing.

| TYPICAL PROPERTIES <sup>1</sup>               | TYPICAL VALUE | Unit                | Standard    |
|-----------------------------------------------|---------------|---------------------|-------------|
| <b>MECHANICAL</b>                             |               |                     |             |
| Tensile Stress, yld, Type I, 5 mm/min         | 1160          | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Stress, brk, Type I, 5 mm/min         | 1180          | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Strain, brk, Type I, 5 mm/min         | 6             | %                   | ASTM D 638  |
| Tensile Modulus, 5 mm/min                     | 47100         | kgf/cm <sup>2</sup> | ASTM D 638  |
| Flexural Stress, brk, 2.6 mm/min, 100 mm span | 2030          | kgf/cm <sup>2</sup> | ASTM D 790  |
| Flexural Modulus, 2.6 mm/min, 100 mm span     | 53400         | kgf/cm <sup>2</sup> | ASTM D 790  |
| <b>IMPACT</b>                                 |               |                     |             |
| Izod Impact, notched, 23°C                    | 4             | cm-kgf/cm           | ASTM D 256  |
| Izod Impact, Reverse Notched, 3.2 mm          | 40            | cm-kgf/cm           | ASTM D 256  |
| <b>THERMAL</b>                                |               |                     |             |
| HDT, 1.82 MPa, 6.4 mm, unannealed             | 207           | °C                  | ASTM D 648  |
| Relative Temp Index, Elec                     | 170           | °C                  | UL 746B     |
| Relative Temp Index, Mech w/impact            | 170           | °C                  | UL 746B     |
| Relative Temp Index, Mech w/o impact          | 170           | °C                  | UL 746B     |
| <b>PHYSICAL</b>                               |               |                     |             |
| Specific Gravity                              | 1.34          | -                   | ASTM D 792  |
| Melt Flow Rate, 337°C/6.6 kgf                 | 11.3          | g/10 min            | ASTM D 1238 |
| <b>ELECTRICAL</b>                             |               |                     |             |
| Arc Resistance, Tungsten {PLC}                | 6             | PLC Code            | ASTM D 495  |
| Hot Wire Ignition {PLC}                       | 1             | PLC Code            | UL 746A     |
| High Voltage Arc Track Rate {PLC}             | 2             | PLC Code            | UL 746A     |
| High Ampere Arc Ign, surface {PLC}            | 4             | PLC Code            | UL 746A     |
| Comparative Tracking Index (UL) {PLC}         | 4             | PLC Code            | UL 746A     |
| <b>FLAME CHARACTERISTICS</b>                  |               |                     |             |
| UL Recognized, 94V-0 Flame Class Rating (3)   | 0.4           | mm                  | UL 94       |
| UL Recognized, 94-5VA Rating (3)              | 1.9           | mm                  | UL 94       |



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| PROCESSING PARAMETERS       | TYPICAL VALUE | Unit |
|-----------------------------|---------------|------|
| <b>Injection Molding</b>    |               |      |
| 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   |