

ULTEM™ RESIN 2410R

REGION ASIA

DESCRIPTION

40% Glass fiber filled, enhanced flow Polyetherimide (Tg 217C) with internal mold release. ECO Conforming, UL94 V0 and 5VA listing.

| INDUSTRY | SUB INDUSTRY |
|----------------------------|---|
| Automotive | Heavy Truck, Automotive Under the Hood, Aerospace, Motorcycle, Recreational/Specialty Vehicles |
| Building and Construction | Building Component, Water Management |
| Consumer | Consumer Goods, Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance, Furniture |
| Electrical and Electronics | Energy Management, Drone Solutions, Mobile Phone - Computer - Tablets, Circuit Boards/Additives, Lighting, Printer Copier, Speaker - Earphone, Wireless Communication |
| Hygiene and Healthcare | Personal and Professional Hygiene, Pharmaceutical Packaging and Drug Delivery, Surgical devices, General Healthcare, Patient Testing |
| Industrial | Electrical, Material Handling, Textile, Eyewear |
| 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 | 179 | MPa | ASTM D638 |
| Tensile Strain, brk, Type I, 5 mm/min | 2.5 | % | ASTM D638 |
| Tensile Modulus, 5 mm/min | 11720 | MPa | ASTM D638 |
| Flexural Stress, brk, 2.6 mm/min, 100 mm span | 241 | MPa | ASTM D790 |
| Flexural Modulus, 2.6 mm/min, 100 mm span | 11720 | MPa | ASTM D790 |
| Hardness, Rockwell M | 114 | - | ASTM D785 |
| IMPACT | | | |
| Izod Impact, unnotched, 23°C | 427 | J/m | ASTM D4812 |
| Izod Impact, notched, 23°C | 112 | J/m | ASTM D256 |
| Izod Impact, Reverse Notched, 3.2 mm | 480 | J/m | ASTM D256 |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 234 | °C | ASTM D1525 |
| HDT, 0.45 MPa, 6.4 mm, unannealed | 215 | °C | ASTM D648 |
| HDT, 1.82 MPa, 6.4 mm, unannealed | 212 | °C | ASTM D648 |
| CTE, -20°C to 150°C, flow | 1.4E-05 | 1/°C | ASTM E831 |
| 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 | 1.61 | - | ASTM D792 |
| Water Absorption, (23°C/24hrs) | 0.13 | % | ASTM D570 |
| Water Absorption, (23°C/Saturated) | 0.9 | % | ASTM D570 |
| Mold Shrinkage, flow, 3.2 mm | 0.1 – 0.3 | % | SABIC method |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|-------------------------------|----------|--------------|
| Melt Flow Rate, 337°C/6.6 kgf | 5.5 | g/10 min | ASTM D1238 |
| ELECTRICAL | | | |
| Volume Resistivity | 1.5E+16 | Ω.cm | ASTM D257 |
| Dielectric Strength, in oil, 1.6 mm | 24 | kV/mm | ASTM D149 |
| Relative Permittivity, 1 kHz | 3.7 | - | ASTM D150 |
| Dissipation Factor, 1 kHz | 0.002 | - | ASTM D150 |
| Comparative Tracking Index (UL) {PLC} | 4 | PLC Code | UL 746A |
| Hot-Wire Ignition (HWI), PLC 0 | ≥1.5 | mm | UL 746A |
| High Amp Arc Ignition (HAI), PLC 4 | ≥1.5 | mm | UL 746A |
| 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 | E45587-236986 | - | - |
| UL Recognized, 94-5VA Flame Class Rating | ≥1.5 | mm | UL 94 |
| UL Recognized, 94V-0 Flame Class Rating | ≥0.25 | mm | UL 94 |
| Oxygen Index (LOI) | 54 | % | ASTM D2863 |
| INJECTION MOLDING | | | |
| 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 | |

(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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