

PTFE MEMBRANE FILTERS

Choosing PTFE as a filtration medium ensures maximum chemical compatibility, wide ranging thermal/pH resistance, high flow rates, and minimal aqueous extractables. These membranes are ideal for processes involving strong/aggressive acids, bases, and solvents incompatible with most other filtration media.

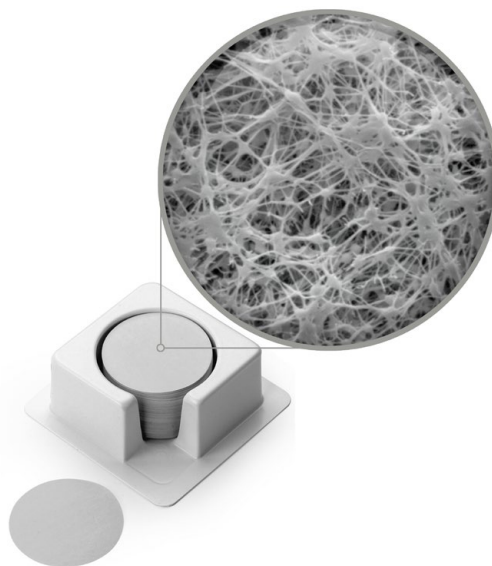
FEATURES

PTFE membranes are available in hydrophilic, hydrophobic, unlaminated, and laminated options for a wide range of applications and temperatures.

Unlaminated PTFE filters are chemically and biologically inert, stable up to 260°C (500°F), and naturally hydrophobic; they are very useful for aerosol sampling, air venting, and gas filtration, especially in environments also containing water vapor. These membranes are manufactured through a patented process to form a high-porosity, uniformly thick, thermostable, pure ePTFE structure.

Laminated PTFE possesses the qualities of standard unlaminated hydrophobic membranes, with the added benefit of a backing layer making them thicker and easier to handle. Sterlitech offers our own line of laminated hydrophobic PTFE along with a wide variety of membrane options from Aspire.

For filtering aqueous solutions, we offer hydrophilic PTFE membrane filters from Advantec. With these filters, there is no need to pre-wet the membrane or flush pre-wetting chemicals. The hydrophilic PTFE membranes are able to maintain filtration integrity, reduce interference with biological processes, and maximize shelf-life. Sterlitech's hydrophobic PTFE can also be used for filtering aqueous solutions, if pre-wetted with alcohol.



APPLICATIONS

Laminated and Aspire Laminated Hydrophobic

- Filtration of nonaqueous solvents
- Filtration of aggressive aqueous solutions such as acids, bases and oxidizers^{a,b}
- Membrane degassing, membrane distillation, and membrane pervaporation
- Aerosol sampling
- Air, gas, and vent filtration (including adhesive-attached vent filters)

Unlaminated Hydrophobic

- Air, gas, and vent filtration
- Filtration of aggressive and high temperature solvents and aqueous solutions
- Organic HPLC samples and mobile phases
- Aerosol sampling

Advantec Hydrophilic

- Filtration of organic/aqueous mixture HPLC samples and mobile phases
- Filtration of room temperature aggressive aqueous solutions

^a Must be support layer compatible

^b After proper wetting with low surface tension fluid

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PERFORMANCE BY PORE SIZE						
Pore Size Rating (µm)	Membrane Type	Thickness (µm)	Clean Air Flow ¹ (L/min·cm ² at 70 mbar)	Clean Water Flow ¹ (mL/min·cm ² at 0.7 bar)	Water Entry Pressure (psi)	Bubble Point (psi)
0.1-0.2	Laminated Hydrophobic	152-254	0.12-0.43	-	>60	≥17 in IPA
	Aspire Laminated QL217	152-254	0.12-0.43	-	>60	≥17 in IPA
	Aspire Laminated QP955	127-229	0.09-0.26	-	>60	>20 in IPA
	Advantec Hydrophilic	35	0.16	14	0	≥55 in H ₂ O
0.2	Laminated Hydrophobic	76-152	0.26-0.55	-	>37	≥17 in IPA
	Unlaminated Hydrophobic	25-51	0.34-0.94	15	-	19-26 in IPA
	Aspire Laminated QL231	152-254	0.20-0.51	-	>45	≥17 in IPA
	Advantec Hydrophilic	35	0.21	21	0	≥35 in H ₂ O
0.45-0.5	Laminated Hydrophobic	64-127	0.60-1.19	-	>11	>10 in IPA
	Unlaminated Hydrophobic	21-51	0.51-1.37	-	>45	13-23 in IPA
	Aspire Laminated QL822	127-203	0.17-0.77	-	>37	≥15 in IPA
	Aspire Laminated QL211	203-305	1.02-2.05	-	>21	≥10 in IPA
	Advantec Hydrophilic	35	0.29	40	0	≥20 in H ₂ O
1.0	Laminated Hydrophobic	76-127	2.56-5.97	-	>4	>8 in IPA
	Unlaminated Hydrophobic	203-305	0.89-1.07	61-92	5.5-6.5	1.0-1.4 in EtOH
	Aspire Laminated QP909	152-254	0.51-1.37	-	>12	≥6 in IPA
	Aspire Laminated QL209	152-254	1.02-2.05	-	>18	≥5 in IPA
	Advantec Hydrophilic	35	0.58	74	0	≥12 in H ₂ O
3.0	Aspire Laminated QL208	152-254	2.56-5.97	-	≥5	≥1 in IPA
5.0	Unlaminated Hydrophobic	152-254	1.07-1.34	92-153	3.5-4.5	0.8-1.2 in EtOH
	Aspire Laminated QL207	152-254	5.12-9.39	-	≥5	≥0.5 in IPA
	Aspire Laminated QL230	152-254	8.19-13.7	-	≥1	≥0.5 in IPA
	Aspire Laminated QP930	76-127	5.97-12.8	-	≥2	≥0.6 in IPA
10.0	Unlaminated Hydrophobic	130	>1.17	>94	-	0.7 in EtOH

¹ Values calculated assuming a linear relationship between flow and differential pressure