

SABIC Innovative Plastics ULTEM 2310EPR PEI

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

30% Glass fiber filled, high flow Polyetherimide (Tg 217C) with internal mold release and enhanced electroplatability. ECO Conforming, UL94 V0 listing.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-2310EPR-PEI.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.48 g/cc	1.48 g/cc	ASTM D792
Density	1.48 g/cc	0.0535 lb/in ³	ISO 1183
Moisture Absorption	0.500 %	0.500 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.90 %	0.90 %	ISO 62
Linear Mold Shrinkage, Flow	0.0030 - 0.0050 cm/cm	0.0030 - 0.0050 in/in	on Tensile Bar; SABIC Method
	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Linear Mold Shrinkage, Transverse	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	SABIC Method
	@Thickness 3.20 mm	@Thickness 0.126 in	
Melt Flow	11 g/10 min	11 g/10 min	ASTM D1238
	@Load 6.60 kg, Temperature 337 Â°C	@Load 14.6 lb, Temperature 639 Â°F	
Melt Index of Compound	12 g/10 min	12 g/10 min	MVR [cm ³ /10 min]; ISO 1133
	@Load 5.00 kg, Temperature 360 Â°C	@Load 11.0 lb, Temperature 680 Â°F	

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	160 MPa	23200 psi	ISO 2039-1
Tensile Strength at Break	158 MPa	22900 psi	Type I, 5 mm/min; ASTM D638
	160 MPa	23200 psi	5 mm/min; ISO 527
Tensile Strength, Yield	158 MPa	22900 psi	Type I, 5 mm/min; ASTM D638
	160 MPa	23200 psi	5 mm/min; ISO 527
Elongation at Break	2.0 %	2.0 %	5 mm/min; ISO 527
	2.1 %	2.1 %	Type I, 5 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
Elongation at Yield	2.0 %	2.0 %	5 mm/min; ISO 527
	2.1 %	2.1 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	8.58 GPa	1240 ksi	5 mm/min; ASTM D638
	8.97 GPa	1300 ksi	1 mm/min; ISO 527
Flexural Yield Strength	210 MPa	30500 psi	2 mm/min; ISO 178
	228 MPa	33100 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	9.14 GPa	1330 ksi	1.3 mm/min, 50 mm span; ASTM D790
	9.50 GPa	1380 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.850 J/cm	1.59 ft-lb/in	ASTM D256
Izod Impact, Unnotched	4.50 J/cm	8.43 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	10.0 kJ/mÂ²	4.76 ft-lb/inÂ²	80*10*4; ISO 180/1A
	10.0 kJ/mÂ²	4.76 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	35.0 kJ/mÂ²	16.7 ft-lb/inÂ²	80*10*4; ISO 180/1U
	35.0 kJ/mÂ²	16.7 ft-lb/inÂ²	80*10*4; ISO 180/1U
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	3.00 J/cmÂ²	14.3 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	3.50 J/cmÂ²	16.7 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	1.00 J/cmÂ²	4.76 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	1.00 J/cmÂ²	4.76 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	9.00 J	6.64 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	ASTM D3763

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	@Temperature -40.0 - 150 Â°C	@Temperature -40.0 - 302 Â°F	ASTM E 831
	18.0 Âµm/m-Â°C	10.0 Âµin/in-Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	@Temperature 23.0 - 150 Â°C	@Temperature 73.4 - 302 Â°F	ISO 11359-2
	30.0 Âµm/m-Â°C	16.7 Âµin/in-Â°F	ASTM E 831
Thermal Conductivity	@Temperature -40.0 - 150 Â°C	@Temperature -40.0 - 302 Â°F	ASTM E 831
	30.0 Âµm/m-Â°C	16.7 Âµin/in-Â°F	ISO 11359-2
Thermal Conductivity	0.310 W/m-K	2.15 BTU-in/hr-ftÂ²-Â°F	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	207 Â°C	405 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	205 Â°C	401 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	208 Â°C	406 Â°F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	196 Â°C	385 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	201 Â°C	394 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	205 Â°C	401 Â°F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	212 Â°C	414 Â°F	Rate B/50; ISO 306
	214 Â°C	417 Â°F	Rate B/120; ISO 306
	217 Â°C	423 Â°F	Rate B/50; ASTM D1525
Glass Transition Temp, Tg	217 Â°C	423 Â°F	
Flammability, UL94	V-0	V-0	UL 94
	@Thickness 0.400 mm	@Thickness 0.0157 in	

Electrical Properties	Metric	English	Comments
Arc Resistance	60 - 120 sec	60 - 120 sec	Tungsten; ASTM D495

Electrical Properties Comparative Tracking Index	Metric 100 - 175 V	English 100 - 175 V	Comments UL 746A
Hot Wire Ignition, HWI	7.0 - 15 sec	7.0 - 15 sec	UL 746A
High Amp Arc Ignition, HAI	0.00 - 15 arcs	0.00 - 15 arcs	UL 746A
High Voltage Arc-Tracking Rate, HVTR	>= 150 mm/min	>= 5.91 in/min	UL 746A

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

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