

SABIC Innovative Plastics ULTEM CRS5201R PEI (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

20% Glass fiber filled, standard flow Polyetherimide copolymer (Tg 225C) with internal mold release and enhanced chemical resistance to strong acids, bases, aromatics, and ketones. Resin is RoHS compliant.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-CRS5201R-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	V-0	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	5VA	5VA	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Oxygen Index	47 %	47 %	ISO 4589
Glow Wire Test	960 Â°C	1760 Â°F	IEC 60695-2-12
	@Thickness 3.20 mm	@Thickness 0.126 in	

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	3.0	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.2	3.2	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
Dielectric Strength	16.0 kV/mm	406 kV/in	in oil; IEC 60243-1
	@Thickness 3.20 mm	@Thickness 0.126 in	
	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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