

ULTEM™ RESIN 6202

REGION AMERICAS

DESCRIPTION

12% Silica filled, standard flow Polyetherimide Copolymer (Tg 235C). ECO Conforming, UL94 VO Listing.

| INDUSTRY | SUB INDUSTRY |
|------------|--------------|
| Automotive | Aerospace |

TYPICAL PROPERTY VALUES

Revision 20231109

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|--------------------------------|-----------|--------------|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 5 mm/min | 96 | MPa | ASTM D638 |
| Tensile Stress, brk, Type I, 5 mm/min | 92 | MPa | ASTM D638 |
| Tensile Strain, brk, Type I, 5 mm/min | 10 | % | ASTM D638 |
| Flexural Stress, yld, 2.6 mm/min, 100 mm span | 144 | MPa | ASTM D790 |
| Flexural Stress, brk, 2.6 mm/min, 100 mm span | 144 | MPa | ASTM D790 |
| Flexural Modulus, 2.6 mm/min, 100 mm span | 4410 | MPa | ASTM D790 |
| Hardness, Rockwell M | 110 | - | ASTM D785 |
| Taber Abrasion, CS-17, 1 kg | 11 | mg/1000cy | ASTM D1044 |
| IMPACT | | | |
| Izod Impact, unnotched, 23°C | 373 | J/m | ASTM D4812 |
| Izod Impact, notched, 23°C | 42 | J/m | ASTM D256 |
| THERMAL | | | |
| Vicat Softening Temp, Rate B/50 | 237 | °C | ASTM D1525 |
| HDT, 1.82 MPa, 6.4 mm, unannealed | 214 | °C | ASTM D648 |
| CTE, -20°C to 150°C, flow | 4.5E-05 | 1/°C | ASTM E831 |
| CTE, -20°C to 150°C, xflow | 4.86E-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 | 1.42 | - | ASTM D792 |
| Water Absorption, (23°C/24hrs) | 0.22 | % | ASTM D570 |
| Mold Shrinkage, flow, 3.2 mm | 0.5 – 0.7 | % | SABIC method |
| Melt Flow Rate, 367°C/6.6 kgf | 14.7 | g/10 min | ASTM D1238 |
| ELECTRICAL | | | |
| Volume Resistivity | 1.E+17 | Ω.cm | ASTM D257 |
| Dielectric Strength, in oil, 1.6 mm | 20.8 | kV/mm | ASTM D149 |
| Relative Permittivity, 1 kHz | 3.1 | - | ASTM D150 |
| Dissipation Factor, 1 kHz | 0.001 | - | ASTM D150 |
| FLAME CHARACTERISTICS ⁽¹⁾ | | | |
| UL Yellow Card Link | E121562-221112 | - | - |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|----------------|-------|--------------|
| UL Recognized, 94V-0 Flame Class Rating | 1.5 | mm | UL 94 |
| Oxygen Index (LOI) | 48 | % | 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 | 380 – 405 | °C | |
| Nozzle Temperature | 375 – 400 | °C | |
| Front - Zone 3 Temperature | 380 – 405 | °C | |
| Middle - Zone 2 Temperature | 370 – 395 | °C | |
| Rear - Zone 1 Temperature | 360 – 380 | °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.

ADDITIONAL PRODUCT NOTES

No PFAS intentionally added: The grade listed in this document does not contain PFAS intentionally added during Seller's manufacturing process and is not expected to contain unintentional PFAS impurities. Each user is responsible for evaluating the presence of unintentional PFAS impurities.

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