

## SABIC Innovative Plastics Ultem UR9076LG PEI

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

### Material Notes:

Standard flow mineral filled Polyetherimide Blend. Restricted sales to GE Specialty Film & Sheet. 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-UR9076LG-PEI.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Ultem-UR9076LG-PEI.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.38 g/cc	1.38 g/cc	ASTM D 792
Density	1.37 g/cc	0.0495 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption at Equilibrium	0.15 %	0.15 %	23 <sup>o</sup> C / 50% RH; ISO 62
Water Absorption at Saturation	0.40 % @Temperature 23.0 <sup>o</sup> C	0.40 % @Temperature 73.4 <sup>o</sup> F	ISO 62
Linear Mold Shrinkage, Flow	0.0040 - 0.0060 cm/cm @Thickness 3.20 mm	0.0040 - 0.0060 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	2.4 g/10 min @Load 6.60 kg, Temperature 295 <sup>o</sup> C	2.4 g/10 min @Load 14.6 lb, Temperature 563 <sup>o</sup> F	ASTM D 1238
	10 g/10 min @Load 5.00 kg, Temperature 220 <sup>o</sup> C	10 g/10 min @Load 11.0 lb, Temperature 428 <sup>o</sup> F	[cm <sup>3</sup> /10 min] Melt Volume Rate; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	95.0 MPa	13800 psi	5 mm/min; ISO 527
	96.0 MPa	13900 psi	Type I, 5 mm/min; ASTM D 638
Tensile Strength, Yield	95.0 MPa	13800 psi	5 mm/min; ISO 527
	96.0 MPa	13900 psi	Type I, 5 mm/min; ASTM D 638
Elongation at Break	5.0 %	5.0 %	Type I, 5 mm/min; ASTM D 638
	5.0 %	5.0 %	5 mm/min; ISO 527
Elongation at Yield	5.0 %	5.0 %	Type I, 5 mm/min; ASTM D 638
	5.0 %	5.0 %	5 mm/min; ISO 527

Tensile Modulus Mechanical Properties	3.30 GPa Metric	479 ksi English	5 mm/min; ASTM D 638 Comments
	3.30 GPa	479 ksi	1 mm/min; ISO 527
Flexural Yield Strength	140 MPa	20300 psi	2 mm/min; ISO 178
Flexural Modulus	3.30 GPa	479 ksi	1.3 mm/min, 50 mm span; ASTM D 790
	3.30 GPa	479 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.550 J/cm @Temperature 23.0 °C	1.03 ft-lb/in @Temperature 73.4 °F	ASTM D 256
	0.600 J/cm @Temperature -30.0 °C	1.12 ft-lb/in @Temperature -22.0 °F	ASTM D 256
Izod Impact, Notched (ISO)	49.0 kJ/m <sup>2</sup> @Temperature 23.0 °C	23.3 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	80*10*4; ISO 180/1A
	55.0 kJ/m <sup>2</sup> @Temperature -30.0 °C	26.2 ft-lb/in <sup>2</sup> @Temperature -22.0 °F	80*10*4; ISO 180/1A
Charpy Impact, Notched	4.90 J/cm <sup>2</sup> @Temperature 23.0 °C	23.3 ft-lb/in <sup>2</sup> @Temperature 73.4 °F	V-notch Edgew 80*10*4 sp=62mm; ISO 179/1eA
Impact Test	854 J @Temperature 23.0 °C	630 ft-lb @Temperature 73.4 °F	Instrumented Impact Total Energy; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	29.0 Åµm/m-Å°C @Temperature -40.0 - 40.0 Å°C	16.1 Åµin/in-Å°F @Temperature -40.0 - 104 Å°F	ASTM E 831
	29.0 Åµm/m-Å°C @Temperature -40.0 - 40.0 Å°C	16.1 Åµin/in-Å°F @Temperature -40.0 - 104 Å°F	ISO 11359-2
CTE, linear, Transverse to Flow	77.0 Åµm/m-Å°C @Temperature -40.0 - 40.0 Å°C	42.8 Åµin/in-Å°F @Temperature -40.0 - 104 Å°F	ASTM E 831
	77.0 Åµm/m-Å°C @Temperature -40.0 - 40.0 Å°C	42.8 Åµin/in-Å°F @Temperature -40.0 - 40.0 Å°C	ISO 11359-2

Thermal Properties	40.0 Å°C Metric	104 Å°F English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	172 Å°C	342 Å°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	185 Å°C	365 Å°F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	179 Å°C	354 Å°F	Rate B/50; ISO 306
	182 Å°C	360 Å°F	Rate B/120; ISO 306
	184 Å°C	363 Å°F	Rate B/50; ASTM D 1525

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