

# ULTEM™ AR9300 resin

Polyether Imide

SABIC Innovative Plastics

## Message:

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.

| General Information                                              |                                                       |                   |                 |
|------------------------------------------------------------------|-------------------------------------------------------|-------------------|-----------------|
| Filler / Reinforcement                                           | Glass fiber reinforced material, 30% filler by weight |                   |                 |
| Features                                                         | Low smoke                                             |                   |                 |
|                                                                  | Low toxicity                                          |                   |                 |
|                                                                  | Comply with ECO                                       |                   |                 |
| Agency Ratings                                                   | EU Eco                                                |                   |                 |
|                                                                  | FAR 25.853                                            |                   |                 |
|                                                                  | OSU 65/65                                             |                   |                 |
| Processing Method                                                | Injection molding                                     |                   |                 |
| Physical                                                         | Nominal Value                                         | Unit              | Test Method     |
| Specific Gravity                                                 | 1.49                                                  | g/cm <sup>3</sup> | ASTM D792       |
| Melt Mass-Flow Rate (MFR) (337°C/6.6 kg)                         | 4.2                                                   | g/10 min          | ASTM D1238      |
| Molding Shrinkage - Flow (3.20 mm)                               | 0.20 - 0.40                                           | %                 | Internal method |
| Mechanical                                                       | Nominal Value                                         | Unit              | Test Method     |
| Tensile Modulus <sup>1</sup>                                     | 8960                                                  | MPa               | ASTM D638       |
| Tensile Strength <sup>2</sup> (Break)                            | 155                                                   | MPa               | ASTM D638       |
| Tensile Elongation <sup>3</sup> (Break)                          | 3.0                                                   | %                 | ASTM D638       |
| Flexural Modulus <sup>4</sup> (100 mm Span)                      | 9650                                                  | MPa               | ASTM D790       |
| Flexural Strength <sup>5</sup> (Yield, 100 mm Span)              | 241                                                   | MPa               | ASTM D790       |
| Impact                                                           | Nominal Value                                         | Unit              | Test Method     |
| Notched Izod Impact (23°C)                                       | 120                                                   | J/m               | ASTM D256       |
| Reverse Notch Izod Impact (3.20 mm)                              | 530                                                   | J/m               | ASTM D256       |
| Thermal                                                          | Nominal Value                                         | Unit              | Test Method     |
| Deflection Temperature Under Load (1.8 MPa, Unannealed, 6.40 mm) | 212                                                   | °C                | ASTM D648       |
| Flammability                                                     | Nominal Value                                         | Unit              | Test Method     |
| FAA Flammability <sup>6</sup>                                    | NATURAL                                               |                   | FAR 25.853      |
| NBS Smoke Density                                                |                                                       |                   | ASTM E662       |
| Flaming, Dmax                                                    | 5.00                                                  |                   | ASTM E662       |
| Flaming, Ds, 1.5 min                                             | 0.00                                                  |                   | ASTM E662       |
| Flaming, Ds, 4 min                                               | 5.00                                                  |                   | ASTM E662       |
| OSU peak heat release rate <sup>7</sup>                          | 40.0                                                  | kW/m <sup>2</sup> | FAR 25.853      |

| OSU total heat release <sup>8</sup> | 5.00               | kW · min/m <sup>2</sup> | FAR 25.853 |
|-------------------------------------|--------------------|-------------------------|------------|
| Vertical Burn Test                  |                    |                         | FAR 25.853 |
| Test a (60 s), passes at            | 0.0                | hr                      | FAR 25.853 |
| Test b (12 s), passes at            | 0.0                | hr                      | FAR 25.853 |
| Injection                           | Nominal Value      | Unit                    |            |
| Drying Temperature                  | 149                | °C                      |            |
| Drying Time                         | 4.0 - 6.0          | hr                      |            |
| Drying Time, Maximum                | 24                 | hr                      |            |
| Suggested Max Moisture              | 0.020              | %                       |            |
| Suggested Shot Size                 | 40 - 60            | %                       |            |
| Rear Temperature                    | 343 - 366          | °C                      |            |
| Middle Temperature                  | 354 - 377          | °C                      |            |
| Front Temperature                   | 366 - 388          | °C                      |            |
| Nozzle Temperature                  | 360 - 382          | °C                      |            |
| Processing (Melt) Temp              | 366 - 388          | °C                      |            |
| Mold Temperature                    | 135 - 163          | °C                      |            |
| Back Pressure                       | 0.345 - 0.689      | MPa                     |            |
| Screw Speed                         | 40 - 70            | rpm                     |            |
| Vent Depth                          | 0.025 - 0.076      | mm                      |            |
| NOTE                                |                    |                         |            |
| 1.                                  | 5.0 mm/min         |                         |            |
| 2.                                  | Type 1, 5.0 mm/min |                         |            |
| 3.                                  | Type 1, 5.0 mm/min |                         |            |
| 4.                                  | 2.6 mm/min         |                         |            |
| 5.                                  | 2.6 mm/min         |                         |            |
| 6.                                  | Method A/B         |                         |            |
| 7.                                  | 5 minute test      |                         |            |
| 8.                                  | 2 minute test      |                         |            |

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

#### Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



WECHAT