



Membrane Filters

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Introduction

Membrane discs or membrane filters are microporous plastic films with specific pore sizes. Also known as screen, sieve or microporous filters, membranes retain particles or microorganisms larger than their pore size primarily by surface capture. Some particles smaller than the stated pore size may be retained by other mechanisms.

Cobetterlab Membrane filters are offered in the most popular membrane materials for various applications. Such as Mixed Cellulose Esters, Cellulose Acetate and Nylon are reverse phase solvent cast membranes, where controlled evaporation or removal of the complex solvent system forms the porous structure. Both hydrophilic and hydrophobic PTFE are made by a patented process where the membranes are stretched biaxially to form the porous structure. Choose your filter material from our extensive range of media options.

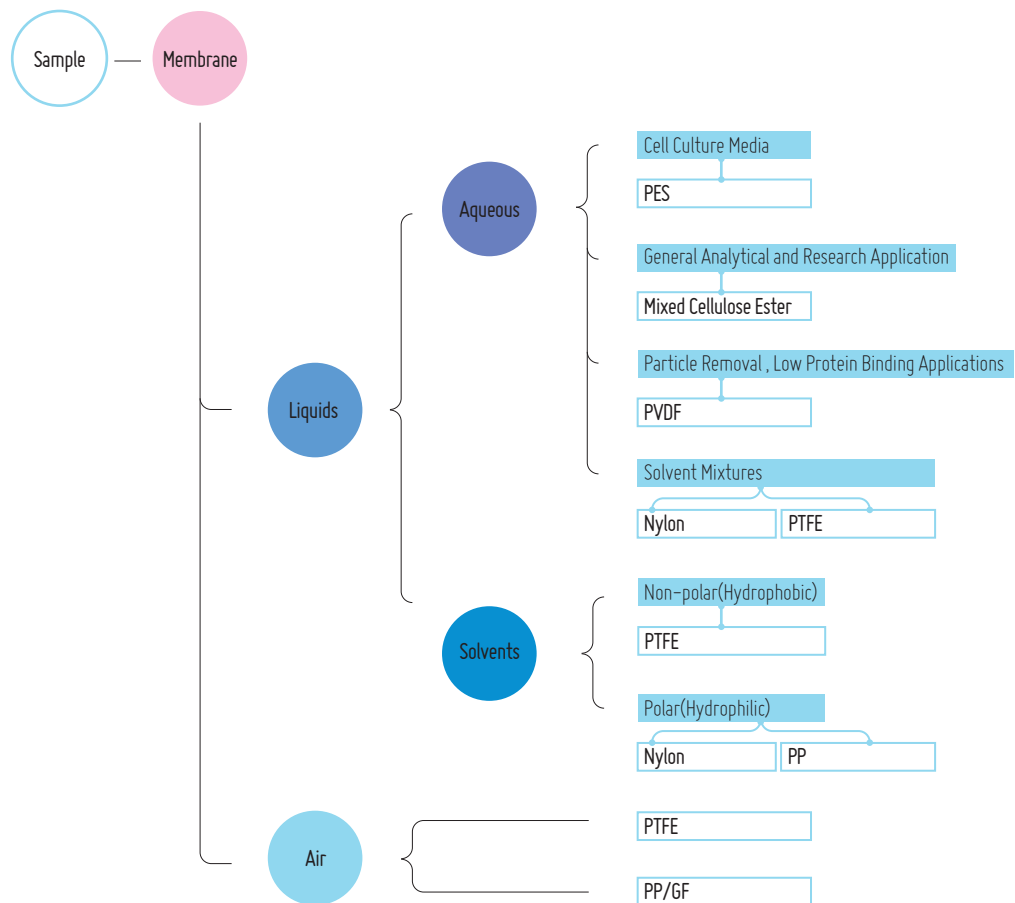
Performance Characteristics of Membrane Filters

