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# SYRINGE FILTER



# CHROMATIFIC®

## SYRINGE FILTER



- IT'S AVAILABLE IN MANY DIFFERENT PORE SIZES AND WITH SEVERAL HYDROPHILIC OR HYDROPHOBIC MEMBRANE MATERIALS.
- RELIABLE REMOVAL OF MICROORGANISMS AND PARTICLES FROM LIQUIDS FOR HPLC SAMPLE PREPARATION.
- HIGH MECHANICAL AND TENSILE STRENGTH.

TYPE	COLOR 0.45µm	COLOR 0.22µm
MCE	Green	Light Green
NY	Yellow	Light Yellow
PES	Green	Light Green
PVDF(Hydrophilic/Hydrophobic)	Purple	Light Purple
PTFE(Hydrophilic/Hydrophobic)	Red	Pink

- FILTRATION IS ACHIEVED BY PUSHING THE SAMPLE THROUGH THE MEMBRANE WITH A SYRINGE OR OTHER LUER-CONNECTION DEVICE.
- SYRINGE FILTERS ALLOW YOU TO CONTROL THE RATE OF FLOW, WHICH CAN BE CRITICAL WITH DELICATE SAMPLES. IT ALSO ALLOWS YOU TO FILTER INTO NEARLY ANY TUBE, VIAL, OR COLUMN THAT REPRESENTS THE NEXT STEP IN YOUR ANALYSIS.

## SYRINGE FILTER

### SELECTION GUIDE

- ✓ Syringe filters are used for many routine preparation steps in laboratories all over the world.
- ✓ They are convenient, ready-to use disposables for removal of particles from solutions and gases.
- ✓ CHROMATIFIC syringe filters are for a wide range of applications.
- ✓ The filters are clean and safe as they are virtually free of leachables and extractables and reliably remove particles and microorganisms without any leakage.

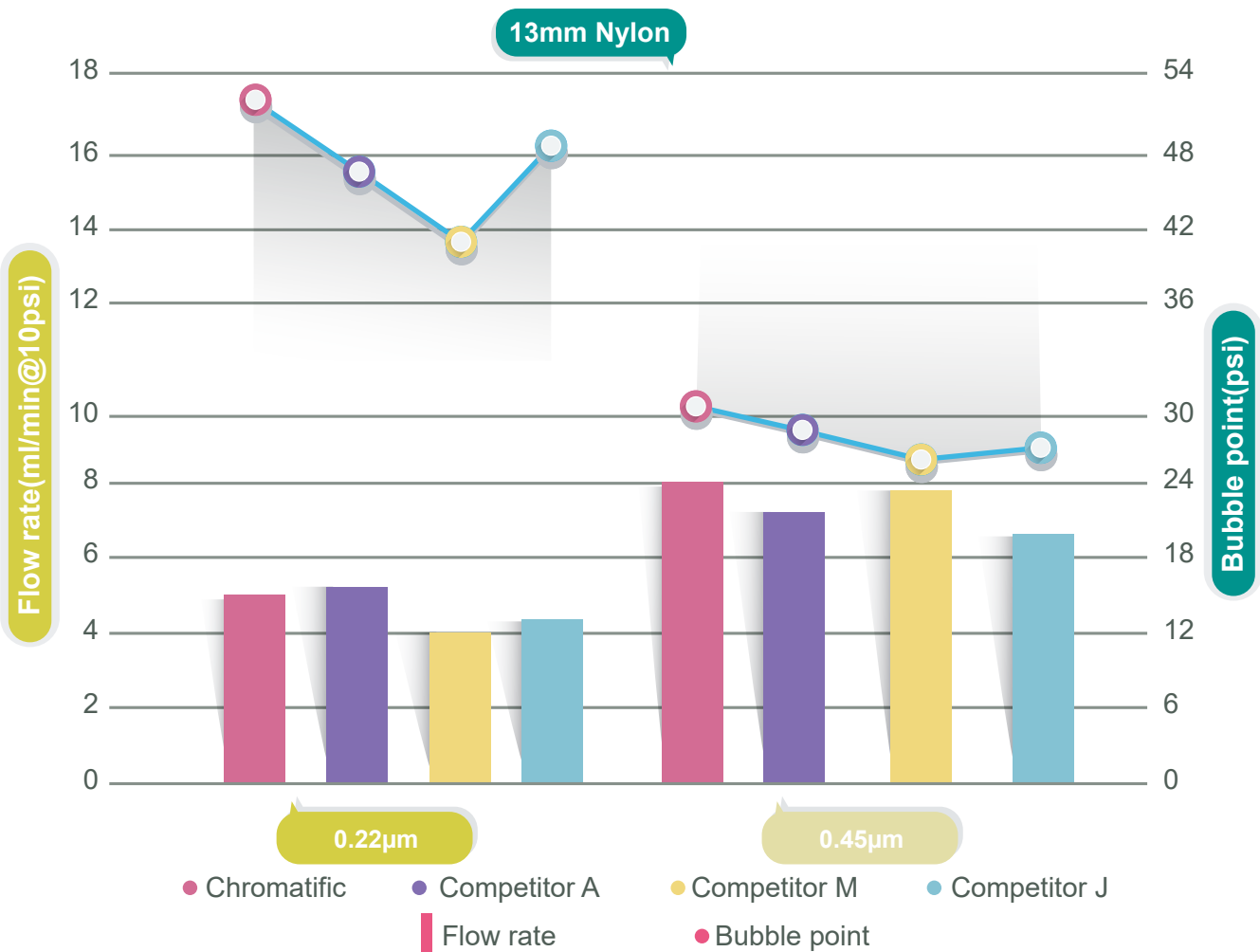
SYRINGE FILTER CAPACITIES	SAMPLE VOLUME
13mm Syringe Filter	less or equal 10mL
25mm Syringe Filter	less or equal 100mL
30mm Syringe Filter	less or equal 150mL



