MF-Millipore™ Filters

A biologically inert mixture of cellulose acetate and cellulose nitrate



For more than 40 years, MF-Millipore filters have found numerous uses in the laboratory. Our wide selection allows you to choose the pore size, diameter, and color that best suits your application. If you have questions about which filter to use, contact your nearest Millipore office. We also offer a complete line of filter holders, pressure vessels, and other filtration accessories.*

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MILLIPORE

* Also referred to as mixed cellulose esters or MCE filters.

Notes to Table

Flow rates
Initial flow rates for a liquid of 1 centipoise viscosity at the start of filtration before filter plugging is detectable (based on measurements with clean water and air). Actual initial flow rates may vary from the average values given here.

Water flow rates
Milliliters per minute per cm^2 of filtration area at 20 °C with a differential pressure of 0.7 bar (10 psi).

Air flow rate
Liters per minute per cm^2 of filtration area at 20 °C with a differential pressure of 0.7 bar (10 psi).

Bubble point
The differential pressure required to force air through the pores of the filter when wet with water.

Water extractables
5% or less

Product Selection Guide

Pore size (µm)		0.025	0.05	0.1	0.22
Membrane type		VS white	VM white	VC white	GS white
Wettability		Hydrophilic	Hydrophilic	Hydrophilic	Hydrophilic
Bubble point	bar	21.1	17.6	14.1	3.52
	psi	300	250	200	50
Thickness (µm)		105	105	105	150
Water flow rate		0.15	0.75	1.5	18
Air flow rate (L/min cm^2)		0.15	0.25	0.4	2
Porosity (%)		70	72	74	75
Protein binding (µg/cm^2)		150	150	150	150
Sterilization		Yes	Yes	Yes	Yes
Gravimetric extractables (% wgt)		<1.0	<1.0	<1.0	<1.0
Size (packaging)					
13 mm (100/pk)	Plain	VSWP 013 00	VMWP 013 00	VCWP 013 00	GSWP 013 00
	Gridded				
19 x 42 (100/pk)	Plain				
24 mm (100/pk)	Plain				GSWP 024 00
25 mm (100/pk)	Plain	VSWP 025 00	VMWP 025 00	VCWP 025 00	GSWP 025 00
	Gridded				
37 mm (100/pk)	Plain				GSWP 037 00[1]
	Gridded				
47 mm (100/pk)	Plain	VSWP 047 00	VMWP 047 00	VCWP 047 00	GSWP 047 00
	Monitor refills/ matched weight pairs				
	Gridded				
50, 55, and 70 mm (100/pk)	Plain	VSWP 050 00 (50 mm)		VCWP 050 00 (50 mm)	GSWP 055 00 (55 mm)
	Gridded				
90 mm (25/pk)	Plain	VSWP 090 25	VMWP 090 25	VCWP 090 25	GSWP 090 00 (100/pk)
142 mm (50/pk)	Plain	VSWP 142 50		VCWP 142 50	GSWP 142 50
293 mm (25/pk)	Plain	VSWP 293 25		VCWP 293 25	GSWP 293 25
300 X 300 mm (10/pk)	Plain				
	Gridded				
30 cm X 300 cm (roll)	Plain	VSWP 000 10	VMWP 000 10		GSWP 000 10
	Gridded				

1. Monitor refills that include thin absorbent pads (AP1003700) for aerosol monitoring.
2. Matched weight filter pairs.
3. Developed for asbestos monitoring. Membranes are cut from selected and controlled stock to avoid contamination by fibers.
4. Monitor refills that include thick absorbent pads (AP30034P0) for liquid monitoring.
5. Matched weight pairs (monitor refills) with thick absorbent pads for liquid monitoring; 50 pair.
6. Matched weight pairs; 50 pair.

