

SABIC Innovative Plastics ULTEM CRS5001 PEI

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. ECO conforming, UL94 V0 listing.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-CRS5001-PEI.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.28 g/cc	1.28 g/cc	ASTM D792
Water Absorption	0.16 %	0.16 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.0040 - 0.0070 cm/cm	0.0040 - 0.0070 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Melt Flow	4.2 g/10 min	4.2 g/10 min	ASTM D1238
	@Load 6.60 kg, Temperature 337 Â°C	@Load 14.6 lb, Temperature 639 Â°F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	123	123	ASTM D785
Tensile Strength, Yield	99.0 MPa	14400 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	60 %	60 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	2.89 GPa	419 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	137 MPa	19900 psi	2.6 mm/min, 100 mm span; ASTM D790
Flexural Modulus	3.10 GPa	450 ksi	2.6 mm/min, 100 mm span; ASTM D790
Izod Impact, Notched	0.640 J/cm	1.20 ft-lb/in	ASTM D256
	20.82 J/cm @Thickness 3.20 mm	39.00 ft-lb/in @Thickness 0.126 in	
Izod Impact, Unnotched	12.81 J/cm	24.00 ft-lb/in	ASTM D4812
Taber Abrasion, mg/1000 Cycles	10	10	CS-17, 1 kg; ASTM D1044

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
Thermal Distortion Temperature at 1.8 MPa (264 psi)	207 Â°C	405 Â°F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Glass Transition Temp, Tg	225 Â°C	437 Â°F	
UL RTI, Electrical	160 Â°C	320 Â°F	UL 746B
UL RTI, Mechanical with Impact	160 Â°C	320 Â°F	UL 746B
UL RTI, Mechanical without Impact	160 Â°C	320 Â°F	UL 746B
Flammability, UL94	V-0	V-0	UL 94
	@Thickness 1.49 mm	@Thickness 0.0587 in	

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

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.10e+17 ohm-cm	1.10e+17 ohm-cm	ASTM D257
Surface Resistance	5.80e+16 ohm	5.80e+16 ohm	ASTM D257
Dielectric Constant	3.12	3.12	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	17.9 kV/mm	455 kV/in	in oil; ASTM D149
	@Thickness 3.20 mm	@Thickness 0.126 in	
Dissipation Factor	0.0017	0.0017	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
Arc Resistance	120 - 180 sec	120 - 180 sec	Tungsten; ASTM D495
Comparative Tracking Index	100 - 175 V	100 - 175 V	UL 746A
Hot Wire Ignition, HWI	>= 120 sec	>= 120 sec	UL 746A
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	80.0 - 150 mm/min	3.15 - 5.91 in/min	UL 746A

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