

SABIC Innovative Plastics ULTEM 2312 PEI (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

30% Milled glass filled, enhanced flow Polyetherimide (Tg 217C). Resin is RoHS compliant. UL94 V0 and 5VA listing.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-2312-PEI-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Density	1.51 g/cc	0.0546 lb/in ³	ISO 1183
Moisture Absorption	0.500 %	0.500 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.90 %	0.90 %	ISO 62
Linear Mold Shrinkage, Flow	0.0020 - 0.0040 cm/cm	0.0020 - 0.0040 in/in	on Tensile Bar; SABIC Method
Melt Index of Compound	12 g/10 min @Load 5.00 kg, Temperature 360 ^o C	12 g/10 min @Load 11.0 lb, Temperature 680 ^o F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	160 MPa	23200 psi	ISO 2039-1
Tensile Strength at Break	85.0 MPa	12300 psi	5 mm/min; ISO 527
Elongation at Break	3.0 %	3.0 %	5 mm/min; ISO 527
Tensile Modulus	6.00 GPa	870 ksi	1 mm/min; ISO 527
Flexural Yield Strength	145 MPa	21000 psi	2 mm/min; ISO 178
Flexural Modulus	6.00 GPa	870 ksi	2 mm/min; ISO 178
Izod Impact, Unnotched (ISO)	20.0 kJ/m ²	9.52 ft-lb/in ²	80*10*4; ISO 180/1U
	20.0 kJ/m ² @Temperature -30.0 ^o C	9.52 ft-lb/in ² @Temperature -22.0 ^o F	80*10*4; ISO 180/1U
Charpy Impact Unnotched	2.50 J/cm ²	11.9 ft-lb/in ²	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	2.50 J/cm ² @Temperature -30.0 ^o C	11.9 ft-lb/in ² @Temperature -22.0 ^o F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	0.400 J/cm ²	1.90 ft-lb/in ²	ISO 179/2C

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	23.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	12.8 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature 23.0 - 150 $\text{Å}^\circ\text{C}$	@Temperature 73.4 - 302 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	27.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	15.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature 23.0 - 150 $\text{Å}^\circ\text{C}$	@Temperature 73.4 - 302 $\text{Å}^\circ\text{F}$	
Thermal Conductivity	0.300 W/m-K	2.08 BTU-in/hr-ft $\text{Å}^2\cdot\text{Å}^\circ\text{F}$	ISO 8302
Deflection Temperature at 0.46 MPa (66 psi)	206 $\text{Å}^\circ\text{C}$	403 $\text{Å}^\circ\text{F}$	Edgew 120*10*4 sp=100mm; ISO 75/Be
Deflection Temperature at 1.8 MPa (264 psi)	192 $\text{Å}^\circ\text{C}$	378 $\text{Å}^\circ\text{F}$	Edgew 120*10*4 sp=100mm; ISO 75/Ae
Vicat Softening Point	211 $\text{Å}^\circ\text{C}$	412 $\text{Å}^\circ\text{F}$	Rate B/50; ISO 306
	213 $\text{Å}^\circ\text{C}$	415 $\text{Å}^\circ\text{F}$	Rate B/120; ISO 306
	220 $\text{Å}^\circ\text{C}$	428 $\text{Å}^\circ\text{F}$	Rate A/50; ISO 306
Glass Transition Temp, Tg	217 $\text{Å}^\circ\text{C}$	423 $\text{Å}^\circ\text{F}$	
UL RTI, Electrical	170 $\text{Å}^\circ\text{C}$	338 $\text{Å}^\circ\text{F}$	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	170 $\text{Å}^\circ\text{C}$	338 $\text{Å}^\circ\text{F}$	UL 746B
Flammability, UL94	V-0	V-0	UL 94
	@Thickness 0.810 mm	@Thickness 0.0319 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
Surface Resistance	$\geq 1.00\text{e}+15$ ohm	$\geq 1.00\text{e}+15$ ohm	ROA; IEC 60093
Dielectric Constant	3.4	3.4	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	150 V	150 V	IEC 60112

Descriptive Properties	Value	Comments
Ball Pressure Test, 125 $\text{Å}^\circ\text{C}$ +/- 2 $\text{Å}^\circ\text{C}$	PASSES	IEC 60695-10-2

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