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0.3	0.45	0.45	0.65	0.8	0.8	1.2	3	5	8
PH white	HA white	HA black	DAWP white	AA white	AA black	RAWP white	SSWP white	SMWP white	SCWP white
Hydrophilic	Hydrophilic	Hydrophilic	Hydrophilic	Hydrophilic	Hydrophilic	Hydrophilic	Hydrophilic	Hydrophilic	Hydrophilic
2.46	2.11	2.32	1.2	0.98	1.12	0.77	0.7	0.42	0.42
35	32	28	17	16	16	12	10	8	6
150	150	150	150	150	150	150	150	135	135
32	60	60	140	190	190	270	320	580	620
3	4	4	9	16	16	20	30	32	65
77	79	79	81	82	82	82	83	84	84
150	150	150	150	150	150	150	150	150	150
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	HAWP 013 00		DAWP 013 00	AAWP 013 00	AABP 013 00	RAWP 013 00	SSWP 013 00	SMWP 013 00	SCWP 013 00
	HAWG 013 00	HABG 013 00		AAWG 013 00	AABG 013 00				
								SMWP 019 0R	SCWP 019 0R
	HAWP 024 00							SMWP 024 00	
PHWP 025 00	HAWP 025 00	HABP 025 00	DAWP 025 00	AAWP 025 00	AABP 025 00	RAWP 025 00	SSWP 025 00	SMWP 025 00	SCWP 025 00
	HAWG 025 00	HABG 025 00		AAWG 025 00	AABG 025 00	RAWG 025 00			
				AAWG 025 0C[3]		RAWG 025 0C[3]			
	HAWP 037 00[1]			AAWP 037 00[1]		RAWP 037 00[1]		SMWP 037 00[1]	
				AAWP 037 P0[4]					
				AAWP 037 PM[5]					
	HAWG 037 00[1]			AAWG 037 00[1]	AABG 037 00[1]				
PHWP 047 00	HAWP 047 00	HABP 047 00	DAWP 047 00	AAWP 047 00	AABP 047 00	RAWP 047 00	SSWP 047 00	SMWP 047 00	SCWP 047 00
	HAWP 047 0M[2]			AAWP 047 0M[6]					
	HAWG 047 00	HABG 047 00		AAWG 047 00	AABG 047 00	RAWG 047 00			
	HAWG 047 05 (500/pk)								
	HAWP 050 00 (50 mm)		DAWP 050 00 (50 mm)			RAWP 050 00 (50 mm)	SSWP 050 00 (50 mm)	SMWP 070 00 (70 mm; 25/pk)	SCWP 050 00 (50 mm)
	HAWG 050 00 (50 mm)								
PHWP 090 25	HAWP 090 00 (100/pk)		DAWP 090 25	AAWP 090 00 (100/pk)		RAWP 090 25	SSWP 090 25	SMWP 090 25	SCWP 090 25
PHWP 142 50	HAWP 142 50		DAWP 142 50	AAWP 142 50		RAWP 142 50	SSWP 142 50	SMWP 142 50	SCWP 142 50
PHWP 293 25	HAWP 293 25		DAWP 293 25	AAWP 293 25		RAWP 293 25	SSWP 293 25	SMWP 293 25	SCWP 293 25
	HAWP 304 F0 (1x1)						SSWP 304 F0	SMWP 304 F0	SCWP 304 F0
	HAWG 304 F0						SSWP 304 F0	SMWP 304 F0	SCWP 304 F0
	HAWP 000 10								
	HAWG 000 10								

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Applications Guide

Pore Size (µm)	0.025	0.05	0.1	0.22	0.3	0.45	0.45	0.65	0.8	0.8	1.2	3	5	8
Membrane Type	VS	VM	VC	GS	PH	HA white	HA black	DA	AA white	AA black	RA	SS	SM	SC
Air monitoring						■			■	■		■		■
Life science														
Bioassays				■	■		■		■					
Clarification of aqueous solutions						■					■			
Fluorescent assays										■				
Fluorescent bacteriological analysis							■							
Microdialysis of DNA and proteins	■	■	■											
Sterilizing filtration			■	■										
Microbiology														
Dairy microbiology								■						
Microbiological analysis*						■								
Monitoring and clarification														
Fluid monitoring												■	■	■
Particle collection and analysis												■	■	■
Particle monitoring					■		■	■	■	■				
Particle removal					■	■		■	■					
QC of fluid holding tanks												■	■	■
Retention of yeasts, molds, algae								■						

* For a complete selection of filters for microbiological QC, contact Millipore.

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