

Norton® PMP Film



Low-Density, High-Yield Polymethylpentene Film

Norton® PMP film is manufactured from polymethylpentene (PMP) copolymer resin. This product offers high temperature resistance, superior optical characteristics, and lowest density among all polymer materials to deliver superior performance at a value price point.

Optical/Lamination Applications

Norton® PMP is manufactured with a gloss finish without plasticizers, stabilizers, or other processing aids, offering a clean surface for laminate manufacturing. Medical device manufacturers receive a high-clarity product well suited for optical measurement requirements. The non-stabilized polymer provides integrity for tested samples and a high surface coverage due to the low density.

Composite Fabrication

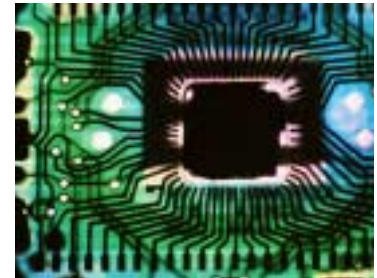
Norton® PMP offers manufacturers of composite products a material which will perform up to 180°C (356°F), depending upon the specific application, for autoclave constructions. Applications such as golf shaft manufacture, aircraft lavatory components, and printed circuit boards benefit from the high surface area yield (due to the low density of this polymer), offering productivity savings for a single use product. Flexible printed circuit constructions utilize the release characteristics of Norton® PMP to provide protection from flowing adhesives during lamination processes.

Rubber Manufacturing

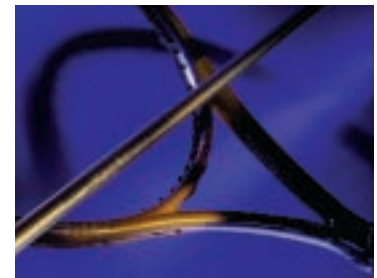
Norton® PMP film is an excellent candidate for applications involving the curing of rubber films and sheets. The excellent release characteristics and the non-plasticized formulation are advantageous for curing silicone rubber where coated PET may be unacceptable.

Features/Benefits

- Good release properties for up to 180°C (356°F) cure composites (application dependent)
- Low density for high surface area per pound
- Excellent clarity
- Thermoformable
- Product available in standard widths up to 60"
- Product available with a minimum thickness of 0.0012" (30 µm)
- Clear or blue films



PMP provides an economical release component for final processing in flex circuit manufacturing.



The low-cost, high-temperature performance of PMP film allows new composite technologies to advance sporting goods performance.

Norton® is a registered trademark.

Norton® PMP Film — Typical Physical Properties*

Property	ASTM Method	Metric Value	Metric Units	English Value	English Units
General					
Specific Gravity	D-792	0.835	m ³ /kg	0.835	
Yield (1.2 mil film)		38.9		190	ft ² /lb
Flammability	UL-94	HB		HB	%
Water Absorption, 24 hrs		0.01	%	0.01	
Mechanical					
Tensile Strength @ Break	D-882	22	MPa	3200	psi
Elongation @ Break	D-882	180	%	180	%
Tensile Modulus	D-882	1030	MPa	150000	psi
Electrical					
Dielectric Strength, 2 mil	D-149	200	kV/mm	5000	V/mil
Dielectric Constant, 1 kHz	D-150	2.12		2.12	
Thermal					
Melt Point	D-3418	240	°C	464	°F
Vicat Softening Point	D-1525	160	°C	320	°F
Specific Heat		1960	J/(kg•°K)	0.47	BTU/(lb•°F)
Coefficient of Thermal Conductivity		0.17	W/(m•°K)	1.2	BTU•in/(hr•ft ² •°F)
Coefficient of Linear Thermal Exp.	D-696	12 x 10 ⁻⁵	mm/(mm•°C)	6.5 x 10 ⁻⁵	in/(in•°F)
Limiting Oxygen Index	D-2863	20	%	20	%
Optical					
Refractive Index	D-542	1.46		1.46	

*Represent typical performance properties and should not be used for specification purposes. Contact your Saint-Gobain Performance Plastics representative for appropriate values.

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