- Wide variety of microporous Plastic films and pore sizes available
- High lot-to-lot reliability and reproducibility for consistent filtration quality
- Ultra-pure production facility in China according to the highest quality control standards of Japan
- Various filter diameters and pack sizes available on demand
- Available in sterile or non-sterile packaging

Select the Best Membrane Filter for Your Application

- Determine what kind of liquid or gas you want to filter
- Check which membrane is chemically compatible (following and appendix)
- Match your need with the best pore size
- Check the membrane specifications for any unusual process conditions that might otherwise limit your choice of membrane (e.g. Temperature, protein binding)

Quick Pick Reference Chart



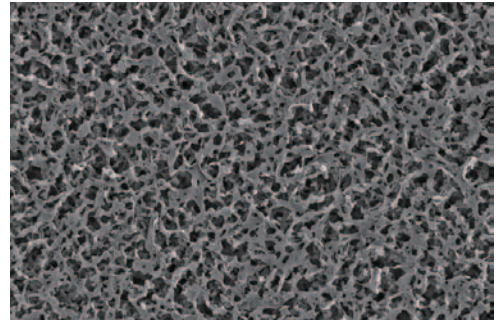
Cobetterlab Nylon Membrane Filter

Aqueous solution filtration

Cobetterlab Nylon membrane filters can be wet by water easily because they are naturally hydrophilic, providing excellent flow rate. It also provides high strength and broad drug compatibility. Their great chemical resistance makes them better for filtering more aggressive solutions such as alcohols and DMSO.

Features

- Broad chemical compatibility and commonly used HPLC solvents
- Low organic extractables
- Hydrophilic discs made of noncharged, unreinforced Nylon 6



Nylon Membrane Filter

Applications

- Sterilizing filtration
- Bioassays
- Solvent filtration



Specifications

Membrane Material	Pore Size (μm)	Bubble Point (Bar)(25°C)	Thickness (μm)	Water Flow Rate (ml/min/cm ²)	Max. Operation Temp (°C)
Nylon	0.1	≥ 4.8	100+15	4.0	135
	0.22	≥ 3.4	100+15	9.9	135
	0.45	≥ 2.6	100+15	26.9	135
	0.8	≥ 1.0	100+15	80.5	135
	1.2	≥ 0.82	100+15	130.5	135
	5.0	≥ 0.41	100+15	331	135

Ordering Information

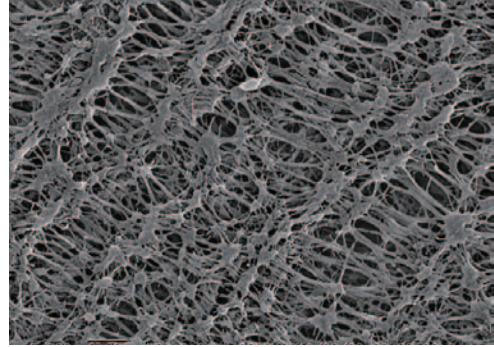
Cat. No.	Diameter	Membrane	Pore Size	Qty/pk
MF13NY0010	13mm	Nylon	0.1μm	100/600
MF25NY0010	25mm	Nylon	0.1μm	50/500
MF47NY0010	47mm	Nylon	0.1μm	50/300
MF90NY0010	90mm	Nylon	0.1μm	25
MF142NY0010	142mm	Nylon	0.1μm	25
MF293NY0010	293mm	Nylon	0.1μm	25
MF13NY0022	13mm	Nylon	0.22μm	100/600
MF25NY0022	25mm	Nylon	0.22μm	50/500
MF47NY0022	47mm	Nylon	0.22μm	50/300
MF90NY0022	90mm	Nylon	0.22μm	25
MF142NY0022	142mm	Nylon	0.22μm	25
MF293NY0022	293mm	Nylon	0.22μm	25
MF13NY0045	13mm	Nylon	0.45μm	100/600
MF25NY0045	25mm	Nylon	0.45μm	50/500
MF47NY0045	47mm	Nylon	0.45μm	50/300
MF90NY0045	90mm	Nylon	0.45μm	25
MF142NY0045	142mm	Nylon	0.45μm	25
MF293NY0045	293mm	Nylon	0.45μm	25
MF13NY080	13mm	Nylon	0.8μm	100/600
MF25NY080	25mm	Nylon	0.8μm	50/500
MF47NY080	47mm	Nylon	0.8μm	50/300
MF90NY080	90mm	Nylon	0.8μm	25
MF142NY080	142mm	Nylon	0.8μm	25
MF293NY080	293mm	Nylon	0.8μm	25
MF13NY0120	13mm	Nylon	1.2μm	100/600
MF25NY0120	25mm	Nylon	1.2μm	50/500
MF47NY0120	47mm	Nylon	1.2μm	50/300
MF90NY0120	90mm	Nylon	1.2μm	25
MF142NY0120	142mm	Nylon	1.2μm	25
MF293NY0120	293mm	Nylon	1.2μm	25
MF13NY500	13mm	Nylon	5.0μm	100/600
MF25NY500	25mm	Nylon	5.0μm	50/500
MF47NY500	47mm	Nylon	5.0μm	50/300
MF90NY500	90mm	Nylon	5.0μm	25
MF142NY500	142mm	Nylon	5.0μm	25
MF293NY500	293mm	Nylon	5.0μm	25