# MEMBRANE SELECTION GUIDE

CHOOSING A MEMBRANE FILTER IS BASED ON THE SIZE AND AMOUNT OF PARTICULATE IN THE SAMPLE, THE MEMBRANE’S CHEMICAL COMPATIBILITY WITH THE SAMPLE MATRIX, AND POTENTIAL INTERACTIONS (BINDING) BETWEEN THE MEMBRANES AND THE SAMPLE COMPONENTS. THIS TABLE OFFERS GENERAL GUIDELINES ON MEMBRANE CHARACTERISTICS AND APPLICATIONS.

MEMBRANE TYPE	FEATURES	APPLICATION
Nylon	Good chemical compatibility and very low extractables	General filtrationsterilization, HPLC sample prep
Polytetrafluoroethylene (PTFE)	Compatible with strong acids and aggressive solvents	Gas, Air, and Solvent filtration
Polyvinylidene Fluoride (PVDF)	Good flow rate characteristics. Ideal for chromatography applications.	HPLC sample preparation and General filtration
PES	very low protein and nucleic acid binding, excellent flow rates	Ion chromatography, ICP-MS, AAS, and capillary electrophoresis for strong bases, alcohols, proteins, peptides
MCE	Hydrophilic, ideal for Clarification or sterilization of aqueous samples filtration	Air monitoring, microbial analysis, cytology, HPLC samples prep/clean up, virus concentration, biological assays, etc.





# NYLON

- HIGH MECHANICAL AND TENSILE STRENGTH.
- UNIVERSAL APPLICATION FOR ANALYTICAL PROCEDURES.
- TWO TYPES IN PORE SIZE:0.22µm AND 0.45µm.
- THREE TYPES IN FILTER SIZE:13mm, 25mm AND 33mm.
- FILTER TYPE PRINTED ON HOUSING



## TYPICAL DATA

MATERIAL	NYLON	
Material of housing	pp	
Effective filtration area(cm <sup>2</sup> )	13mm/1.13cm <sup>2</sup>	25mm/4.15cm <sup>2</sup>
Pore size(µm)	0.22/0.45	
Process volume(ml)	<10ml(13mm)	<100ml(25mm)
Maximum Operating Temperature	100°C	
Maximum Operating Pressure(psi)	87psi	

Order.No.	13NYL22	13NYL45	25NYL22	25NYL45
DESCRIPTION	13mm Nylon Syringe Filter 0.22µm with Outer Ring.	13mm Nylon Syringe Filter 0.45µm with Outer Ring.	25mm Nylon Syringe Filter 0.22µm with Outer Ring.	25mm Nylon Syringe Filter 0.45µm with Outer Ring.
100 pcs/pk				

## FEATURES



- One of the most commonly used membranes.
- Broad compatibility with aqueous and organic solvents, with stable hydrophilicity, not suitable for highly acidic samples.

