SABIC Innovative Plastics Ultem XH6050M PEI Copolymer (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

Enhanced flow Polyetherimidesulfone copolymer (Tg 247C) with internal mold release. ECO Conforming, UL94 V0 listing. Resin is subject to U.S. Commerce Control Laws (15CFR Chapter VII, Part 774).This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Ultem-XH6050M-PEI-Copolymer-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.30 g/cc	1.30 g/cc	ASTM D 792
Density	1.30 g/cc	0.0470 lb/inÂ³	ISO 1183
Moisture Absorption at Equilibrium	0.65 %	0.65 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	1.75 % @Temperature 23.0 Â°C	1.75 % @Temperature 73.4 Â°F	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	on tensile bar; SABIC Method
	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	8.0 g/10 min @Load 5.00 kg, Temperature 360 Â°C	8.0 g/10 min @Load 11.0 lb, Temperature 680 Â°F	[cm^3/10 min] Melt Volume Rate; ISO 1133
	12.5 g/10 min @Load 6.60 kg, Temperature 367 Â°C	12.5 g/10 min @Load 14.6 lb, Temperature 693 Â°F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Hardness, H358/30	138 MPa	20000 psi	ISO 2039-1
Tensile Strength at Break	78.0 MPa	11300 psi	5 mm/min; ISO 527
	96.0 MPa	13900 psi	Type I, 5 mm/min; ASTM D 638
Tensile Strength, Yield	95.0 MPa	13800 psi	5 mm/min; ISO 527
	96.0 MPa	13900 psi	Type I, 5 mm/min; ASTM D 638

Mechanical Properties	Metric	English	Comments
Elongation at Break	15.3 %	15.3 %	5 mm/min; ISO 527
	25 %	25 %	Type I, 5 mm/min; ASTM D 638
Elongation at Yield	6.0 %	6.0 %	Type I, 5 mm/min; ASTM D 638
	8.4 %	8.4 %	5 mm/min; ISO 527
Tensile Modulus	3.12 GPa	453 ksi	1 mm/min; ISO 527
	3.51 GPa	509 ksi	5 mm/min; ASTM D 638
Flexural Strength	123 MPa	17800 psi	2 mm/min; ISO 178
	158 MPa	22900 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Yield Strength	155 MPa	22500 psi	2.6 mm/min, 100 mm span; ASTM D 790
Flexural Modulus	3.07 GPa	445 ksi	2 mm/min; ISO 178
	3.17 GPa	460 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	0.690 J/cm @Temperature 23.0 Â°C	1.29 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
	0.740 J/cm @Temperature -30.0 Â°C	1.39 ft-lb/in @Temperature -22.0 Â°F	ASTM D 256
Izod Impact, Unnotched	NB @Temperature 23.0 Â°C	NB @Temperature 73.4 Â°F	ASTM D 4812
Izod Impact, Notched (ISO)	5.00 kJ/mÂ² @Temperature -30.0 Â°C	2.38 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1A
	6.00 kJ/mÂ² @Temperature 23.0 Â°C	2.86 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	147 kJ/mÂ² @Temperature -30.0 Â°C	69.9 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1U
	196 kJ/mÂ² @Temperature 23.0 Â°C	93.3 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1U

Mechanical Properties	Metric	English	Comments
Charpy Impact Unnotched	NB @Temperature 23.0 Â°C	NB @Temperature 73.4 Â°F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
	NB @Temperature -30.0 Â°C	NB @Temperature -22.0 Â°F	Edgew 80*10*4 sp=62mm; ISO 179/1eU
Impact Test	33.0 J @Temperature 23.0 Â°C	24.3 ft-lb @Temperature 73.4 Â°F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	50.0 Âµm/m-Â°C @Temperature -40.0 - 150 Â°C	27.8 Âµin/in-Â°F @Temperature -40.0 - 302 Â°F	ASTM E 831
	50.0 Âµm/m-Â°C @Temperature 23.0 - 150 Â°C	27.8 Âµin/in-Â°F @Temperature 73.4 - 302 Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	50.0 Âµm/m-Â°C @Temperature -40.0 - 150 Â°C	27.8 Âµin/in-Â°F @Temperature -40.0 - 302 Â°F	ASTM E 831
	50.0 Âµm/m-Â°C @Temperature 23.0 - 150 Â°C	27.8 Âµin/in-Â°F @Temperature 73.4 - 302 Â°F	ISO 11359-2
Thermal Conductivity	0.220 W/m-K	1.53 BTU-in/hr-ftÂ²-Â°F	ASTM E 1530
Deflection Temperature at 0.46 MPa (66 psi)	237 Â°C @Thickness 6.40 mm	459 Â°F @Thickness 0.252 in	unannealed; ASTM D 648
Deflection Temperature at 1.8 MPa (264 psi)	228 Â°C	442 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	217 Â°C @Thickness 3.20 mm	423 Â°F @Thickness 0.126 in	unannealed; ASTM D 648
	230 Â°C @Thickness 6.40 mm	446 Â°F @Thickness 0.252 in	unannealed; ASTM D 648
Vicat Softening Point	240 Â°C	464 Â°F	Rate B/120; ISO 306
	242 Â°C	468 Â°F	Rate B/50; ASTM D 1525
	242 Â°C	468 Â°F	Rate B/50; ISO 306

Thermal Properties	Metric	English	Comments
Glass Transition Temp, Tg	247 Â°C	477 Â°F	
Oxygen Index	45 %	45 %	LOI; ISO 4589
Glow Wire Test	850 Â°C @Thickness 3.00 mm	1560 Â°F @Thickness 0.118 in	Glow Wire Ignitability Temperature; IEC 60695-2-13
	960 Â°C @Thickness 3.20 mm	1760 Â°F @Thickness 0.126 in	Glow Wire Flammability Index; IEC 60695-2-12

Electrical Properties	Metric	English	Comments
Dielectric Strength	14.0 kV/mm @Thickness 3.20 mm	356 kV/in @Thickness 0.126 in	in oil; ASTM D 149
Dissipation Factor	0.0010 @Frequency 1000 Hz	0.0010 @Frequency 1000 Hz	IEC 60250
	0.0070 @Frequency 1.00e+6 Hz	0.0070 @Frequency 1.00e+6 Hz	IEC 60250
	0.0080 @Frequency 100 Hz	0.0080 @Frequency 100 Hz	IEC 60250
	0.018 @Frequency 50.0 - 60.0 Hz	0.018 @Frequency 50.0 - 60.0 Hz	IEC 60250
Comparative Tracking Index	175 V	175 V	IEC 60112

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

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