Cobetterlab Hydrophobic PTFE Membrane Filter

Hydrophobic microporous PTFE membrane.

Aggressive chemical and air/gas stream filtration

Cobetter PTFE membrane is a hydrophobic PTFE membrane bonded to a polypropylene support. The extreme chemical compatibility (pH 1-14) makes them very useful for they are also used for the filtration of solvents and acids or other aggressive chemicals, for which other membrane filter types are unsuitable. Due to their hydrophobic characteristics, they must be pre-wet with a solvent such as ethanol or methanol before the filtration of aqueous solutions.



PTFE Membrane Filter

Features

- Excellent air permeability, outstanding air flow rates
- Compatible with different sealing methods
- High flow rate
- Broad chemical compatibility

Applications

- Ideal for HPLC and organic solvents
- Air and gas filtration
- Aerosol sampling



Specifications

Membrane Material	Support Layer	Pore Size (μm)	Wettability	Bubble Point (Bar)(25 $^{\circ}\text{C}$)	Thickness (μm)	Max. Operation Temp ($^{\circ}\text{C}$)
Hydrophobic PTFE	PP	0.1	Hydrophobic	≥ 0.16	200+30	130
		0.22	Hydrophobic	≥ 0.12	200+30	130
		0.45	Hydrophobic	≥ 0.09	200+30	130
		1.2	Hydrophobic	≥ 0.06	200+30	130
		3.0	Hydrophobic	≥ 0.03	200+30	130