## APPLICATIONS



- Used for most organic solvents mixtures and mid-polar liquids.
- Chemical filtration and Beverage filtration.
- Note: Nylon binds protein, do not use when high protein recovery is desired.



# PES

- ⦿ HIGH MECHANICAL AND TENSILE STRENGTH.
- ⦿ USED FOR MOST ORGANIC SOLVENTS AND MID-POLAR LIQUIDS.
- ⦿ TWO TYPES IN PORE SIZE:0.22µm AND 0.45µm.
- ⦿ THREE TYPES IN FILTER SIZE:13mm, 25mm AND 33mm.
- ⦿ FILTER TYPE PRINTED ON HOUSING



## TYPICAL DATA

MATERIAL		PES
Material of housing	pp	
Effective filtration area(cm <sup>2</sup> )	13mm/1.13cm <sup>2</sup>	25mm/4.15cm <sup>2</sup>
Pore size(µm)	0.22/0.45	
Process volume(ml)	<10ml(13mm)	<100ml(25mm)
Maximum Operating Temperature	90°C	
Maximum Operating Pressure(psi)	87psi	



Order.No.	13PES22	13PES45	25PES22	25PES45
DESCRIPTION	13mm PES Syringe Filter 0.22µm with Outer Ring.	13mm PES Syringe Filter 0.45µm with Outer Ring.	25mm PES Syringe Filter 0.22µm with Outer Ring.	25mm PES Syringe Filter 0.45µm with Outer Ring.
100 pcs/pk				

## FEATURES



- ⦿ Excellent thermal resistance and chemical resistance.
- ⦿ Having high flow rates thanks to their symmetric structure .
- ⦿ A low protein adsorption, recommended for filtration of protein filtration as well as aqueous solutions filtration.
- ⦿ The low level extractables makes them suitable for environmental analysis.

## APPLICATIONS



- ⦿ PES is certified for ion chromatography; tissue culture media; filtration of proteins and nucleic acids.
- ⦿ Suitable for filtration of aqueous solution with high throughput.



# PTFE HYDROPHOBIC

- HYDROPHOBIC PTFE SYRINGE FILTERS HAVE BROAD CHEMICAL COMPATIBILITY AND HIGH pH RESISTANCE.
- VERSATILE FILTERS FOR USE WITH AGGRESSIVE ORGANIC SOLVENT-BASED SOLUTIONS AND ARE ESPECIALLY IDEAL FOR HPLC SAMPLE PREPARATION.
- TWO TYPES IN PORE SIZE:0.22µm AND 0.45µm.
- THREE TYPES IN FILTER SIZE:13mm, 25mm AND 33mm .
- FILTER TYPE PRINTED ON HOUSING



## TYPICAL DATA

MATERIAL	PTFE HYDROPHOBIC	
Material of housing	pp	
Effective filtration area(cm <sup>2</sup> )	13mm/1.13cm <sup>2</sup>	25mm/4.15cm <sup>2</sup>
Pore size(µm)	0.22/0.45	
Process volume(ml)	<10ml(13mm)	<100ml(25mm)
Maximum Operating Temperature	130°C	
Maximum Operating Pressure(psi)	87psi	



Order.No.	13PTFE22	13PTFE45	25PTFE22	25PTFE45
DESCRIPTION	13mm PTFE Hydrophobic Syringe Filter 0.22µm	13mm PTFE Hydrophobic Syringe Filter 0.45µm	25mm PTFE Hydrophobic Syringe Filter 0.22µm	25mm PTFE Hydrophobic Syringe Filter 0.45µm
100 pcs/pk				

## FEATURES



- Hydrophobic PTFE membrane has great temperature resistance.
- Suitable for Solvents/Gases/Acids/Bases.
- Excellent chemical compatibility for filtering harsh chemicals that destroy other membrane materials and ideal for aerosol sampling

## APPLICATIONS

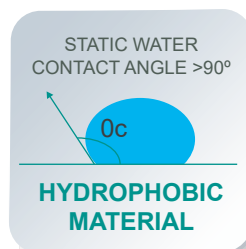


- Degassing/Clarifying aqueous samples.
- Removal of protein precipitates.
- Strong acid solvent filtration and Alkali solvent filtration.
- Biofuel analysis.



