

# ULTEM™ RESIN 1100

REGION AMERICAS

## DESCRIPTION

Standard flow Polyetherimide (Tg 217C). ECO Conforming, UL94 V0, V2 and 5VA listing.

## TYPICAL PROPERTY VALUES

Revision 20170913

| PROPERTIES                                    | TYPICAL VALUES | UNITS    | TEST METHODS |
|---|----------------|----------|--------------|
| <b>MECHANICAL</b>                             |                |          |              |
| Tensile Stress, yld, Type I, 5 mm/min         | 110            | MPa      | ASTM D 638   |
| Tensile Strain, brk, Type I, 5 mm/min         | 70             | %        | ASTM D 638   |
| Tensile Modulus, 5 mm/min                     | 3720           | MPa      | ASTM D 638   |
| Flexural Stress, yld, 2.6 mm/min, 100 mm span | 165            | MPa      | ASTM D 790   |
| Flexural Modulus, 2.6 mm/min, 100 mm span     | 3720           | MPa      | ASTM D 790   |
| <b>IMPACT</b>                                 |                |          |              |
| Izod Impact, notched, 23°C                    | 37             | J/m      | ASTM D 256   |
| Izod Impact, Reverse Notched, 3.2 mm          | 1548           | J/m      | ASTM D 256   |
| Gardner, 23°C                                 | 23             | J        | ASTM D 3029  |
| <b>THERMAL</b>                                |                |          |              |
| HDT, 1.82 MPa, 6.4 mm, unannealed             | 198            | °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                              | 1.36           | -        | ASTM D 792   |
| Mold Shrinkage, flow, 3.2 mm (5)              | 0.5 – 0.7      | %        | SABIC method |
| Melt Flow Rate, 337°C/6.6 kgf                 | 8.8            | g/10 min | ASTM D 1238  |
| <b>ELECTRICAL</b>                             |                |          |              |
| Arc Resistance, Tungsten {PLC}                | 5              | 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}            | 3              | PLC Code | UL 746A      |
| Comparative Tracking Index (UL) {PLC}         | 4              | PLC Code | UL 746A      |
| <b>FLAME CHARACTERISTICS</b>                  |                |          |              |
| UL Recognized, 94V-2 Flame Class Rating (3)   | 0.4            | mm       | UL 94        |
| UL Recognized, 94V-0 Flame Class Rating (3)   | 0.75           | mm       | UL 94        |

| PROPERTIES                       | TYPICAL VALUES | UNITS | TEST METHODS |
|----------------------------------|----------------|-------|--------------|
| UL Recognized, 94-5VA Rating (3) | 3              | mm    | UL 94        |
| <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    |              |

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