SABIC Innovative Plastics ULTEM AUT230 PEI (Asia Pacific)

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

Transparent polyetherimide (Tg 247 degC). Very low outgassing and plateout, for automotive lighting applications where highly metallized, reflective surfaces are required. Haze onset temperature of 230 degC (SABIC Innovative Plastics method).

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-AUT230-PEI-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.30 g/cc	1.30 g/cc	ASTM D792
Density	1.30 g/cc	0.0470 lb/inÂ³	ISO 1183
Moisture Absorption	0.600 %	0.600 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	1.75 %	1.75 %	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	15.5 g/10 min @Load 6.60 kg, Temperature 367 Â°C	15.5 g/10 min @Load 14.6 lb, Temperature 693 Â°F	ASTM D1238
Melt Index of Compound	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	MVR [cm^3/10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
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 D638
Tensile Strength, Yield	95.0 MPa	13800 psi	5 mm/min; ISO 527
	96.0 MPa	13900 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	16.8 %	16.8 %	5 mm/min; ISO 527
	25 %	25 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	6.0 %	6.0 %	Type I, 5 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
	8.5 %	8.5 %	5 mm/min; ISO 527
Tensile Modulus	3.11 GPa	451 ksi	1 mm/min; ISO 527
	3.51 GPa	509 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	123 MPa	17800 psi	2 mm/min; ISO 178
Flexural Modulus	3.08 GPa	447 ksi	2 mm/min; ISO 178
	3.17 GPa	460 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.690 J/cm	1.29 ft-lb/in	ASTM D256
	0.740 J/cm @Temperature -30.0 Â°C	1.39 ft-lb/in @Temperature -22.0 Â°F	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D4812
Izod Impact, Notched (ISO)	4.00 kJ/mÂ²	1.90 ft-lb/inÂ²	80*10*4; ISO 180/1A
	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
Izod Impact, Unnotched (ISO)	NB	NB	80*10*4; ISO 180/1U
	NB @Temperature -30.0 Â°C	NB @Temperature -22.0 Â°F	80*10*4; ISO 180/1U
Dart Drop, Total Energy	33.0 J @Temperature 23.0 Â°C	24.3 ft-lb @Temperature 73.4 Â°F	ASTM D3763

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

Thermal Properties	Metric	English	Comments
	50.0 µm/m-°C @Temperature 23.0 - 150 °C	27.8 µin/in-°F @Temperature 73.4 - 302 °F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	237 °C @Thickness 6.40 mm	459 °F @Thickness 0.252 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	228 °C	442 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	217 °C @Thickness 3.20 mm	423 °F @Thickness 0.126 in	unannealed; ASTM D648
	230 °C @Thickness 6.40 mm	446 °F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	238 °C	460 °F	Rate B/120; ISO 306
	242 °C	468 °F	Rate B/50; ASTM D1525
	242 °C	468 °F	Rate B/50; ISO 306
Glass Transition Temp, Tg	247 °C	477 °F	

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

Descriptive Properties	Value	Comments
Ball Pressure Test, 125°C +/- 2°C	Passes	IEC 60695-10-2
Metallized Haze Onset	230°C	SABIC Method

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