

SABIC Innovative Plastics ULTEM CRS5201 PEI (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

20% Glass fiber filled, standard flow Polyetherimide copolymer (Tg 225C) with enhanced chemical resistance to strong acids, bases, aromatics, and ketones. Resin is RoHS compliant. UL94 V0 and 5VA listing.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-CRS5201-PEI-Europe-Africa-Middle-East.php

| Physical Properties | Metric | English | Comments |
|--------------------------------|--|--|---|
| Density | 1.43 g/cc | 0.0517 lb/in ³ | ISO 1183 |
| Moisture Absorption | 0.200 % | 0.200 % | 23 ^o C / 50% RH; ISO 62 |
| Water Absorption at Saturation | 1.0 % | 1.0 % | ISO 62 |
| Linear Mold Shrinkage, Flow | 0.0030 - 0.0050 cm/cm | 0.0030 - 0.0050 in/in | on Tensile Bar; SABIC Method |
| Melt Index of Compound | 5.0 g/10 min @Load 5.00 kg, Temperature 360 ^o C | 5.0 g/10 min @Load 11.0 lb, Temperature 680 ^o F | MVR [cm ³ /10 min]; ISO 1133 |

| Mechanical Properties | Metric | English | Comments |
|------------------------------|--|--|---------------------|
| Hardness, H358/30 | 145 MPa | 21000 psi | ISO 2039-1 |
| Tensile Strength at Break | 135 MPa | 19600 psi | 5 mm/min; ISO 527 |
| Elongation at Break | 3.0 % | 3.0 % | 5 mm/min; ISO 527 |
| Tensile Modulus | 7.20 GPa | 1040 ksi | 1 mm/min; ISO 527 |
| Flexural Strength | 180 MPa | 26100 psi | 2 mm/min; ISO 178 |
| Flexural Modulus | 5.80 GPa | 841 ksi | 2 mm/min; ISO 178 |
| Izod Impact, Unnotched (ISO) | 40.0 kJ/m ² | 19.0 ft-lb/in ² | 80*10*4; ISO 180/1U |
| | 40.0 kJ/m ² @Temperature -30.0 ^o C | 19.0 ft-lb/in ² @Temperature -22.0 ^o F | 80*10*4; ISO 180/1U |

| Thermal Properties | Metric | English | Comments |
|-------------------------------|---|---|-------------|
| CTE, linear, Parallel to Flow | 20.0 μ m/m- ^o C | 11.1 μ in/in- ^o F | ISO 11359-2 |
| | @Temperature 23.0 - 150 ^o C | @Temperature 73.4 - 302 ^o F | |
| | 50.0 μ m/m- ^o C | 27.8 μ in/in- ^o F | |

| Thermal Properties | Metric @ Temperature 23.0 - 150 Â°C | English @ Temperature 73.4 - 302 Â°F | Comments ISO 11359-2 |
|---|---|--|------------------------------------|
| Deflection Temperature at 0.46 MPa (66 psi) | 210 Â°C | 410 Â°F | Edgew 120*10*4 sp=100mm; ISO 75/Be |
| Deflection Temperature at 1.8 MPa (264 psi) | 205 Â°C | 401 Â°F | Edgew 120*10*4 sp=100mm; ISO 75/Ae |
| Vicat Softening Point | 220 Â°C | 428 Â°F | Rate B/50; ISO 306 |
| | 222 Â°C | 432 Â°F | Rate B/120; ISO 306 |
| | 225 Â°C | 437 Â°F | Rate A/50; ISO 306 |
| Glass Transition Temp, Tg | 225 Â°C | 437 Â°F | |
| UL RTI, Electrical | 105 Â°C | 221 Â°F | UL 746B |
| UL RTI, Mechanical with Impact | 105 Â°C | 221 Â°F | UL 746B |
| UL RTI, Mechanical without Impact | 105 Â°C | 221 Â°F | UL 746B |
| Flammability, UL94 | V-0 @Thickness 1.50 mm | V-0 @Thickness 0.0591 in | UL 94 |
| | 5VA @Thickness 1.50 mm | 5VA @Thickness 0.0591 in | UL 94 |
| Oxygen Index | 47 % | 47 % | ISO 4589 |
| Glow Wire Test | 960 Â°C @Thickness 3.20 mm | 1760 Â°F @Thickness 0.126 in | IEC 60695-2-12 |

| Electrical Properties | Metric | English | Comments |
|-----------------------|----------------------------------|----------------------------------|---------------------|
| Volume Resistivity | 1.00e+15 ohm-cm | 1.00e+15 ohm-cm | IEC 60093 |
| Surface Resistance | >= 1.00e+15 ohm | >= 1.00e+15 ohm | ROA; IEC 60093 |
| Dielectric Constant | 3.0 @Frequency 1.00e+6 Hz | 3.0 @Frequency 1.00e+6 Hz | IEC 60250 |
| | 3.2 @Frequency 50.0 - 60.0 Hz | 3.2 @Frequency 50.0 - 60.0 Hz | IEC 60250 |
| Dielectric Strength | 16.0 kV/mm @Thickness 3.20 mm | 406 kV/in @Thickness 0.126 in | in oil; IEC 60243-1 |
| | 26.0 kV/mm | 660 kV/in | |

| Electrical Properties | Metric @ Thickness 1.60 mm | English @ Thickness 0.0630 in | in oil: IEC 60243-1 Comments |
|----------------------------|-------------------------------|----------------------------------|---------------------------------|
| Dissipation Factor | 0.0016 | 0.0016 | IEC 60250 |
| | @Frequency 50.0 - 60.0 Hz | @Frequency 50.0 - 60.0 Hz | |
| Comparative Tracking Index | 0.0043 | 0.0043 | IEC 60250 |
| | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz | |
| Comparative Tracking Index | >= 100 V | >= 100 V | IEC 60112 |
| | 150 V | 150 V | |

| Descriptive Properties | Value | Comments |
|-------------------------------------|--------|----------------|
| Ball Pressure Test, 125Å°C +/- 2Å°C | PASSES | IEC 60695-10-2 |

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