

SABIC Innovative Plastics ULTEM EXUM0169 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.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-ULTEM-EXUM0169-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 %	23Â°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 Â°C	43 g/10 min @Load 14.6 lb, Temperature 639 Â°F	ASTM D1238
Melt Index of Compound	56 g/10 min @Load 5.00 kg, Temperature 360 Â°C	56 g/10 min @Load 11.0 lb, Temperature 680 Â°F	MVR [cm ³ /10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	108	108	ASTM D785
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 Mechanical Properties	2.50 GPa Metric	363 ksi English	1 mm/min; ISO 527 Comments
	3.21 GPa	466 ksi	5 mm/min; ASTM D638
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	0.656 ft-lb/in	ASTM D256
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
	20.85 J/cm	39.06 ft-lb/in	ASTM D256
	@Thickness 3.20 mm	@Thickness 0.126 in	
Izod Impact, Unnotched	NB	NB	ASTM D4812
	NB	NB	ASTM D4812
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
Izod Impact, Notched (ISO)	2.00 kJ/mÂ²	0.952 ft-lb/inÂ²	80*10*4; ISO 180/1A
	2.00 kJ/mÂ²	0.952 ft-lb/inÂ²	80*10*4; ISO 180/1A
	@Temperature -30.0 Â°C	@Temperature -22.0 Â°F	
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	8.00 J	5.90 ft-lb	ASTM D3763
	@Temperature -20.0 Â°C	@Temperature -4.00 Â°F	
	48.0 J	35.4 ft-lb	ASTM D3763
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

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	

Thermal Properties	Metric	English	Comments
	@Temperature -40.0 - 150 Â°C	@Temperature -40.0 - 302 Â°F	ASTM E 831
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
	@Temperature -40.0 - 150 Â°C	@Temperature -40.0 - 302 Â°F	
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	343 Â°F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
	178 Â°C	352 Â°F	unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
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

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+17 ohm-cm	1.00e+17 ohm-cm	ASTM D257
Surface Resistance	1.60e+17 ohm	1.60e+17 ohm	ASTM D257
Dissipation Factor	0.0061	0.0061	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

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