

Norton® PVDF Fluoropolymer Film



Features/Benefits

- Excellent weatherability
- High dielectric strength
- Excellent chemical and abrasion resistance
- Thermoformable
- Product available in widths up to 60"
- Product available with thicknesses from 0.001" (0.0254 mm) to 0.020" (0.5 mm)
- Temperature range of -62°C (-80°F) to 150°C (300°F)

Weatherable, Chemically Resistant Fluoropolymer Film

Norton® PVDF film is manufactured from polyvinylidene fluoride resin. This product offers the best weathering characteristics of any fluoropolymer film available. Norton® PVDF provides very good performance when subjected to severe conditions such as heat fluctuation, UV exposure, and corrosive environments. Norton® PVDF is manufactured to strict standards for gels and gauge control, offering the best value for fluoropolymer performance of any film. This material also performs over a wide temperature range, from -62°C (-80°F) to 150°C (300°F).

Chemical Protection

Norton® PVDF film protects against exposure to many common acids, oxidizing agents, and organics. This broad range of chemical resistance makes Norton® PVDF an excellent candidate for pump diaphragms and tank linings. The thin gauge films offer bondability for protection of equipment exposed to air pollutants, corrosive media and weather.

Decorative Applications

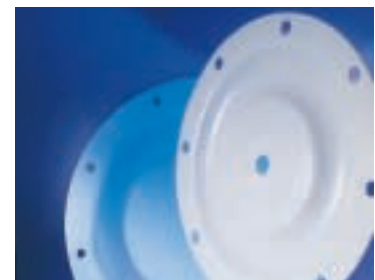
Norton® PVDF film can be adaptable to metallizing or printing for a variety of protective applications. The excellent chemical resistance to a wide range of cleansers and harsh cleaning agents used in high traffic applications offers long maintenance performance. Norton® PVDF carries a UL V-0 flammability rating, which signifies self extinguishing performance suited for aircraft interior panel applications.

Weathering Applications

The outstanding weatherability of Norton® PVDF film makes it an excellent candidate for products with outdoor exposures. Vinyl siding is protected with the excellent chemical and abrasion resistance of Norton® PVDF film. The fluoropolymer properties are impervious to UV exposure and eliminate wear due to water and chemical exposures.



PVDF weatherability and chemical resistance provide long life for exterior building materials.



PVDF provides excellent chemical resistance for chemical processing and semicon applications.

Norton® is a registered trademark.

Norton® PVDF Fluoropolymer Film — Typical Physical Properties*

Property	ASTM Method	Metric Value	Metric Units	English Value	English Units
General					
Specific Gravity	D-792	1.78		1.78	
Yield (1.2 mil film)		22.1	m ² /kg	108	ft ² /lb
Flammability	UL-94	V-0		V-0	
Water Absorption, 24 hrs		<0.04	%	<0.04	%
Mechanical					
Tensile Strength @ Break	D-638	35-50	MPa	5000-7200	psi
Elongation @ Break	D-638	100-250	%	100-250	%
Tensile Modulus	D-638	2500	MPa	360000	psi
Fold Endurance (M.I.T.), 4 mil	D-2176	>26000	cycles	>26000	cycles
Electrical					
Dielectric Strength, 1 mil	D-149	160	kV/mm	4000	V/mil
Dielectric Constant, 1 kHz	D-150	8.2-10		8.2-10	
Dissipation Factor, 1 kHz	D-150	0.005-0.02		0.005-0.02	
Thermal					
Melt Point	D-3418	174	°C	345	°F
Continuous Service Temperature		130	°C	265	°F
Specific Heat		1.2-1.6	J/(kg•°K)	0.28-0.38	BTU/(lb•°F)
Coefficient of Thermal Conductivity		0.2	W/(m•°K)	1.38	BTU•in/(hr•ft ² •°F)
Coefficient of Linear Thermal Exp.	D-696	12-14 x 10 ⁻⁵	mm/(mm•°C)	6.6-7.7 x 10 ⁻⁵	in/(in•°F)
Limiting Oxygen Index	D-2863	44	%	44	%
Optical					
Refractive Index	D-542	1.42		1.42	

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



PERFORMANCE PLASTICS

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