

# ULTEM™ RESIN SF2250

REGION AMERICAS

## DESCRIPTION

20% Glass fiber filled, super high flow for thin wall application.

## TYPICAL PROPERTY VALUES

Revision 20231212

| PROPERTIES                                   | TYPICAL VALUES                    | UNITS      | TEST METHODS |
|----------------------------------------------|-----------------------------------|------------|--------------|
| MECHANICAL                                   |                                   |            |              |
| Tensile Stress, brk, Type I, 5 mm/min        | 162                               | MPa        | ASTM D638    |
| Tensile Strain, brk, Type I, 5 mm/min        | 3                                 | %          | ASTM D638    |
| Tensile Modulus, 5 mm/min                    | 8900                              | MPa        | ASTM D638    |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 197                               | MPa        | ASTM D790    |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 7260                              | MPa        | ASTM D790    |
| Tensile Stress, break, 5 mm/min              | 157                               | MPa        | ISO 527      |
| Tensile Strain, break, 5 mm/min              | 3                                 | %          | ISO 527      |
| Flexural Modulus, 2 mm/min                   | 7150                              | MPa        | ISO 178      |
| IMPACT                                       |                                   |            |              |
| Izod Impact, notched, 23°C                   | 89                                | J/m        | ASTM D256    |
| Izod Impact, notched 80°10°4 +23°C           | 9                                 | kJ/m²      | ISO 180/1A   |
| THERMAL                                      |                                   |            |              |
| HDT, 1.82 MPa, 3.2mm, unannealed             | 203                               | °C         | ASTM D648    |
| CTE, -40°C to 150°C, flow                    | 1.4E-05                           | 1/°C       | ASTM E831    |
| CTE, -40°C to 150°C, xflow                   | 5.4E-05                           | 1/°C       | ASTM E831    |
| CTE, 23°C to 150°C, flow                     | 1.8E-05                           | 1/°C       | ISO 11359-2  |
| CTE, 23°C to 150°C, xflow                    | 5.9E-05                           | 1/°C       | ISO 11359-2  |
| HDT/Ae, 1.8 MPa Edgew 120°10°4 sp=100mm      | 208                               | °C         | ISO 75/Ae    |
| PHYSICAL                                     |                                   |            |              |
| Specific Gravity                             | 1.44                              | -          | ASTM D792    |
| Moisture absorption (23°C/50% RH)            | 0.07                              | %          | -            |
| Mold Shrinkage, flow                         | 0.46                              | %          | SABIC method |
| Mold Shrinkage, xflow                        | 0.54                              | %          | SABIC method |
| Melt Flow Rate, 337°C/6.6 kgf                | 19.7                              | g/10 min   | ASTM D1238   |
| Density                                      | 1.44                              | g/cm³      | ISO 1183     |
| Water Absorption, (23°C/24hrs)               | 0.2                               | %          | ISO 62-1     |
| Melt Volume Rate, MVR at 345°C/10.0 kg       | 40                                | cm³/10 min | ISO 1133     |
| FLAME CHARACTERISTICS <sup>(1)</sup>         |                                   |            |              |
| UL Yellow Card Link                          | <a href="#">E207780-100116343</a> | -          | -            |
| 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         |              |

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CHEMISTRY THAT MATTERS™

| PROPERTIES                  | TYPICAL VALUES | UNITS | TEST METHODS |
|-----------------------------|----------------|-------|--------------|
| 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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