



## ULTEM™ Resin AR9110

### Americas: COMMERCIAL

10% Glass fiber filled, enhanced flow Polyetherimide (Tg 217C). Meets FAR 25.853 and OSU 65/65 with low toxicity, smoke, and flame evolution. ECO Conforming.

| TYPICAL PROPERTIES <sup>1</sup>               | TYPICAL VALUE | Unit                  | Standard    |
|-----------------------------------------------|---------------|-----------------------|-------------|
| <b>MECHANICAL</b>                             |               |                       |             |
| Tensile Stress, yld, Type I, 5 mm/min         | 1080          | kgf/cm <sup>2</sup>   | ASTM D 638  |
| Tensile Stress, brk, Type I, 5 mm/min         | 1040          | kgf/cm <sup>2</sup>   | ASTM D 638  |
| Tensile Strain, brk, Type I, 5 mm/min         | 8             | %                     | ASTM D 638  |
| Tensile Modulus, 5 mm/min                     | 45600         | kgf/cm <sup>2</sup>   | ASTM D 638  |
| Flexural Stress, yld, 2.6 mm/min, 100 mm span | 1920          | kgf/cm <sup>2</sup>   | ASTM D 790  |
| Flexural Modulus, 2.6 mm/min, 100 mm span     | 49200         | kgf/cm <sup>2</sup>   | ASTM D 790  |
| <b>IMPACT</b>                                 |               |                       |             |
| Izod Impact, notched, 23°C                    | 5             | 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  |
| <b>PHYSICAL</b>                               |               |                       |             |
| Specific Gravity                              | 1.4           | -                     | ASTM D 792  |
| Melt Flow Rate, 337°C/6.6 kgf                 | 12.5          | g/10 min              | ASTM D 1238 |
| <b>FLAME CHARACTERISTICS</b>                  |               |                       |             |
| FAA Flammability, FAR 25.853 A/B              | NATURAL       | -                     | FAR 25.853  |
| OSU total heat release (2 minute test)        | 6             | kW-min/m <sup>2</sup> | FAR 25.853  |
| OSU peak heat release rate (5 minute test)    | 36            | kW/m <sup>2</sup>     | FAR 25.853  |
| NBS Smoke Density, Flaming, Dmax              | 5             | -                     | ASTM E 662  |
| NBS Smoke Density, Flaming, Ds 1.5 min        | 0             | -                     | ASTM E 662  |
| NBS Smoke Density, Flaming, Ds 4 min          | 5             | -                     | ASTM E 662  |



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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            | 365 - 390     | °C   |
| Nozzle Temperature          | 360 - 380     | °C   |
| Front - Zone 3 Temperature  | 365 - 390     | °C   |
| Middle - Zone 2 Temperature | 355 - 375     | °C   |
| Rear - Zone 1 Temperature   | 345 - 365     | °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   |