

ULTEM™ RESIN MD131A

REGION AMERICAS

DESCRIPTION

Transparent, enhanced flow Polyetherimide (Tg 217C). US FDA and EU Food Contact compliant.

TYPICAL PROPERTY VALUES

Revision 20240314

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|----------------|----------|--------------|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 5 mm/min | 110 | MPa | ASTM D638 |
| Tensile Strain, brk, Type I, 5 mm/min | 70 | % | ASTM D638 |
| Tensile Modulus, 5 mm/min | 3720 | MPa | ASTM D638 |
| Flexural Stress, yld, 2.6 mm/min, 100 mm span | 165 | MPa | ASTM D790 |
| Flexural Modulus, 2.6 mm/min, 100 mm span | 3720 | MPa | ASTM D790 |
| IMPACT | | | |
| Izod Impact, Reverse Notched, 3.2 mm | 1922 | J/m | ASTM D256 |
| Gardner, 23°C | 23 | J | ASTM D3029 |
| THERMAL | | | |
| HDT, 1.82 MPa, 6.4 mm, unannealed | 198 | °C | ASTM D648 |
| Relative Temp Index, Elec | 170 | °C | UL 746B |
| Relative Temp Index, Mech w/impact | 170 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact | 170 | °C | UL 746B |
| PHYSICAL | | | |
| Specific Gravity | 1.36 | - | ASTM D792 |
| Mold Shrinkage, flow, 3.2 mm | 0.5 – 0.7 | % | SABIC method |
| Melt Flow Rate, 337°C/6.6 kgf | 16 | g/10 min | ASTM D1238 |
| ELECTRICAL | | | |
| Arc Resistance, Tungsten {PLC} | 5 | PLC Code | ASTM D495 |
| Hot Wire Ignition {PLC} | 1 | PLC Code | UL 746A |
| High Voltage Arc Track Rate {PLC} | 2 | PLC Code | UL 746A |
| High Ampere Arc Ign, surface {PLC} | 3 | PLC Code | UL 746A |
| Comparative Tracking Index (UL) {PLC} | 4 | PLC Code | UL 746A |
| 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 | |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|-----------------------|----------------|-------|--------------|
| Screw Speed | 40 – 70 | rpm | |
| Shot to Cylinder Size | 40 – 60 | % | |
| Vent Depth | 0.025 – 0.076 | mm | |

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