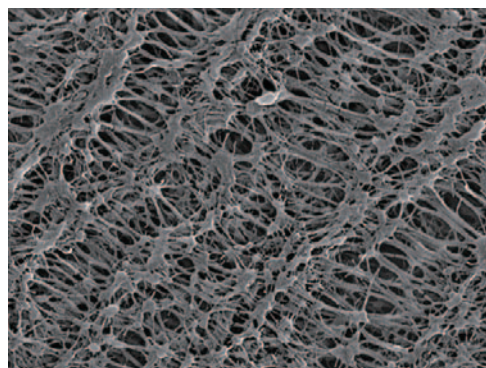
Ordering Information

Cat. No.	Diameter	Membrane	Pore Size	Qty/pk
MF13PT0010	13mm	Hydrophobic PTFE, PP supported	0.1 μm	100/600
MF25PT0010	25mm	Hydrophobic PTFE, PP supported	0.1 μm	50/500
MF47PT0010	47mm	Hydrophobic PTFE, PP supported	0.1 μm	50/300
MF90PT0010	90mm	Hydrophobic PTFE, PP supported	0.1 μm	25
MF142PT0010	142mm	Hydrophobic PTFE, PP supported	0.1 μm	25
MF293PT0010	293mm	Hydrophobic PTFE, PP supported	0.1 μm	25
MF13PT0022	13mm	Hydrophobic PTFE, PP supported	0.22 μm	100/600
MF25PT0022	25mm	Hydrophobic PTFE, PP supported	0.22 μm	50/500
MF47PT0022	47mm	Hydrophobic PTFE, PP supported	0.22 μm	50/300
MF90PT0022	90mm	Hydrophobic PTFE, PP supported	0.22 μm	25
MF142PT0022	142mm	Hydrophobic PTFE, PP supported	0.22 μm	25
MF293PT0022	293mm	Hydrophobic PTFE, PP supported	0.22 μm	25
MF13PT0045	13mm	Hydrophobic PTFE, PP supported	0.45 μm	100/600
MF25PT0045	25mm	Hydrophobic PTFE, PP supported	0.45 μm	50/500
MF47PT0045	47mm	Hydrophobic PTFE, PP supported	0.45 μm	50/300
MF90PT0045	90mm	Hydrophobic PTFE, PP supported	0.45 μm	25
MF142PT0045	142mm	Hydrophobic PTFE, PP supported	0.45 μm	25
MF293PT0045	293mm	Hydrophobic PTFE, PP supported	0.45 μm	25
MF13PT0120	13mm	Hydrophobic PTFE, PP supported	1.2 μm	100/600
MF25PT0120	25mm	Hydrophobic PTFE, PP supported	1.2 μm	50/500
MF47PT0120	47mm	Hydrophobic PTFE, PP supported	1.2 μm	50/300
MF90PT0120	90mm	Hydrophobic PTFE, PP supported	1.2 μm	25
MF142PT0120	142mm	Hydrophobic PTFE, PP supported	1.2 μm	25
MF293PT0120	293mm	Hydrophobic PTFE, PP supported	1.2 μm	25
MF13PT0300	13mm	Hydrophobic PTFE, PP supported	3.0 μm	100/600
MF25PT0300	25mm	Hydrophobic PTFE, PP supported	3.0 μm	50/500
MF47PT0300	47mm	Hydrophobic PTFE, PP supported	3.0 μm	50/300
MF90PT0300	90mm	Hydrophobic PTFE, PP supported	3.0 μm	25
MF142PT0300	142mm	Hydrophobic PTFE, PP supported	3.0 μm	25
MF293PT0300	293mm	Hydrophobic PTFE, PP supported	3.0 μm	25

Cobetterlab Hydrophilic PTFE Membrane Filter

PTFE membrane discs can be used for both aqueous and organic liquid filtration

Cobetterlab hydrophilic PTFE (polytetrafluorethylene) membrane filter has a durable wide operating temperature range and resistance to the destructive effects of many chemicals. It can be used to filter aqueous fluids without prior wetting.



PTFE Membrane Filter

Features

- Compatible with all commonly used HPLC solvents
- High flow rates with minimal aqueous extractable (< 0.3 wt%)
- Unsupported membrane

Applications

- Ideal for HPLC and other mixtures of aqueous and organic solvents

Specifications

Membrane Material	Pore Size (μm)	Wettability	Bubble Point (Bar)(25°C)	Thickness (μm)	Max. Operation Temp. (°C)
Hydrophilic PTFE	0.1	Hydrophilic	≥ 3.8	35	100
	0.22	Hydrophilic	≥ 2.4	35	100
	0.45	Hydrophilic	≥ 1.4	35	100

