

Aurum[®] PL450C Thermoplastic Polyimide - Typical Properties for Film

	Units	Method	Result
THERMAL			
Continuous use temperature	°F	-	446 (230°C)
Melting point	°F	-	730 (388°C)
Coefficient of thermal conductivity	W/m•K	-	0.18
Coefficient of linear expansion	x 10 ⁻⁶ cm/cm/K	-	55
MECHANICAL			
Tensile strength at break	Mpa (psi)	ASTM D882	104 (15,100)
Tensile elongation at break	%	ASTM D882	190
Tensile modulus	MPa (psi)	ASTM D882	3,060 (442,780)
Tensile impact	ft.lb/sq in	ASTM D1822	94
Tear Resistance (Graves Tear) - Load	lbf	ASTM D1004-08	4.72
Load/Thickness at max load	lbf/mil	ASTM D1004-08	1.52
Extension at max load	in	ASTM D1004-08	0.063
ELECTRICAL			
Flammability	-	UL94	V-0 @ 0.016"
Capacitance	-	ASTM D150	364.0
Dielectric constant	@ 1kHz	ASTM D150	2.50
Dissipation factor	-	ASTM D150	.0014
Dielectric breakdown @ .004"	kV	ASTM D149-97a	12.4
Dielectric strength @ .004"	V/mil	ASTM D149-97a	3,950
CHEMICAL RESISTANCE			
O ₂ permeability	cc/m ² /atm/24 hr	ASTM D3938	135 @ 0.8 mil
H ₂ O permeability	g/m ² /atm/24 hr	ASTM E96	85 @ 1.4 mil
Water absorption (24 hr)	%@50°C•75%RH•24hr		1.0
Toluene	-	Mitsui	No change
MEK	-	Mitsui	No change
OTHER			
Specific gravity	-	ASTM D792	1.33
Haze	%	ASTM D1003	0.1
Light transmission	%	ASTM D1003	64 @ 1.4 mil