SABIC Innovative Plastics Ultem DT1800E PEI Blend (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

Improved ductility, transparent, standard flow Polyetherimide blend (Tg 200C) with internal mold release and enhanced ductility. ECO Conforming.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-DT1800E-PEI-Blend-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.28 g/cc	1.28 g/cc	ASTM D 792
Density	1.27 g/cc	0.0459 lb/inÂ³	ISO 1183
Moisture Absorption at Equilibrium	0.090 %	0.090 %	23Â°C / 50% RH; ISO 62
Water Absorption at Saturation	0.37 % @Temperature 23.0 Â°C	0.37 % @Temperature 73.4 Â°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	23 g/10 min @Load 6.60 kg, Temperature 337 Â°C	23 g/10 min @Load 14.6 lb, Temperature 639 Â°F	ASTM D 1238
	28 g/10 min @Load 5.00 kg, Temperature 360 Â°C	28 g/10 min @Load 11.0 lb, Temperature 680 Â°F	[cm^3/10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	108	108	ASTM D 785
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

Mechanical Properties	Metric	English	Comments
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	2.50 GPa	363 ksi	1 mm/min; ISO 527
	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
	3.50 GPa	508 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	0.350 J/cm @Temperature 23.0 Â°C	0.656 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
	0.380 J/cm @Temperature -30.0 Â°C	0.712 ft-lb/in @Temperature -22.0 Â°F	ASTM D 256
	21.35 J/cm @Thickness 3.20 mm	40.00 ft-lb/in @Thickness 0.126 in	reverse notched; 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	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 @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	10.0 J @Temperature -20.0 Â°C	7.38 ft-lb @Temperature -4.00 Â°F	Instrumented Impact Total Energy; ASTM D 3763

Mechanical Properties	Metric	English	Comments
	50.0 J @Temperature 23.0 Â°C	36.9 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
	60.0 Âµm/m-Â°C @Temperature -20.0 - 150 Â°C	33.3 Âµin/in-Â°F @Temperature -4.00 - 302 Â°F	ASTM E 831
CTE, linear, Transverse 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
	60.0 Âµm/m-Â°C @Temperature -20.0 - 150 Â°C	33.3 Âµin/in-Â°F @Temperature -4.00 - 302 Â°F	ASTM E 831
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 D 648
	178 Â°C @Thickness 6.40 mm	352 Â°F @Thickness 0.252 in	unannealed; ASTM D 648
Vicat Softening Point	192 Â°C	378 Â°F	Rate B/50; ASTM D 1525
	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

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+17 ohm-cm	1.00e+17 ohm-cm	ASTM D 257
Surface Resistance	1.60e+17 ohm	1.60e+17 ohm	ASTM D 257
	0.0061	0.0061	

Electrical Properties	Metric	English	Comments
Dissipation Factor	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	ASTM D 150

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