# ULTEM™ RESIN CRS5311

REGION ASIA

## DESCRIPTION

30% Glass fiber filled, enhanced flow Polyetherimide copolymer (Tg 225C) with enhanced chemical resistance to strong acids, bases, aromatics, and ketones. ECO conforming, UL94 V0 and 5VA listing.

| INDUSTRY | SUB INDUSTRY |
|---|---|
| Automotive | Heavy Truck, Automotive Interiors, Bus, Automotive Under the Hood |
| Hydrocarbon and Energy | Fossil |
| Industrial | Defense |
| Mass Transportation | Aircraft Interiors, Rail |

## TYPICAL PROPERTY VALUES

Revision 20190717

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| **MECHANICAL** | | | |
| Tensile Stress, brk, Type I, 5 mm/min | 165 | MPa | ASTM D 638 |
| Tensile Strain, brk, Type I, 5 mm/min | 3 | % | ASTM D 638 |
| Tensile Modulus, 5 mm/min | 8960 | MPa | ASTM D 638 |
| Flexural Stress, yld, 2.6 mm/min, 100 mm span | 234 | MPa | ASTM D 790 |
| Flexural Modulus, 2.6 mm/min, 100 mm span | 8960 | MPa | ASTM D 790 |
| **IMPACT** | | | |
| Izod Impact, notched, 23°C | 96 | J/m | ASTM D 256 |
| Izod Impact, Reverse Notched, 3.2 mm | 507 | J/m | ASTM D 256 |
| Izod Impact, notched (natural, tints) | 160 | J/m | ASTM D 256 |
| **THERMAL** | | | |
| HDT, 1.82 MPa, 6.4 mm, unannealed | 218 | °C | ASTM D 648 |
| Relative Temp Index, Elec [1] | 105 | °C | UL 746B |
| Relative Temp Index, Mech w/impact [1] | 105 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact [1] | 105 | °C | UL 746B |
| **PHYSICAL** | | | |
| Specific Gravity | 1.52 | - | ASTM D 792 |
| Mold Shrinkage, flow, 3.2 mm | 0.2 – 0.4 | % | SABIC method |
| Melt Flow Rate, 337°C/6.6 kgf | 4 | g/10 min | ASTM D 1238 |
| **ELECTRICAL** | | | |
| Comparative Tracking Index (UL) {PLC} | 4 | PLC Code | UL 746A |
| Hot-Wire Ignition (HWI), PLC 0 | ≥3 | mm | UL 746A |
| Hot-Wire Ignition (HWI), PLC 1 | ≥1.5 | mm | UL 746A |
| High Amp Arc Ignition (HAI), PLC 3 | ≥1.5 | mm | UL 746A |
| High Amp Arc Ignition (HAI), PLC 4 | ≥3 | mm | UL 746A |
| High Voltage Arc Track Rate {PLC} | 3 | PLC Code | UL 746A |
| Arc Resistance, Tungsten {PLC} | 5 | PLC Code | ASTM D 495 |
| **FLAME CHARACTERISTICS** [1] | | | |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| UL Recognized, 94-5VA Flame Class Rating | ≥1.5 | mm | UL 94 |
| UL Recognized, 94V-0 Flame Class Rating | ≥1.5 | mm | UL 94 |
| INJECTION MOLDING | | | |
| 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 | |

(1) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

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