

SABIC Innovative Plastics ULTEM 2300 PEI

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

30% Glass fiber filled, standard flow Polyetherimide (Tg 217C). ECO Conforming, UL94 V0 and 5VA listing. NSF 51 listing, WRAS certification, KTW certification in recognized colors.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-2300-PEI.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.51 g/cc	1.51 g/cc	ASTM D792
Water Absorption	0.16 % @Time 86400 sec	0.16 % @Time 24.0 hour	ASTM D570
Moisture Absorption at Equilibrium	0.90 %	0.90 %	ASTM D570
Linear Mold Shrinkage, Flow	0.0020 - 0.0040 cm/cm @Thickness 3.20 mm	0.0020 - 0.0040 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0020 - 0.0040 cm/cm @Thickness 3.20 mm	0.0020 - 0.0040 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	5.0 g/10 min @Load 6.60 kg, Temperature 337 Â°C	5.0 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	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	ASTM D256

Mechanical Properties	@Thickness 3.20 mm Metric	@Thickness 0.126 in English	Comments
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 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature -20.0 - 150 $\text{Å}^\circ\text{C}$	11.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature -4.00 - 302 $\text{Å}^\circ\text{F}$	ASTM E 831
Deflection Temperature at 0.46 MPa (66 psi)	212 $\text{Å}^\circ\text{C}$ @Thickness 6.40 mm	414 $\text{Å}^\circ\text{F}$ @Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	210 $\text{Å}^\circ\text{C}$ @Thickness 6.40 mm	410 $\text{Å}^\circ\text{F}$ @Thickness 0.252 in	unannealed; ASTM D648
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 @Thickness 0.250 mm	V-0 @Thickness 0.00984 in	UL 94
	5VA @Thickness 1.21 mm	5VA @Thickness 0.0476 in	UL 94
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 @Frequency 1000 Hz	3.7 @Frequency 1000 Hz	ASTM D150
Dielectric Strength	24.8 kV/mm @Thickness 1.60 mm	630 kV/in @Thickness 0.0630 in	in air; ASTM D149
	30.3 kV/mm @Thickness 1.60 mm	770 kV/in @Thickness 0.0630 in	in oil; ASTM D149
Dissipation Factor	0.0015 @Frequency 1000 Hz	0.0015 @Frequency 1000 Hz	ASTM D150

Electrical Properties	Metric	English	Comments
	@Frequency 2.45e+9 Hz	@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
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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