

POLYESTER MEMBRANE FILTERS

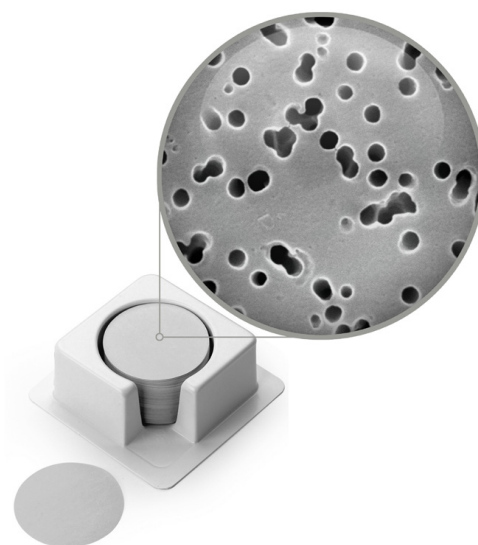
Hydrophilic polyester track etch (PETE) membranes are made from a thin, translucent, microporous, polyester film and are ideal for use in blood assays, microscopic analysis, and general filtration.

The surface of PETE membranes is smooth and flat (excellent for particle visibility and quicker analysis) with pores capable of capturing all particles larger than their precise diameters. In comparison to their polycarbonate counterparts, PETE membranes have similar material characteristics and applications, but feature greater resistance to solvents.

Polyester filters are also available with nominal pore sizes. Polyester drain discs are typically used as a spacer between stacked membranes; they are ideal for increasing flow rates in PCTE and PETE membranes. The polyester spun-bound "drain" type disc prevents "pore blinding", or blockage of the capillary pores, in screen membranes, which results in higher flow rates and increased throughput. These discs also increase flow by lifting off of screen supports and exposing all the pores, ensuring efficient performance when placed between two filters in a serial filtration stack.

SPECIFICATIONS

GENERAL - HYDROPHILIC	
Sterilization	Gamma Irradiation, EtO, Autoclave
USP Class VI Testing	Passed
Nominal Thickness	7-12 µm
BSA Protein Binding	<5 µg/cm ²
Burst Strength	10 psi (0.7 bar)
Max. Operating Temp.	284°F (140°C)
Sealing Compatibility	Ultrasonic, Heat, Radio Frequency, Insert Molding
pH range	4-8



APPLICATIONS

Hydrophilic PETE

- Precise general filtration and prefiltration
- Removal of red blood cells from plasma
- Flow control of reagents through assay

Hydrophobic PETE

- Vent filters for electrical enclosures
- Vent filters for microbial retention in medical devices
- Air and gas filtration while repelling liquid water or oils/solvents (surface tension >25 dynes/cm)

Polyester Drain Discs

- Spacer between stacked membranes
- Prevention of pore blinding/blockage in PCTE and PETE membrane filters

PERFORMANCE BY PORE SIZE			
	Bubble Point (psi) ¹	H ₂ O Flow Rate ²	Air Flow Rate ³
0.10 µm	30.0	2.5	1.5
0.20 µm	20.0	10.0	3.0
0.40 µm	12.0	33.0	7.5
0.40 µm transparent	-	-	-
0.80 µm	7.0	90.0	18.0
1.00 µm	6.0	130.0	20.0
2.00 µm	3.0	300.0	16.5
3.00 µm	2.0	440.0	37.5
3.0 µm transparent	-	-	-
5.00 µm	1.2	700.0	30.0
8.00 µm	0.7	1000.0	30.0
10.00 µm	0.9	1150.0	34.5

¹ Measured as L/min/cm²; 3-10 µm at 10 psi, 0.1-2.0 µm at 5 psi

² Measured as mL/min/cm² at 10 psi (520 mmHg)

³ Measured with isopropanol (IPA)

HYDROPHOBIC	
Pore Size ¹	0.2µm
Pore Density	2.7x10 ⁸ -3.7x10 ⁸ pores/cm ²
Nominal Thickness	90-190 µm
Air Flow Rate	2.5-4.9 (L/min·cm ²) at 1 bar
Oil Repellency	AATCC Grade 5

¹ Tolerance + 0%, -20%

POLYESTER DRAIN DISCS	
Sterilization	Gamma Irradiation, EtO, Autoclave
Wetting Characteristics	Naturally hydrophilic
Nominal Thickness	80 µm
pH Range	4-8
Max. Operating Temp.	284 °F (140 °C)
Basis Weight	35.4 g/cm ²
Gurley Air Permeability	0.13 sec/100cc (corresponds to 7.2L/min·cm ² at 1.21kPa)