Ordering Information

Cat.No.	Diameter	Membrane	Pore Size	Qty/pk
White Plain Hydrophilic PTFE Membrane Disc				
MF13PTH0001	13mm	Hydrophilic PTFE, unsupported	0.1μm	100/600
MF25PTH0001	25mm	Hydrophilic PTFE, unsupported	0.1μm	50/500
MF47PTH0001	47mm	Hydrophilic PTFE, unsupported	0.1μm	50/300
MF13PTH0022	13mm	Hydrophilic PTFE, unsupported	0.22μm	100/600
MF25PTH0022	25mm	Hydrophilic PTFE, unsupported	0.22μm	50/500
MF47PTH0022	47mm	Hydrophilic PTFE, unsupported	0.22μm	50/300
MF13PTH0045	13mm	Hydrophilic PTFE, unsupported	0.45μm	100/600
MF25PTH0045	25mm	Hydrophilic PTFE, unsupported	0.45μm	50/500
MF47PTH0045	47mm	Hydrophilic PTFE, unsupported	0.45μm	50/300

Cobetterlab PES Membrane Filters

Aqueous solution filtration for pharmaceutical and biological applications

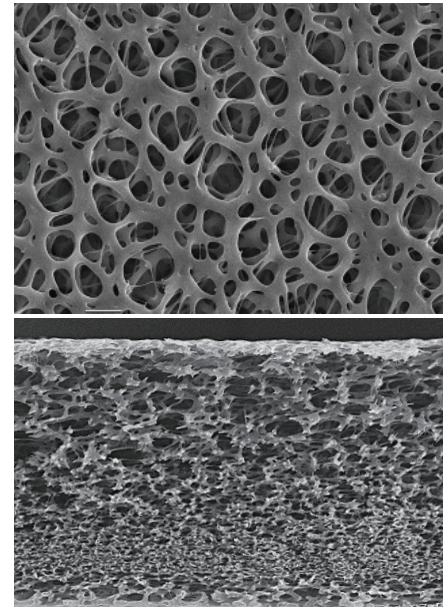
Cobetterlab PES (polyethersulfone) membrane filter is made of a modified polyethersulfone polymer cast. Cobetterlab PES membrane filter has very low protein binding characteristics, high liquid flow rates and throughput (long life), and low extractable. PES' s hydrophilic characteristics allow it to be used with both liquids and dry gases, making it suitable for a variety of environments. PES can withstand autoclaving and is the membrane of choice for many clinical applications.

Features

- High asymmetric PES membrane
- Outstanding flow rates
- Lowest protein binding
- Sterilization compatibility autoclave, ethylene oxide, gamma irradiation

Applications

- Prefiltration and sterile filtration of beverage, pharmaceutical and biology solutions
- Aqueous solutions
- Water filtration
- Particle collection



PES Membrane Filter

Specifications

Membrane Material	Pore Size (μm)	Bubble Point (bar)(25°C)	Thickness (μm)	Water Flow Rate (ml/min/cm ²)
PES	0.22	3.4	110±10	30
	0.45	2.7	110±10	40

Ordering Information

Cat.No.	Diameter	Membrane	Pore Size	Qty/pk
MF13PE0022	13mm	PES	0.22μm	100/600
MF25PE0022	25mm	PES	0.22μm	50/500
MF47PE0022	47mm	PES	0.22μm	50/300
MF90PE0022	90mm	PES	0.22μm	25
MF13PE0045	13mm	PES	0.45μm	100/600
MF25PE0045	25mm	PES	0.45μm	50/500
MF47PE0045	47mm	PES	0.45μm	50/300
MF90PE0045	90mm	PES	0.45μm	25

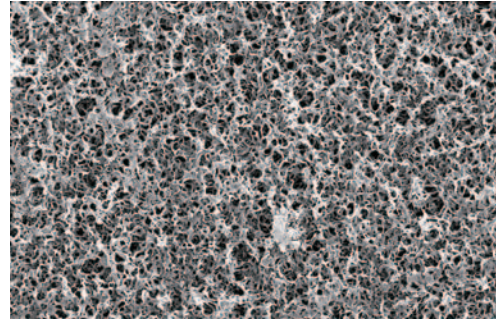
Cobetterlab Hydrophilic PVDF Membrane Filter

