

## IMIDEX® (Thermoplastic Polyimide film)

Imidex is a unique thermoplastic polyimide film made from Aurum® resin.

### Advantages of Imidex:

- Will melt onto itself
- Thermoformable
- High heat resistance
- High tensile and tear strength
- Excellent resistance to oil, many chemicals, sunlight, and radiation
- Fairly transparent

### Applications Include:

- Electronics
  - Acoustics
- Composites
- Wire/Cable insulation
- Adhesive film
- Washers and gaskets

Property	ASTM Test Method	Units	IMIDEX®
<b>Physical</b>			
Specific Gravity	D792		1.33
Haze	D1003	%	0.1
Light Transmission	D1003	%	64 @ 1.4mil
Water Absorption @24 hours		%@50°C•75%RH•24hr	1.0
<b>Mechanical</b>			
Flexural Modulus	D790	MPa (psi)	3,779 (548,000)
Tear Strength - Initiation	D1004	lbs	50.4
Tear Strength - Propagation	D1922	lbs	2.8
Tensile Elongation	D882	%	110
Tensile Impact	D1822	ft-lb/in	94
Tensile Modulus	D882	MPa (psi)	3,060 (442,780)
Tensile Strength	D882	MPa (psi)	118 (17,100)
<b>Thermal</b>			
Continuous Use Temperature		°F	446 (230°C)
Coefficient of Linear Expansion		cm/cm/K	55 x 10 <sup>-6</sup>
Coefficient of Thermal Conductivity		W/m-K	0.18
Melting Point		°F	730 (388°C)
Flammability - UL94			VTM-0 @ 1 mil
<b>Electrical</b>			
Radiation Resistance		— g Ray — b Ray	10,000 mega rad 12,000 mega rad
1 mil film tested:			
Capacitance	D150		364.0
Dielectric Constant @1kHz	D150		2.50
Dissipation Factor	D150		.0014
Dissipation Breakdown	D149	kV	6.29
Dielectric Strength	D149	V/mil	6,290
<b>Chemical</b>			
O2 Permeability	D3938	cc/m <sup>2</sup> /atm/24hr	135 @ 0.8mil
H2O Permeability	E96	g/m <sup>2</sup> /atm/24hr	85 @ 1.4mil
10% HCl Aqueous	Mitsui		no change
30% NaOH Aqueous	Mitsui		no change
Toluene	Mitsui		no change
MEK	Mitsui		no change

*NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets. All values at 73°F (23°C) unless otherwise noted.*