



PEN HIGH TEMPERATURE PACKAGING FILM FOR LITHIUM BATTERY



High Temperature
Resistance



Excellent Dimensional
Stability



Low Thermal
Shrinkage



Excellent Electrical
Insulation



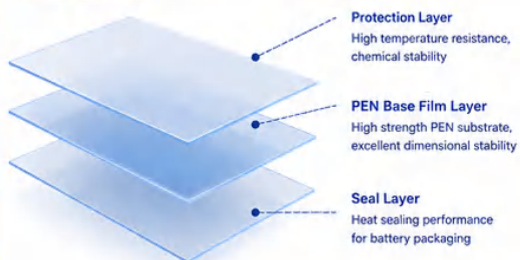
High Mechanical
Strength



Battery Packaging
Reliability



STRUCTURE



Protection Layer
High temperature resistance,
chemical stability

PEN Base Film Layer
High strength PEN substrate,
excellent dimensional stability

Seal Layer
Heat sealing performance
for battery packaging

THICKNESS OPTIONS

Thickness (μm)	25	38	50	75	100	125	Custom
Tolerance (μm)	±2	±2	±2	±3	±3	±3	±5

PHYSICAL PROPERTIES (TYPICAL VALUES)

Property	Test Method	Unit	25μm	38μm	50μm	75μm	100μm	125μm
Thickness	ASTM D374	μm	25	38	50	75	100	125
Basis Weight	ASTM D374	g/m ²	34.5	52.5	69.0	103.5	138.0	172.5
Density	ASTM D792	g/cm ³	1.35					
Transparency	ASTM D1003	%	≥ 90					
Haze	ASTM D1003	%	≤ 1.5					

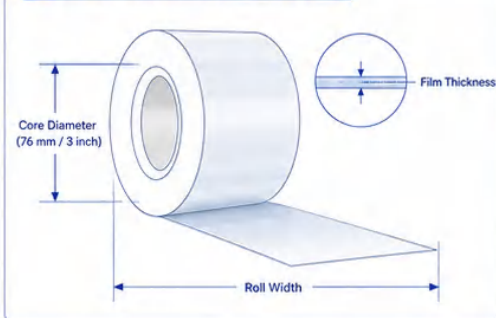
TYPICAL PERFORMANCE PROPERTIES

MECHANICAL PROPERTIES				THERMAL PROPERTIES				ELECTRICAL PROPERTIES				OTHER PROPERTIES			
Property	Test Method	Unit	Typical Value	Property	Test Method	Unit	Typical Value	Property	Test Method	Unit	Typical Value	Property	Test Method	Unit	Typical Value
Tensile Strength (MD)	ASTM D882	MPa	≥ 230	Heat Shrinkage (150°C, 30min) MD	ASTM D1204	%	≤ 0.3	Dielectric Strength	ASTM D149	kV/μm	≥ 200	Water Vapor Transmission Rate	ASTM F1249	g/m ² ·day	≤ 1.0
Tensile Strength (TD)	ASTM D882	MPa	≥ 230	Heat Shrinkage (150°C, 30min) TD	ASTM D1204	%	≤ 0.5	Volume Resistivity	ASTM D257	Ω·cm	≥ 10 ¹⁶	Oxygen Transmission Rate	ASTM D3985	cc/m ² ·day	≤ 5.0
Elongation at Break (MD)	ASTM D882	%	≤ 100	Melting Point (Tm)	DSC	°C	255 ~ 265	Surface Resistivity	ASTM D257	Ω/sq	≥ 10 ¹⁶	Chemical Resistance	Internal Method	-	Excellent
Elongation at Break (TD)	ASTM D882	%	≤ 120	Glass Transition Temperature (Tg)	DSC	°C	120 ~ 130	Dielectric Constant (1kHz)	ASTM D150	-	3.2 ~ 3.4	Flame Retardancy	UL 94	-	VTM-0
Young's Modulus (MD)	ASTM D882	GPa	≥ 3.0	Continuous Use Temperature	-	°C	-60 ~ 180	Dissipation Factor (1kHz)	ASTM D150	-	≤ 0.005	RoHS Compliance	2011/65/EU	-	Pass
Young's Modulus (TD)	ASTM D882	GPa	≥ 3.0	Short-term Use Temperature	-	°C	200								
Coefficient of Friction (COF)	ASTM D1894	-	≤ 0.35												
Puncture Strength	ASTM D5748	N	≥ 20												

ROLL SPECIFICATIONS

Roll Width	300 mm, 400 mm, 500 mm, 600 mm, 700 mm, 1000 mm (Custom widths available)
Roll Length	100 m, 200 m, 500 m, 1000 m (Custom length available)
Core Diameter	3 inch (76 mm)
Max. Roll Diameter	800 mm
Slitting Tolerance	± 0.3 mm
Edge Condition	Clean cut, no burr
Winding	Tension control, wrinkle free

DIMENSIONAL DRAWING (REFERENCE)



APPLICATIONS



The above values are typical values, not guaranteed values. The data is measured under standard test condition and may vary with test methods and application conditions. Specifications are subject to change without notice.