Clarifying filtration of biological solutions

Cobetterlab modified hydrophilic PVDF (Polyvinylidene Difluoride) membrane filter has excellent water wettability, providing high flow rate. PVDF membranes are naturally hydrophobic but are modified to a hydrophilic nature. Useful for a wide range of applications, both aqueous and non-aggressive solvent-based. These membranes are typically low protein binding and are frequently used for sterilizing filtration.

Features

- Outstanding flow rates
- Extremely low protein binding
- Low extractable
- Sterilization compatibility --- Autoclave, ethylene oxide, gamma irradiation



PVDF Membrane Filter

Applications

- Particulate removal
- Clarifying filtration of biological solutions
- General filtration
- Sample preparation

Specifications

Membrane Material	Pore Size (μm)	Bubble Point (Bar)(25°C)	Wettability	Water Flow Rate (ml/min/cm ²)	Protein Binding (μg/cm ²)
Hydrophilic PVDF	0.22	≥ 3.4	Hydrophilic	>12	4
	0.45	≥ 1.5	Hydrophilic	>34	4

Ordering Information

Cat.No.	Diameter	Membrane	Pore Size	Qty/pk
White Plain Hydrophilic PVDF Membrane Disc				
MF13PVH0022	13mm	Hydrophilic PVDF	0.22μm	100/600
MF25PVH0022	25mm	Hydrophilic PVDF	0.22μm	50/500
MF47PVH0022	47mm	Hydrophilic PVDF	0.22μm	50/300
MF90PVH0022	90mm	Hydrophilic PVDF	0.22μm	25
MF13PVH0045	13mm	Hydrophilic PVDF	0.45μm	100/600
MF25PVH0045	25mm	Hydrophilic PVDF	0.45μm	50/500
MF47PVH0045	47mm	Hydrophilic PVDF	0.45μm	50/300
MF90PVH0045	90mm	Hydrophilic PVDF	0.45μm	25

Cobetterlab MCE Membrane Filter

Fluids and air filtration

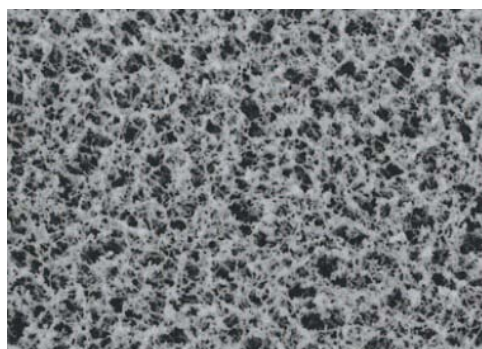
Cobetterlab MCE (Mixed cellulose ester) membrane filters are composed of cellulose acetate and cellulose nitrate. Because MCE membrane is biologically inert, it's one of the most widely used membranes in research applications. MCE membrane filter is characterized by a smoother and more uniform surface than pure nitrocellulose filter, providing superior flow rates. Withstand autoclaving temperatures up to 130 °C without adversely affecting bubble point, flow rate or microbiological recovery.

Features

- Versatile filter for biological and environmental monitoring applications
- Available in a range of pore sizes, colored black or white, with or without a gridded surface
- Compatible with ethylene oxide, gamma irradiation, and autoclave sterilization methods
- Biologically inert with good thermal stability

Applications

- Widely used membranes in analytical and research applications
- Sterilizing biological fluids
- Microbiology testing



MCE Membrane Filter

Specifications

Membrane Material	Pore Size (μm)	Bubble Point (Bar)(25°C)	Thickness (μm)	Water Flow Rate (ml/min/cm ²)	Max. Operation Temp. (°C)
MCE	0.22	3.62	130±10	19	75
	0.45	2.23	130±10	60	75
	0.65	1.18	130±10	135	75
	0.8	0.95	130±10	180	75
	1.2	0.77	130±10	270	75

