# ULTEM™ Resin CRS5201R

REGION AMERICAS

## DESCRIPTION

20% Glass fiber filled, standard flow Polyetherimide copolymer (Tg 225C) with internal mold release and enhanced chemical resistance to strong acids, bases, aromatics, and ketones. ECO Conforming.

| INDUSTRY | SUB INDUSTRY |
|---|---|
| Automotive | Heavy Truck, Automotive Under the Hood, Aerospace, Motorcycle, Recreational/Specialty Vehicles |
| Building and Construction | Building Component |
| Consumer | Personal Accessory, Home Appliances, Commercial Appliance |
| Electrical and Electronics | Energy Management, Drone Solutions, Mobile Phone - Computer - Tablets, Circuit Boards/Additives, Printer Copier, Speaker - Earphone |
| Industrial | Electrical, Material Handling |
| Mass Transportation | Rail |
| Packaging | Industrial Packaging |

## TYPICAL PROPERTY VALUES

Revision 20231109

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| **MECHANICAL** | | | |
| **Tensile Stress, brk, Type I, 5 mm/min** | 131 | MPa | ASTM D638 |
| **Tensile Strain, brk, Type I, 5 mm/min** | 5 | % | ASTM D638 |
| **Tensile Modulus, 5 mm/min** | 6890 | MPa | ASTM D638 |
| **Flexural Stress, yld, 2.6 mm/min, 100 mm span** | 213 | MPa | ASTM D790 |
| **Flexural Modulus, 2.6 mm/min, 100 mm span** | 6890 | MPa | ASTM D790 |
| **IMPACT** | | | |
| **Izod Impact, notched, 23°C** | 74 | J/m | ASTM D256 |
| **Izod Impact, Reverse Notched, 3.2 mm** | 480 | J/m | ASTM D256 |
| **THERMAL** | | | |
| **HDT, 1.82 MPa, 6.4 mm, unannealed** | 218 | °C | ASTM D648 |
| **CTE, -40°C to 150°C, flow** | 2.7E-05 | 1/°C | ISO 11359-2 |
| **CTE, -40°C to 150°C, xflow** | 5.8E-05 | 1/°C | ISO 11359-2 |
| **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** | 1.42 | - | ASTM D792 |
| **Melt Flow Rate, 337°C/6.6 kgf** | 3.1 | g/10 min | ASTM D1238 |
| **ELECTRICAL** | | | |
| **Hot-Wire Ignition (HWI), PLC 2** | ≥3 | mm | UL 746A |
| **Hot-Wire Ignition (HWI), PLC 3** | ≥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 |
| **Comparative Tracking Index (UL) {PLC}** | 4 | PLC Code | UL 746A |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| High Voltage Arc Track Rate {PLC} | 4 | PLC Code | UL 746A |
| Arc Resistance, Tungsten {PLC} | 5 | PLC Code | ASTM D495 |
| FLAME CHARACTERISTICS [1] | | | |
| UL Yellow Card Link | E121562-103873032 | - | - |
| 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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