

# ULTEM™ RESIN AR9300

REGION AMERICAS

## DESCRIPTION

30% Glass fiber filled, standard flow Polyetherimide (Tg 217C). Meets FAR 25.853 and OSU 65/65 with low toxicity, smoke, and flame evolution. ECO Conforming.

| INDUSTRY            | SUB INDUSTRY |
|---------------------|--------------|
| Automotive          | Aerospace    |
| Mass Transportation | Rail         |

## TYPICAL PROPERTY VALUES

Revision 20260205

| PROPERTIES                                    | TYPICAL VALUES | UNITS     | TEST METHODS |
|-----------------------------------------------|----------------|-----------|--------------|
| <b>MECHANICAL</b>                             |                |           |              |
| Tensile Stress, brk, Type I, 5 mm/min         | 155            | MPa       | ASTM D638    |
| Tensile Strain, brk, Type I, 5 mm/min         | 3              | %         | ASTM D638    |
| Tensile Modulus, 5 mm/min                     | 8960           | MPa       | ASTM D638    |
| Flexural Stress, yld, 2.6 mm/min, 100 mm span | 241            | MPa       | ASTM D790    |
| Flexural Modulus, 2.6 mm/min, 100 mm span     | 9650           | MPa       | ASTM D790    |
| <b>IMPACT</b>                                 |                |           |              |
| Izod Impact, notched, 23°C                    | 117            | J/m       | ASTM D256    |
| Izod Impact, Reverse Notched, 3.2 mm          | 534            | J/m       | ASTM D256    |
| <b>THERMAL</b>                                |                |           |              |
| HDT, 1.82 MPa, 6.4 mm, unannealed             | 212            | °C        | ASTM D648    |
| <b>PHYSICAL</b>                               |                |           |              |
| Specific Gravity                              | 1.49           | -         | ASTM D792    |
| Mold Shrinkage, flow, 3.2 mm                  | 0.2 – 0.4      | %         | SABIC method |
| Melt Flow Rate, 337°C/6.6 kgf                 | 4.2            | g/10 min  | ASTM D1238   |
| <b>FLAME CHARACTERISTICS</b>                  |                |           |              |
| FAA Flammability, FAR 25.853 A/B              | NATURAL        | -         | FAR 25.853   |
| OSU total heat release (2 minute test)        | 5              | kW-min/m² | FAR 25.853   |
| OSU peak heat release rate (5 minute test)    | 40             | kW/m²     | FAR 25.853   |
| Vertical Burn a (60s) passes at               | 0              | Seconds   | FAR 25.853   |
| Vertical Burn b (12s) passes at               | 0              | Seconds   | FAR 25.853   |
| NBS Smoke Density, Flaming, Dmax              | 5              | -         | ASTM E662    |
| NBS Smoke Density, Flaming, Ds 1.5 min        | 0              | -         | ASTM E662    |
| NBS Smoke Density, Flaming, Ds 4 min          | 5              | -         | ASTM E662    |
| <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        |              |

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|-----------------------------|----------------|-------|--------------|
| 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    |              |

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