

# ULTEM™ 2110R resin

Polyether Imide

SABIC Innovative Plastics

## Message:

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

| General Information                                              |                                                       |                   |             |
|------------------------------------------------------------------|-------------------------------------------------------|-------------------|-------------|
| UL YellowCard                                                    | E45587-236982                                         |                   |             |
| Filler / Reinforcement                                           | Glass fiber reinforced material, 10% filler by weight |                   |             |
| Additive                                                         | demoulding                                            |                   |             |
| Features                                                         | Comply with ECO                                       |                   |             |
| Agency Ratings                                                   | EU Eco                                                |                   |             |
| Processing Method                                                | Injection molding                                     |                   |             |
| Physical                                                         | Nominal Value                                         | Unit              | Test Method |
| Specific Gravity                                                 | 1.34                                                  | g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (337°C/6.6 kg)                         | 12                                                    | g/10 min          | ASTM D1238  |
| Mechanical                                                       | Nominal Value                                         | Unit              | Test Method |
| Tensile Modulus <sup>1</sup>                                     | 4620                                                  | MPa               | ASTM D638   |
| Tensile Strength <sup>2</sup>                                    |                                                       |                   | ASTM D638   |
| Yield                                                            | 114                                                   | MPa               | ASTM D638   |
| Fracture                                                         | 116                                                   | MPa               | ASTM D638   |
| Tensile Elongation <sup>3</sup> (Break)                          | 6.0                                                   | %                 | ASTM D638   |
| Flexural Modulus <sup>4</sup> (100 mm Span)                      | 5240                                                  | MPa               | ASTM D790   |
| Flexural Strength <sup>5</sup> (Break, 100 mm Span)              | 200                                                   | MPa               | ASTM D790   |
| Impact                                                           | Nominal Value                                         | Unit              | Test Method |
| Notched Izod Impact (23°C)                                       | 53                                                    | J/m               | ASTM D256   |
| Reverse Notch Izod Impact (3.20 mm)                              | 400                                                   | J/m               | ASTM D256   |
| Thermal                                                          | Nominal Value                                         | Unit              | Test Method |
| Deflection Temperature Under Load (1.8 MPa, Unannealed, 6.40 mm) | 208                                                   | °C                | ASTM D648   |
| RTI Elec                                                         | 170                                                   | °C                | UL 746      |
| RTI Imp                                                          | 170                                                   | °C                | UL 746      |
| RTI                                                              | 170                                                   | °C                | UL 746      |
| Electrical                                                       | Nominal Value                                         |                   | Test Method |
| Arc Resistance <sup>6</sup>                                      | PLC 6                                                 |                   | ASTM D495   |
| Comparative Tracking Index (CTI)                                 | PLC 4                                                 |                   | UL 746      |
| High Amp Arc Ignition (HAI)                                      | PLC 4                                                 |                   | UL 746      |
| High Voltage Arc Tracking Rate (HVTR)                            | PLC 2                                                 |                   | UL 746      |
| Hot-wire Ignition (HWI)                                          | PLC 1                                                 |                   | UL 746      |
| Flammability                                                     | Nominal Value                                         |                   | Test Method |

|              |     |       |
|--------------|-----|-------|
| Flame Rating |     | UL 94 |
| 0.406 mm     | V-0 | UL 94 |
| 1.91 mm      | 5VA | UL 94 |

| 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       | 332 - 399     | °C   |
| Middle Temperature     | 338 - 399     | °C   |
| Front Temperature      | 343 - 399     | °C   |
| Nozzle Temperature     | 343 - 399     | °C   |
| Processing (Melt) Temp | 349 - 399     | °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.   | Tungsten electrode |  |

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