# PTFE HYDROPHILIC

- HYDROPHILIC MATERIALS ARE OBTAINED THROUGH PROCESS IMPROVEMENT.
- HYDROPHILIC MATERIAL HAS A GREAT AFFINITY FOR WATER AND IT'S EASILY WETTED BY WATER BECAUSE OF THE SURFACE WITH WATER MOLECULES TO FORM INTERMOLECULAR FORCES.
- HIGH MECHANICAL AND TENSILE STRENGTH.
- USED FOR MOST ORGANIC SOLVENTS AND MID-POLAR LIQUIDS.
- TWO TYPES IN PORE SIZE:0.22µm AND 0.45µm.
- THREE TYPES IN FILTER SIZE:13mm, 25mm AND 33mm
- FILTER TYPE PRINTED ON HOUSING



## TYPICAL DATA

MATERIAL	PTFE HYDROPHILIC	
Material of housing	pp	
Effective filtration area(cm²)	13mm/1.13cm²	25mm/4.15cm²
Pore size(µm)	0.22/0.45	
Process volume(ml)	<10ml(13mm)	<100ml(25mm)
Maximum Operating Temperature	130°C	
Maximum Operating Pressure(psi)	87psi	



Order.No.	13HPTL22	13HPTL45	25HPTL22	25HPTL45
DESCRIPTION	13mm PTFE Hydrophilic Syringe Filter 0.22µm	13mm PTFE Hydrophilic Syringe Filter 0.45µm	25mm PTFE Hydrophilic Syringe Filter 0.22µm	25mm PTFE Hydrophilic Syringe Filter 0.45µm
100 pcs/pk				

## FEATURES

- Broad chemical compatibility choose for filtering aqueous and organic solutions low protein binding.
- Low IC extractables.



## APPLICATIONS

- Industrial Chromatography.
- Filtration of aqueous solutions as well as organic solvents and chemicals.





# PVDF HYDROPHOBIC

- FILTRATION OF WATER-SOLUBLE OLIGOMERS AND POLYMERS, E.G. PROTEIN SOLUTIONS.
- FILTRATION OF HYDROPHOBIC SUBSTANCES IN DIFFERENT ORGANIC SOLVENTS.
- TWO TYPES IN PORE SIZE:0.22µm AND 0.45µm.
- THREE TYPES IN FILTER SIZE:13mm, 25mm AND 33mm.
- FILTER TYPE PRINTED ON HOUSING



## TYPICAL DATA

MATERIAL	PVDF HYDROPHOBIC	
Material of housing	pp	
Effective filtration area(cm <sup>2</sup> )	13mm/1.13cm <sup>2</sup>	25mm/4.15cm <sup>2</sup>
Pore size(µm)	0.22/0.45	
Process volume(ml)	<10ml(13mm)	<100ml(25mm)
Maximum Operating Temperature	100°C	
Maximum Operating Pressure(psi)	87psi	



Order.No.	13PVDF22	13PVDF45	25PVDF22	25PVDF45
DESCRIPTION	13mm PVDF Hydrophobic Syringe Filter 0.22µm	13mm PVDF Hydrophobic Syringe Filter 0.45µm	25mm PVDF Hydrophobic Syringe Filter 0.22µm	25mm PVDF Hydrophobic Syringe Filter 0.45µm
100 pcs/pk				

## FEATURES



- This membrane features stability and hydrophobic interactions which is similar to PTFE.
- Naturally hydrophobic membrane provides excellent flow rates and high loading.
- Exceptional temperature stability provides extended sampling range over other membranes.