Ordering Information

Cat.No.	Diameter	Membrane	Pore Size	Qty/pk
MF13MC0022	13mm	Mixed Cellulose Ester	0.22μm	100/600
MF25MC0022	25mm	Mixed Cellulose Ester	0.22μm	50/500
MF47MC0022	47mm	Mixed Cellulose Ester	0.22μm	50/300
MF90MC0022	90mm	Mixed Cellulose Ester	0.22μm	25
MF13MC0045	13mm	Mixed Cellulose Ester	0.45μm	100/600
MF25MC0045	25mm	Mixed Cellulose Ester	0.45μm	50/500
MF47MC0045	47mm	Mixed Cellulose Ester	0.45μm	50/300
MF90MC0045	90mm	Mixed Cellulose Ester	0.45μm	25
MF13MC0065	13mm	Mixed Cellulose Ester	0.65μm	100/600
MF25MC0065	25mm	Mixed Cellulose Ester	0.65μm	50/500
MF47MC0065	47mm	Mixed Cellulose Ester	0.65μm	50/300
MF90MC0065	90mm	Mixed Cellulose Ester	0.65μm	25
MF13MC0080	13mm	Mixed Cellulose Ester	0.8μm	100/600
MF25MC0080	25mm	Mixed Cellulose Ester	0.8μm	50/500
MF47MC0080	47mm	Mixed Cellulose Ester	0.8μm	50/300
MF90MC0080	90mm	Mixed Cellulose Ester	0.8μm	25
MF13MC0120	13mm	Mixed Cellulose Ester	1.2μm	100/600
MF25MC0120	25mm	Mixed Cellulose Ester	1.2μm	50/500
MF47MC0120	47mm	Mixed Cellulose Ester	1.2μm	50/300
MF90MC0120	90mm	Mixed Cellulose Ester	1.2μm	25

Cobetterlab PP Membrane Filter

For aggressive filtration applications

Cobetter PP (polypropylene) membrane filter is a preferred choice for HPLC applications where the detection levels are below 230 nm. This plastic polymer has very good resistance to a broad range of chemicals even at high temperature. Adaptable material for applications ranging from air filtration.

Features

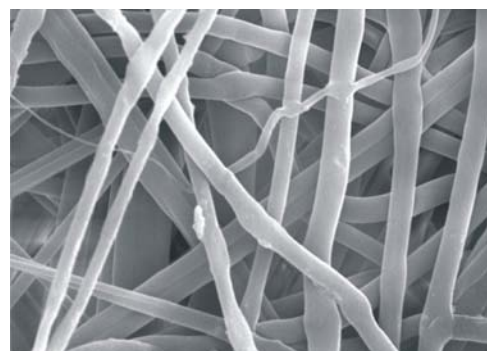
- High particle retention, low pressure drop
- Compatible with aggressive solvents
- Prefilters have high dirt-holding capacity

Applications

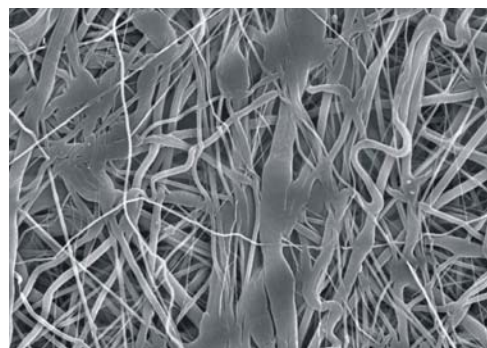
- Aqueous and organic solvent filtration
- Depth filtration
- Sterilize gases: traps aqueous aerosols
- Air and gas venting

