

SABIC Innovative Plastics ULTEM CRS5001 PEI (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

Transparent, Standard flow Polyetherimide copolymer (Tg 225C) with enhanced chemical resistance to strong acids, bases, aromatics, and ketones. Resin is RoHS compliant. UL94 V0 listing.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-CRS5001-PEI-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.28 g/cc	0.0462 lb/in ³	ISO 1183
Moisture Absorption	0.0600 %	0.0600 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	1.2 %	1.2 %	ISO 62
Linear Mold Shrinkage, Flow	0.0060 - 0.0080 cm/cm	0.0060 - 0.0080 in/in	on Tensile Bar; SABIC Method
Melt Index of Compound	7.0 g/10 min @Load 5.00 kg, Temperature 360 ^o C	7.0 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	135 MPa	19600 psi	ISO 2039-1
Tensile Strength at Break	95.0 MPa	13800 psi	50 mm/min; ISO 527
Tensile Strength, Yield	100 MPa	14500 psi	50 mm/min; ISO 527
Elongation at Break	50 %	50 %	50 mm/min; ISO 527
Elongation at Yield	8.0 %	8.0 %	50 mm/min; ISO 527
Tensile Modulus	3.20 GPa	464 ksi	1 mm/min; ISO 527
Flexural Strength	105 MPa	15200 psi	2 mm/min; ISO 178
Flexural Yield Strength	110 MPa	16000 psi	2 mm/min; ISO 178
Flexural Modulus	2.50 GPa	363 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	8.00 kJ/m ²	3.81 ft-lb/in ²	80*10*4; ISO 180/1A
	8.00 kJ/m ² @Temperature -30.0 ^o C	3.81 ft-lb/in ² @Temperature -22.0 ^o F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB	NB	80*10*4; ISO 180/1U

Mechanical Properties	Metric	English	Comments
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	ISO 1135-1, ISO 1130, TU

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	50.0 Âµm/m-Â°C @Temperature 23.0 - 150 Â°C	27.8 Âµin/in-Â°F @Temperature 73.4 - 302 Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	60.0 Âµm/m-Â°C @Temperature 23.0 - 150 Â°C	33.3 Âµin/in-Â°F @Temperature 73.4 - 302 Â°F	ISO 11359-2
Thermal Conductivity	0.290 W/m-K	2.01 BTU-in/hr-ftÂ²- Â°F	ISO 8302
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)	200 Â°C	392 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
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

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

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093

Electrical Properties	Metric	English	Comments
Surface Resistance	$\geq 1.00 \times 10^{15} \text{ ohm}$	$\geq 1.00 \times 10^{15} \text{ ohm}$	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	in oil; IEC 60243-1
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dissipation Factor	0.0016	0.0016	IEC 60250
	@Frequency 50.0 - 60.0 Hz	@Frequency 50.0 - 60.0 Hz	
	0.0043	0.0043	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	$\geq 125 \text{ V}$	$\geq 125 \text{ V}$	IEC 60112
	175 V	175 V	IEC 60112

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

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