



TPX® FILM – POLYMETHYLPENTENE

TPX has a remarkable and unique combination of transparency and resistance to heat and chemicals. It also has unique acoustical properties. It is used in a wide variety of applications including speaker cones, gas separating membranes, release films and carrier films for ceramic slurry.

The following physical property information is based on typical values of the base TPX® DX845 resin as well as test results obtained from actual film testing.

Applications Include:

- Speaker cones
- Gas separating membranes
- Release films
- Carrier films for ceramic slurry
- Antennas
- Medical instrument cover
- Ultrasonic imaging equipment

Advantages of TPX Film:

- Lowest specific gravity of any known thermoplastic
- Low moisture absorption
- Exceptional electrical properties
- Good chemical resistance
- High heat resistance
- Excellent acoustical properties
- Transparency
- Resin FDA compliant

Manufacturing Capabilities:

- **Film:**
 .002" to .029" thick up to 24" wide

Finishes:

- all thicknesses available polished one side, matte the other (P/M)

In addition to our standard capabilities, Westlake also has the ability to process custom resins in various sizes and colors with some exceptions.

Property	Units	Test Standard	Result
Mechanical			
Tensile Strength @yield	psi	ASTM D882	4,110
Tensile Elongation @break	%	ASTM D882	10
Tensile Modulus	psi	ASTM D882	280,000
Flexural Modulus	psi	ASTM D790	210,000
Tear Strength - prop.	g/mil	ASTM D1004	125
Thermal			
Continuous Use Temperature—UL	°F	—	212
Heat Deflection Temperature @66 psi	°F	ASTM D648	212
Melt Temperature—DSC	°F	—	455
Glass Transition Temperature	°F	ASTM D3418	—
Flammability			
UL Rating—UL94	—	—	HB
LOI	%	ASTM D2863	<25
NBS Smoke	Dmax	ASTM E662	—
Electrical			
Surface Resistivity	Ohms	ASTM D257	>10 ¹⁶
Dielectric Strength @.003"	V/mil	ASTM D149	3,710
Dielectric Constant	1 KHz	ASTM D150	2.12
Dissipation Factor	1 KHz	ASTM D150	0.000025
Other			
Specific Gravity	—	ASTM D792	0.835
Water Absorption @24 hours	%	ASTM D570	0.01
Refractive Index	—	—	1.463
Haze	%	ASTM D1003	2
Area Factor	in ² /lb/mil	—	32,725