Specifications

Membrane Material	Pore Size (μm)	Thickness (μm)	Max. Operation Temp. (°C)
PP	0.22	140	90
	0.45	140	90
	1.2	140	90
	2.5	140	90



PP media



PP membrane

Ordering Information

Cat.No.	Diameter	Membrane	Pore Size	Qty/pk
MF13PP0022	13mm	PP	0.22μm	100/600
MF25PP0022	25mm	PP	0.22μm	50/500
MF47PP0022	47mm	PP	0.22μm	50/300
MF90PP0022	90mm	PP	0.22μm	100
MF13PP0045	13mm	PP	0.45μm	100/600
MF25PP0045	25mm	PP	0.45μm	50/500
MF47PP0045	47mm	PP	0.45μm	50/300
MF90PP0045	90mm	PP	0.45μm	100
MF13PP0120	13mm	PP	1.2μm	100/600
MF25PP0120	25mm	PP	1.2μm	50/500
MF47PP0120	47mm	PP	1.2μm	50/300
MF90PP0120	90mm	PP	1.2μm	100
MF13PP0250	13mm	PP	2.5μm	100/600
MF25PP0250	25mm	PP	2.5μm	50/500
MF47PP0250	47mm	PP	2.5μm	50/300
MF90PP0250	90mm	PP	2.5μm	100

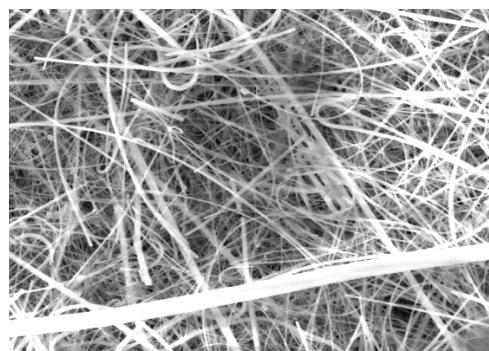
Cobetterlab Glass Fiber Filters

For gravimetric analysis

Cobetterlab Glass fiber filters without binder resin retain their structural integrity without weight loss when heated up to 500 °C and can therefore be used in gravimetric analysis as well as for the filtration of hot gases.

Applications

- Use in biochemical applications
- Liquid clarification, quantification of solids in suspensions of fine particles
- Filtering extremely fine precipitates such as protein, nucleic acids, or serum precipitates



Glass fiber

Specifications

Membrane Material	Retention Rate(μm)	Binder	Weight (g/m ²)	Max. Operation Temp. (°C)
Glass fiber	0.22	No	120+20	500
	0.45	No	120+20	500
	0.7	No	120+20	500
	1.2	No	120+20	500

Ordering Information

Cat.No.	Diameter	Membrane	Pore Size	Qty/pk
MF13GF0022	13mm	Glass Fiber	0.22μm	100/600
MF25GF0022	25mm	Glass Fiber	0.22μm	50/500
MF47GF0022	47mm	Glass Fiber	0.22μm	50/300
MF90GF0022	90mm	Glass Fiber	0.22μm	25
MF13GF0045	13mm	Glass Fiber	0.45μm	100/600
MF25GF0045	25mm	Glass Fiber	0.45μm	50/500
MF47GF0045	47mm	Glass Fiber	0.45μm	50/300
MF90GF0045	90mm	Glass Fiber	0.45μm	25
MF13GF0070	13mm	Glass Fiber	0.7μm	100/600
MF25GF0070	25mm	Glass Fiber	0.7μm	50/500
MF47GF0070	47mm	Glass Fiber	0.7μm	50/300
MF90GF0070	90mm	Glass Fiber	0.7μm	25
MF13GF0120	13mm	Glass Fiber	1.2μm	100/600
MF25GF0120	25mm	Glass Fiber	1.2μm	50/500
MF47GF0120	47mm	Glass Fiber	1.2μm	50/300
MF90GF0120	90mm	Glass Fiber	1.2μm	25



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