

SABIC Innovative Plastics ULTEM 2300R PEI (Asia Pacific)

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

30% 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-2300R-PEI-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.51 g/cc	1.51 g/cc	ASTM D792
Water Absorption	0.16 %	0.16 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Moisture Absorption at Equilibrium	0.90 %	0.90 %	ASTM D570
Linear Mold Shrinkage, Flow	0.0020 - 0.0040 cm/cm	0.0020 - 0.0040 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Melt Flow	5.3 g/10 min	5.3 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 M	114	114	ASTM D785
Tensile Strength at Break	158 MPa	22900 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	168 MPa	24400 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	3.0 %	3.0 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	9.30 GPa	1350 ksi	5 mm/min; ASTM D638
Flexural Strength	227 MPa	32900 psi	2.6 mm/min, 100 mm span; ASTM D790
Flexural Modulus	8.96 GPa	1300 ksi	2.6 mm/min, 100 mm span; ASTM D790
Izod Impact, Notched	0.850 J/cm	1.59 ft-lb/in	ASTM D256
	4.91 J/cm	9.20 ft-lb/in	
	@Thickness 3.20 mm	@Thickness 0.126 in	ASTM D256
Izod Impact, Unnotched	4.27 J/cm	8.00 ft-lb/in	ASTM D4812

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	19.8 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	11.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -20.0 - 150 $\text{Å}^\circ\text{C}$	@Temperature -4.00 - 302 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	212 $\text{Å}^\circ\text{C}$	414 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	210 $\text{Å}^\circ\text{C}$	410 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	227 $\text{Å}^\circ\text{C}$	441 $\text{Å}^\circ\text{F}$	Rate B/50; ASTM D1525
Glass Transition Temp, Tg	217 $\text{Å}^\circ\text{C}$	423 $\text{Å}^\circ\text{F}$	
UL RTI, Electrical	180 $\text{Å}^\circ\text{C}$	356 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical with Impact	170 $\text{Å}^\circ\text{C}$	338 $\text{Å}^\circ\text{F}$	UL 746B
UL RTI, Mechanical without Impact	180 $\text{Å}^\circ\text{C}$	356 $\text{Å}^\circ\text{F}$	UL 746B
Flammability, UL94	V-0	V-0	UL 94
	@Thickness 0.250 mm	@Thickness 0.00984 in	
	5VA	5VA	UL 94
	@Thickness 1.21 mm	@Thickness 0.0476 in	
Oxygen Index	50 %	50 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	3.00e+16 ohm-cm	3.00e+16 ohm-cm	ASTM D257
Dielectric Constant	3.7	3.7	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dielectric Strength	24.8 kV/mm	630 kV/in	in air; ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	30.3 kV/mm	770 kV/in	in oil; ASTM D149
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Dissipation Factor	0.0015	0.0015	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.0053	0.0053	ASTM D150
	@Frequency 2.45e+9 Hz	@Frequency 2.45e+9 Hz	

Electrical Properties	Metric	English	Comments
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
High Amp Arc Ignition, HAI	0.00 - 15 arcs	0.00 - 15 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	80.0 - 150 mm/min	3.15 - 5.91 in/min	UL 746A

Descriptive Properties	Value	Comments
NBS Smoke Density, Flaming, Ds 4 min	1.6	ASTM E 662

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