SABIC Innovative Plastics ULTEM AUT200 PEI

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

Transparent high flow Polyetherimide (Tg 217C). Very low outgassing and plateout, for automotive lighting applications where highly metallized, reflective surfaces are required. Haze onset temperature of 204C (SABIC IP method)

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-AUT200-PEI.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.27 g/cc	1.27 g/cc	ASTM D792
Density	1.27 g/cc	0.0459 lb/inÂ³	ISO 1183
Moisture Absorption	0.700 %	0.700 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	1.25 %	1.25 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.20 mm	0.0050 - 0.0070 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	17.8 g/10 min @Load 6.60 kg, Temperature 337 Â°C	17.8 g/10 min @Load 14.6 lb, Temperature 639 Â°F	ASTM D1238
Melt Index of Compound	25 g/10 min @Load 5.00 kg, Temperature 360 Â°C	25 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	85.0 MPa	12300 psi	5 mm/min; ISO 527
	105 MPa	15200 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	105 MPa	15200 psi	5 mm/min; ISO 527
	110 MPa	16000 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	60 %	60 %	Type I, 5 mm/min; ASTM D638
	60 %	60 %	5 mm/min; ISO 527
Elongation at Yield	6.0 %	6.0 %	5 mm/min; ISO 527
	7.0 %	7.0 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	3.20 GPa	464 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
	3.59 GPa	521 ksi	5 mm/min; ASTM D638
Flexural Yield Strength	160 MPa	23200 psi	2 mm/min; ISO 178
	165 MPa	23900 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	3.30 GPa	479 ksi	2 mm/min; ISO 178
	3.52 GPa	511 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.320 J/cm	0.599 ft-lb/in	ASTM D256
	0.350 J/cm @Temperature -30.0 Â°C	0.656 ft-lb/in @Temperature -22.0 Â°F	ASTM D256
Izod Impact, Unnotched	13.35 J/cm	25.01 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	5.00 kJ/mÂ²	2.38 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
Charpy Impact, Notched	0.300 J/cmÂ²	1.43 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
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 23.0 - 150 Â°C	27.8 Âµin/in-Â°F @Temperature 73.4 - 302 Â°F	ISO 11359-2
	55.0 Âµm/m-Â°C @Temperature -40.0 - 150 Â°C	30.6 Âµin/in-Â°F @Temperature -40.0 - 302 Â°F	ASTM E 831
CTE, linear, Transverse to Flow	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 Properties	Metric	English	Comments
	55.0 µm/m-°C	30.6 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 150 °C	@Temperature -40.0 - 302 °F	
Deflection Temperature at 0.46 MPa (66 psi)	205 °C @Thickness 3.20 mm	401 °F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	190 °C	374 °F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	193 °C	379 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	197 °C @Thickness 3.20 mm	387 °F @Thickness 0.126 in	unannealed; ASTM D648
	199 °C @Thickness 6.40 mm	390 °F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	211 °C	412 °F	Rate B/50; ISO 306
	212 °C	414 °F	Rate B/120; ISO 306
	219 °C	426 °F	Rate B/50; ASTM D1525
Glass Transition Temp, Tg	217 °C	423 °F	

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

Descriptive Properties	Value	Comments
Metallized Haze Onset	204°C	SABIC Method

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