

SABIC Innovative Plastics ULTEM EXUM0167 PEI Blend

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

Improved ductility, transparent, standard flow Polyetherimide blend (Tg 200C) with internal mold release and enhanced ductility. ECO Conforming.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-EXUM0167-PEI-Blend.php

| Physical Properties | Metric | English | Comments |
|--------------------------------|---|---|---|
| Specific Gravity | 1.28 g/cc | 1.28 g/cc | ASTM D792 |
| Density | 1.28 g/cc | 0.0462 lb/in ³ | ISO 1183 |
| Moisture Absorption | 0.0900 % | 0.0900 % | 23 ^o C / 50% RH; ISO 62 |
| Water Absorption at Saturation | 0.37 % | 0.37 % | ISO 62 |
| Linear Mold Shrinkage, Flow | 0.0050 - 0.0070 cm/cm @Thickness 3.20 mm | 0.0050 - 0.0070 in/in @Thickness 0.126 in | SABIC Method |
| Melt Flow | 23 g/10 min @Load 6.60 kg, Temperature 337 ^o C | 23 g/10 min @Load 14.6 lb, Temperature 639 ^o F | ASTM D1238 |
| Melt Index of Compound | 28 g/10 min @Load 5.00 kg, Temperature 360 ^o C | 28 g/10 min @Load 11.0 lb, Temperature 680 ^o F | MVR [cm ³ /10 min]; ISO 1133 |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|----------|-----------|-----------------------------|
| Hardness, Rockwell M | 108 | 108 | ASTM D785 |
| Tensile Strength at Break | 80.0 MPa | 11600 psi | 5 mm/min; ISO 527 |
| | 85.0 MPa | 12300 psi | Type I, 5 mm/min; ASTM D638 |
| Tensile Strength, Yield | 98.0 MPa | 14200 psi | 5 mm/min; ISO 527 |
| | 103 MPa | 14900 psi | Type I, 5 mm/min; ASTM D638 |
| Elongation at Break | 80 % | 80 % | Type I, 5 mm/min; ASTM D638 |
| | 80 % | 80 % | 5 mm/min; ISO 527 |
| Elongation at Yield | 7.0 % | 7.0 % | Type I, 5 mm/min; ASTM D638 |
| | 7.0 % | 7.0 % | 5 mm/min; ISO 527 |

| Tensile Modulus Mechanical Properties | 2.50 GPa Metric | 363 ksi English | 1 mm/min; ISO 527 Comments |
|--|--------------------------|-----------------------------|------------------------------------|
| | 3.21 GPa | 466 ksi | 5 mm/min; ASTM D638 |
| Flexural Yield Strength | 135 MPa | 19600 psi | 2 mm/min; ISO 178 |
| | 145 MPa | 21000 psi | 1.3 mm/min, 50 mm span; ASTM D790 |
| Flexural Modulus | 3.10 GPa | 450 ksi | 2 mm/min; ISO 178 |
| | 3.50 GPa | 508 ksi | 1.3 mm/min, 50 mm span; ASTM D790 |
| Izod Impact, Notched | 0.350 J/cm | 0.656 ft-lb/in | ASTM D256 |
| | 0.380 J/cm | 0.712 ft-lb/in | ASTM D256 |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| | 21.35 J/cm | 40.00 ft-lb/in | ASTM D256 |
| | @Thickness 3.20 mm | @Thickness 0.126 in | |
| Izod Impact, Unnotched | NB | NB | ASTM D4812 |
| | NB | NB | ASTM D4812 |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| Izod Impact, Notched (ISO) | 2.00 kJ/m ² | 0.952 ft-lb/in ² | 80*10*4; ISO 180/1A |
| | 2.00 kJ/m ² | 0.952 ft-lb/in ² | 80*10*4; ISO 180/1A |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| Charpy Impact, Notched | 0.200 J/cm ² | 0.952 ft-lb/in ² | Edgew 80*10*4 sp=62mm; ISO 179/1eA |
| Dart Drop, Total Energy | 10.0 J | 7.38 ft-lb | ASTM D3763 |
| | @Temperature -20.0 °C | @Temperature -4.00 °F | |
| | 50.0 J | 36.9 ft-lb | ASTM D3763 |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |

| Thermal Properties | Metric | English | Comments |
|-------------------------------|-------------------------------|-------------------------------|-------------|
| CTE, linear, Parallel to Flow | 55.0 µm/m-°C | 30.6 µin/in-°F | ISO 11359-2 |
| | @Temperature 23.0 - 150 °C | @Temperature 73.4 - 302 °F | |
| | 60.0 µm/m-°C | 33.3 µin/in-°F | |

| Thermal Properties | Metric | English | Comments |
|---|--|--|------------------------------------|
| | @Temperature -20.0 - 150 Â°C | @Temperature -4.00 - 302 Â°F | ASTM E 831 |
| CTE, linear, Transverse to Flow | 55.0 Âµm/m-Â°C @Temperature 23.0 - 150 Â°C | 30.6 Âµin/in-Â°F @Temperature 73.4 - 302 Â°F | ISO 11359-2 |
| | 60.0 Âµm/m-Â°C @Temperature -20.0 - 150 Â°C | 33.3 Âµin/in-Â°F @Temperature -4.00 - 302 Â°F | ASTM E 831 |
| Deflection Temperature at 1.8 MPa (264 psi) | 168 Â°C | 334 Â°F | Edgew 120*10*4 sp=100mm; ISO 75/Ae |
| | 173 Â°C @Thickness 3.20 mm | 343 Â°F @Thickness 0.126 in | unannealed; ASTM D648 |
| | 178 Â°C @Thickness 6.40 mm | 352 Â°F @Thickness 0.252 in | unannealed; ASTM D648 |
| Vicat Softening Point | 192 Â°C | 378 Â°F | Rate B/50; ASTM D1525 |
| | 192 Â°C | 378 Â°F | Rate B/50; ISO 306 |
| | 195 Â°C | 383 Â°F | Rate B/120; ISO 306 |
| Glass Transition Temp, Tg | 200 Â°C | 392 Â°F | |

| Optical Properties | Metric | English | Comments |
|-----------------------|--------|---------|---------------------------------------|
| Transmission, Visible | 90 % | 90 % | transparent; thickness not quantified |

| Electrical Properties | Metric | English | Comments |
|-----------------------|---------------------------------|---------------------------------|-----------|
| Volume Resistivity | 1.00e+17 ohm-cm | 1.00e+17 ohm-cm | ASTM D257 |
| Surface Resistance | 1.60e+17 ohm | 1.60e+17 ohm | ASTM D257 |
| Dissipation Factor | 0.0061 @Frequency 1.00e+6 Hz | 0.0061 @Frequency 1.00e+6 Hz | ASTM D150 |

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