## APPLICATIONS

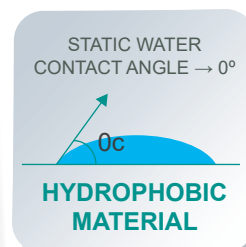
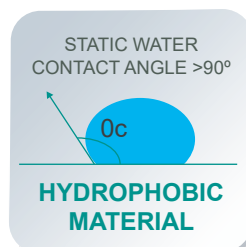


- Gas filtration, Vapor filtration, High-temperature filtration.
- Food industry and Medicine filtration.



# PVDF HYDROPHILIC

- HYDROPHILIC MATERIALS ARE OBTAINED THROUGH PROCESS IMPROVEMENT.
- HYDROPHILIC MATERIAL HAS A GREAT AFFINITY FOR WATER AND IT'S EASILY WETTED BY WATER BECAUSE OF THE SURFACE WITH WATER MOLECULES TO FORM INTERMOLECULAR FORCES.
- LOW PROTEIN-BINDING FOR FILTRATION OF NON-AGGRESSIVE AQUEOUS AND MILD ORGANIC SOLUTIONS.
- LOW UV ABSORBING EXTRACTABLES AND LOW NONSPECIFIC PROTEIN BINDING.
- TWO TYPES IN PORE SIZE:0.22µm AND 0.45µm.
- THREE TYPES IN FILTER SIZE:13mm, 25mm AND 33mm.
- FILTER TYPE PRINTED ON HOUSING



## TYPICAL DATA

MATERIAL	PVDF HYDROPHILIC	
Material of housing	pp	
Effective filtration area(cm <sup>2</sup> )	13mm/1.13cm <sup>2</sup>	25mm/4.15cm <sup>2</sup>
Pore size(µm)	0.22/0.45	
Process volume(ml)	<10ml(13mm)	<100ml(25mm)
Maximum Operating Temperature	100°C	
Maximum Operating Pressure(psi)	87psi	



Order.No.	13LPVD22	13LPVD45	25LPVD22	25LPVD45
DESCRIPTION	13mm PVDF Hydrophilic Syringe Filter 0.22µm with Outer Ring.	13mm PVDF Hydrophilic Syringe Filter 0.45µm with Outer Ring.	25mm PVDF Hydrophilic Syringe Filter 0.22µm with Outer Ring.	25mm PVDF Hydrophilic Syringe Filter 0.45µm with Outer Ring.
100 pcs/pk				

## FEATURES

- Hydrophilic membrane with good solvent resistance.
- It has superior performance to prevent leak of sample solvent and can promise membrane area being used in a large filtration area.





# MCE

- BIOLOGICALLY INERT MIXTURES OF CELLULOSE ACETATE AND CELLULOSE NITRATE.
- MEMBRANES IN ANALYTICAL AND RESEARCH APPLICATIONS.
- TWO TYPES IN PORE SIZE:0.22µm AND 0.45µm.
- THREE TYPES IN FILTER SIZE:13mm, 25mm, 33mm.
- FILTER TYPE PRINTED ON HOUSING



## TYPICAL DATA

MATERIAL	MCE	
Material of housing	pp	
Effective filtration area(cm <sup>2</sup> )	13mm/1.13cm <sup>2</sup>	25mm/4.15cm <sup>2</sup>
Pore size(µm)	0.22/0.45	
Process volume(ml)	<10ml(13mm)	<100ml(25mm)
Maximum Operating Temperature	50°C	
Maximum Operating Pressure(psi)	87psi	



Order.No.	13MCE22	13MCE45	25MCE22	25MCE45
DESCRIPTION	13mm MCE Syringe Filter 0.22µm	13mm MCE Syringe Filter 0.45µm	25mm MCE Syringe Filter 0.22µm	25mm MCE Syringe Filter 0.45µm
100 pcs/pk				

## FEATURES



- Ideal for capturing and culturing microorganisms in the Water and wastewater industry.
- Used to determine particulate contamination of lubricating oil and hydraulic fluid in patch test kits.
- Compatible with gamma irradiation.

## APPLICATIONS



- Appropriate for bacterial culturing, including E. coli culturing
- Biologically inert with good thermal stability
- Uniform microporous structure results in high flow rates when used for filtering



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