

SABIC Innovative Plastics ULTEM 2200R PEI

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

20% Glass fiber filled, standard flow Polyetherimide (Tg 217C) with internal mold release. ECO Conforming, UL94 V0 and 5VA listing.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-2200R-PEI.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.42 g/cc	1.42 g/cc	ASTM D792
Water Absorption	0.19 % @Time 86400 sec	0.19 % @Time 24.0 hour	ASTM D570
Moisture Absorption at Equilibrium	1.1 %	1.1 %	ASTM D570
Linear Mold Shrinkage, Flow	0.0030 - 0.0050 cm/cm @Thickness 3.20 mm	0.0030 - 0.0050 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	6.5 g/10 min @Load 6.60 kg, Temperature 337 Â°C	6.5 g/10 min @Load 14.6 lb, Temperature 639 Â°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	114	114	ASTM D785
Tensile Strength at Break	131 MPa	19000 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	4.0 %	4.0 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	6.89 GPa	999 ksi	5 mm/min; ASTM D638
Flexural Strength	227 MPa	32900 psi	2.6 mm/min, 100 mm span; ASTM D790
Flexural Modulus	6.89 GPa	999 ksi	2.6 mm/min, 100 mm span; ASTM D790
Izod Impact, Notched	0.900 J/cm	1.69 ft-lb/in	ASTM D256
	5.12 J/cm @Thickness 3.20 mm	9.59 ft-lb/in @Thickness 0.126 in	ASTM D256
Izod Impact, Unnotched	4.80 J/cm	8.99 ft-lb/in	ASTM D4812

Thermal Properties	Metric	English	Comments
	25.2 Âµm/m-Â°C	14.0 Âµin/in-Â°F	

Thermal Properties	Metric	English	Comments
	@ Temperature -20.0 - 150 Â°C	@ Temperature -4.00 - 302 Â°F	
Deflection Temperature at 0.46 MPa (66 psi)	210 Â°C @Thickness 6.40 mm	410 Â°F @Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	210 Â°C @Thickness 6.40 mm	410 Â°F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	220 Â°C	428 Â°F	Rate B/50; ASTM D1525
Glass Transition Temp, Tg	217 Â°C	423 Â°F	
UL RTI, Electrical	170 Â°C	338 Â°F	UL 746B
UL RTI, Mechanical with Impact	170 Â°C	338 Â°F	UL 746B
UL RTI, Mechanical without Impact	170 Â°C	338 Â°F	UL 746B
Flammability, UL94	V-0 @Thickness 0.400 mm	V-0 @Thickness 0.0157 in	UL 94
	5VA @Thickness 1.90 mm	5VA @Thickness 0.0748 in	UL 94
Oxygen Index	50 %	50 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	7.00e+16 ohm-cm	7.00e+16 ohm-cm	ASTM D257
Dielectric Constant	3.5 @Frequency 1000 Hz	3.5 @Frequency 1000 Hz	ASTM D150
Dielectric Strength	26.3 kV/mm @Thickness 1.60 mm	668 kV/in @Thickness 0.0630 in	in oil; ASTM D149
Dissipation Factor	0.0015 @Frequency 1000 Hz	0.0015 @Frequency 1000 Hz	ASTM D150
	0.0049 @Frequency 2.45e+9 Hz	0.0049 @Frequency 2.45e+9 Hz	ASTM D150
Arc Resistance	60 - 120 sec	60 - 120 sec	Tungsten; ASTM D495
Comparative Tracking Index	100 - 175 V	100 - 175 V	UL 746A
Hot Wire Ignition, HWI	60 - 120 sec	60 - 120 sec	UL 746A

Electrical Properties	Metric	English	Comments
High Voltage Arc-Tracking Rate, HVTR	25.4 - 80.0 mm/min	1.00 - 3.15 in/min	UL 746A

Descriptive Properties	Value	Comments
NBS Smoke Density, Flaming, Ds 4 min	1.3	ASTM E 662

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