

ULTEM™ RESIN 2210F

REGION AMERICAS

DESCRIPTION

20% Glass fiber filled, enhanced flow Polyetherimide (Tg 217C). ECO Conforming. US FDA Food Contact compliant in recognized colors.

| 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, yld, Type I, 5 mm/min | 139 | MPa | ASTM D638 |
| Tensile Stress, brk, Type I, 5 mm/min | 140 | MPa | ASTM D638 |
| Tensile Strain, yld, Type I, 5 mm/min | 2 | % | ASTM D638 |
| Tensile Modulus, 5 mm/min | 6890 | MPa | ASTM D638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 227 | MPa | ASTM D790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 6890 | MPa | ASTM D790 |
| Tensile Stress, yield, 5 mm/min | 140 | MPa | ISO 527 |
| Tensile Stress, break, 5 mm/min | 140 | MPa | ISO 527 |
| Tensile Strain, yield, 5 mm/min | 2 | % | ISO 527 |
| Tensile Strain, break, 5 mm/min | 2 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 6800 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 210 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 6500 | MPa | ISO 178 |
| IMPACT | | | |
| Izod Impact, unnotched, 23°C | 475 | J/m | ASTM D4812 |
| Instrumented Dart Impact Total Energy, 23°C | 13 | J | ASTM D3763 |
| Izod Impact, notched 80*10*4 +23°C | 5 | kJ/m ² | ISO 180/1A |
| Izod Impact, notched 80*10*4 -30°C | 5 | kJ/m ² | ISO 180/1A |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm | 8 | kJ/m ² | ISO 179/1eA |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 226 | °C | ASTM D1525 |
| HDT, 1.82 MPa, 6.4 mm, unannealed | 211 | °C | ASTM D648 |
| Vicat Softening Temp, Rate B/50 | 212 | °C | ISO 306 |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|--------------------------------|-------------------|--------------|
| Vicat Softening Temp, Rate B / 120 | 218 | °C | ISO 306 |
| Relative Temp Index, Elec ⁽¹⁾ | 170 | °C | UL 746B |
| Relative Temp Index, Mech w/impact ⁽¹⁾ | 170 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact ⁽¹⁾ | 170 | °C | UL 746B |
| PHYSICAL | | | |
| Density | 1.42 | g/cm ³ | ISO 1183 |
| Water Absorption, (23°C/saturated) | 1 | % | ISO 62-1 |
| Moisture Absorption (23°C / 50% RH) | 0.55 | % | ISO 62 |
| ELECTRICAL | | | |
| Comparative Tracking Index (UL) {PLC} | 4 | PLC Code | UL 746A |
| Hot-Wire Ignition (HWI), PLC 1 | ≥3 | mm | UL 746A |
| Hot-Wire Ignition (HWI), PLC 2 | ≥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} | 2 | PLC Code | UL 746A |
| Arc Resistance, Tungsten {PLC} | 6 | PLC Code | ASTM D495 |
| FLAME CHARACTERISTICS ⁽¹⁾ | | | |
| UL Yellow Card Link | E121562-221093 | - | - |
| UL Recognized, 94-5VA Flame Class Rating | ≥1.9 | mm | UL 94 |
| UL Recognized, 94V-0 Flame Class Rating | ≥0.41 | mm | UL 94 |

(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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