

SABIC Innovative Plastics ULTEM DT1810EV PEI Blend

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

Improved ductility, transparent, enhanced flow Polyetherimide blend (Tg 200C) with internal mold release and enhanced ductility. ECO Conforming, UL94 V0 listed.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-DT1810EV-PEI-Blend.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.28 g/cc	1.28 g/cc	ASTM D792
Density	1.28 g/cc	0.0462 lb/in ³	ISO 1183
Moisture Absorption	0.0800 %	0.0800 %	23 ^o C / 50% RH; ISO 62
Water Absorption at Saturation	0.36 %	0.36 %	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	43 g/10 min @Load 6.60 kg, Temperature 337 ^o C	43 g/10 min @Load 14.6 lb, Temperature 639 ^o F	ASTM D1238
Melt Index of Compound	56 g/10 min @Load 5.00 kg, Temperature 360 ^o C	56 g/10 min @Load 11.0 lb, Temperature 680 ^o F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	80.0 MPa	11600 psi	5 mm/min; ISO 527
	85.0 MPa	12300 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	98.0 MPa	14200 psi	5 mm/min; ISO 527
	103 MPa	14900 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	80 %	80 %	Type I, 5 mm/min; ASTM D638
	80 %	80 %	5 mm/min; ISO 527
Elongation at Yield	7.0 %	7.0 %	Type I, 5 mm/min; ASTM D638
	7.0 %	7.0 %	5 mm/min; ISO 527
Tensile Modulus	2.50 GPa	363 ksi	1 mm/min; ISO 527

Mechanical Properties	3.21 GPa Metric	466 ksi English	5 mm/min: ASTM D638 Comments
Flexural Yield Strength	135 MPa	19600 psi	2 mm/min; ISO 178
	145 MPa	21000 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	3.10 GPa	450 ksi	2 mm/min; ISO 178
	3.32 GPa	482 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	NB	NB	ASTM D4812
	NB @Temperature -30.0 Â°C	NB @Temperature -22.0 Â°F	ASTM D4812
Izod Impact, Notched (ISO)	2.00 kJ/mÂ²	0.952 ft-lb/inÂ²	80*10*4; ISO 180/1A
	2.00 kJ/mÂ² @Temperature -30.0 Â°C	0.952 ft-lb/inÂ² @Temperature -22.0 Â°F	80*10*4; ISO 180/1A
Charpy Impact, Notched	0.200 J/cmÂ²	0.952 ft-lb/inÂ²	Edgew 80*10*4 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	48.0 J @Temperature 23.0 Â°C	35.4 ft-lb @Temperature 73.4 Â°F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	55.0 Âµm/m-Â°C	30.6 Âµin/in-Â°F	ISO 11359-2
	@Temperature 23.0 - 150 Â°C	@Temperature 73.4 - 302 Â°F	
	60.0 Âµm/m-Â°C	33.3 Âµin/in-Â°F	ASTM E 831
	@Temperature -40.0 - 150 Â°C	@Temperature -40.0 - 302 Â°F	
CTE, linear, Transverse to Flow	55.0 Âµm/m-Â°C	30.6 Âµin/in-Â°F	ISO 11359-2
	@Temperature 23.0 - 150 Â°C	@Temperature 73.4 - 302 Â°F	
	60.0 Âµm/m-Â°C	33.3 Âµin/in-Â°F	ASTM E 831

Thermal Properties	@Temperature -40.0 - 150 Â°C Metric	@Temperature -40.0 - 300 Â°F English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	168 Â°C	334 Â°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	173 Â°C @Thickness 3.20 mm	343 Â°F @Thickness 0.126 in	unannealed; ASTM D648
	178 Â°C @Thickness 6.40 mm	352 Â°F @Thickness 0.252 in	unannealed; ASTM D648
Vicat Softening Point	192 Â°C	378 Â°F	Rate B/50; ASTM D1525
	192 Â°C	378 Â°F	Rate B/50; ISO 306
	195 Â°C	383 Â°F	Rate B/120; ISO 306
Glass Transition Temp, Tg	200 Â°C	392 Â°F	

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

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