

## SABIC Innovative Plastics Ultem DT1810E 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. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-Ultem-DT1810E-PEI-Blend.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Ultem-DT1810E-PEI-Blend.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.28 g/cc	1.28 g/cc	ASTM D 792
Density	1.28 g/cc	0.0462 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption at Equilibrium	0.080 %	0.080 %	23 <sup>o</sup> C / 50% RH; ISO 62
Water Absorption at Saturation	0.36 % @Temperature 23.0 <sup>o</sup> C	0.36 % @Temperature 73.4 <sup>o</sup> F	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 <sup>o</sup> C	43 g/10 min @Load 14.6 lb, Temperature 639 <sup>o</sup> F	ASTM D 1238
	56 g/10 min @Load 5.00 kg, Temperature 360 <sup>o</sup> C	56 g/10 min @Load 11.0 lb, Temperature 680 <sup>o</sup> F	[cm <sup>3</sup> /10 min] Melt Volume Rate; 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 D 638
Tensile Strength, Yield	98.0 MPa	14200 psi	5 mm/min; ISO 527
	103 MPa	14900 psi	Type I, 5 mm/min; ASTM D 638
Elongation at Break	80 %	80 %	Type I, 5 mm/min; ASTM D 638
	80 %	80 %	5 mm/min; ISO 527
Elongation at Yield	7.0 %	7.0 %	Type I, 5 mm/min; ASTM D 638
	7.0 %	7.0 %	5 mm/min; ISO 527

Tensile Modulus Mechanical Properties	2.50 GPa Metric	363 ksi English	1 mm/min; ISO 527 Comments
	3.21 GPa	466 ksi	5 mm/min; ASTM D 638
Flexural Yield Strength	135 MPa	19600 psi	2 mm/min; ISO 178
	145 MPa	21000 psi	1.3 mm/min, 50 mm span; ASTM D 790
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 D 790
Izod Impact, Notched	0.320 J/cm @Temperature 23.0 Â°C	0.599 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
	0.350 J/cm @Temperature -30.0 Â°C	0.656 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
	NB @Temperature -30.0 Â°C	NB @Temperature -22.0 Â°F	ASTM D 4812
Izod Impact, Notched (ISO)	2.00 kJ/mÂ² @Temperature 23.0 Â°C	0.952 ft-lb/inÂ² @Temperature 73.4 Â°F	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 @Temperature 23.0 Â°C	0.952 ft-lb/inÂ² @Temperature 73.4 Â°F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Impact Test	48.0 J @Temperature 23.0 Â°C	35.4 ft-lb @Temperature 73.4 Â°F	Instrumented Impact Total Energy; ASTM D 3763

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

Thermal Properties	60.0 Åµm/m-Å°C Metric	33.3 Åµin/in-Å°F English	Comments ASTME 831
	@Temperature -40.0 - 150 Å°C	@Temperature -40.0 - 302 Å°F	
CTE, linear, Transverse to Flow	55.0 Åµm/m-Å°C	30.6 Åµin/in-Å°F	ISO 11359-2
	@Temperature 23.0 - 150 Å°C	@Temperature 73.4 - 302 Å°F	
	60.0 Åµm/m-Å°C	33.3 Åµin/in-Å°F	ASTME 831
	@Temperature -40.0 - 150 Å°C	@Temperature -40.0 - 302 Å°F	
Deflection Temperature at 1.8 MPa (264 psi)	168 Å°C	334 Å°F	Edgew 120*10*4 sp=100mm; ISO 75/Ae
	173 Å°C	343 Å°F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	178 Å°C	352 Å°F	unannealed; ASTM D 648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	192 Å°C	378 Å°F	Rate B/50; ASTM D 1525
	192 Å°C	378 Å°F	Rate B/50; ISO 306
	195 Å°C	383 Å°F	Rate B/120; ISO 306
Glass Transition Temp, Tg	200 Å°C	392 Å°F	

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

## Contact Songhan Plastic Technology Co.,Ltd.

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