Westlake TPX® Film

Polymethylpentene

Westlake Plastics Company

Message:

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.
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

General Information			
Features	Food Contact Acceptable Good Chemical Resistance Good Electrical Properties High Heat Resistance Low Moisture Absorption Ultrasonic Weldable		
Uses	Film Medical/Healthcare Applications Membranes		
Agency Ratings	FDA Unspecified Rating		
Appearance	Clear/Transparent		
Forms	Film		
Processing Method	Thermoforming		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	0.833	g/cm³	ASTM D792
Water Absorption (24 hr)	0.010	%	ASTM D570
Films	**Nominal Value**	**Unit**	**Test Method**
Elastic Modulus - MD	1930	MPa	ASTM D882
Tensile Strength - MD (Yield)	28.3	MPa	ASTM D882

Tensile Elongation - MD (Break)	10	%	ASTM D882
Flexural Modulus - MD	1450	MPa	ASTM D790
Oxygen Permeability	13000	$cm^3 \cdot mm/m^2/atm/24\ hr$	
Water Vapor Transmission Rate	20	$g \cdot mm/m^2/atm/24\ hr$	
Area Factor	32700	$in^2/lb/mil$	
Carbon Dioxide Permeability	45000	$cm^3 \cdot mm/m^2/atm/24\ hr$	
Nitrogen Permeability	3100	$cm^3 \cdot mm/m^2/atm/24\ hr$	
Tear Strength - prop	48.3	kN/m	ASTM D1004
Thermoforming Molding Temperature	120 to 220	°C	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (0.45 MPa, Unannealed)	100	°C	ASTM D648
Continuous Use Temperature	100	°C	
Melting Temperature	235	°C	DSC
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	> 1.0E+16	ohms	ASTM D257
Dielectric Strength (0.0762 mm)	150	kV/mm	ASTM D149
Dielectric Constant (1 kHz)	2.12		ASTM D150
Dissipation Factor (1 MHz)	2.5E-5		ASTM D150
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating	HB		UL 94
Oxygen Index	< 25	%	ASTM D2863
Optical	**Nominal Value**	**Unit**	**Test Method**
Refractive Index	1.463		
Transmittance	90.0	%	
Haze	2.0	%	ASTM D1003

Recommended distributors for this material

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