

Introduction

To ensure the highest and most consistent quality, Membrane Solutions (MS) syringe filters are manufactured under ISO9001, and in a certified clean room environment using the latest manufacturing technologies. MS syringe filters offer reliable and competitive performance. They are available with Nylon, PES, PTFE, PVDF, MCE, CA, PP and GF membrane and filter media, in numerous pore sizes, and as hydrophilic or hydropho-

bic. Our syringe filters are offered in either transparent or, for easy membrane type identification, color coded housings. Typical applications are clarification, sterile filtration, sample preparation, sterile venting and medical applications. All wetted surfaces of are made from medical grade polypropylene. And, all are HPLC certified.

Why Membrane Solutions Syringe Filter?

Membrane Solutions offers numerous types of syringe filters to cover most application requirements. Filtration is a routine procedure to prevent clogging and increase the service life of chromatography columns.

Membrane Solutions® Syringe Filter have the following features:

- Superior flow rate
- High total throughput
- Broad range of membrane types
- Various diameters
- With or without a built-in prefilter
- Low extractables
- Consistent particle retention
- Also available in OEM, custom or Private Label configurations

Choosing the Right Diameter

Typical Process Volume	Suitable Syringe Filter Diameter (mm)
< 1 mL	4
1 – 10 mL	13, 17
10 – 100 mL	25, 30
>100mL	30,33
>1L	50

Filtration at a Guidance

Filtration Media	Main Features	Applications
Nylon	<ul style="list-style-type: none"> • Hydrophilic • Robust • pH range: 3-12 • Broad Chemical compatibility 	<ul style="list-style-type: none"> • Chemicals filtration • Beverage filtration • HPLC sample preparation
PES	<ul style="list-style-type: none"> • Hydrophilic • High flow rate • Low extractables • Low protein binding • pH range: 1-14 	<ul style="list-style-type: none"> • Protein filtration • Tissue culture media filtration • Buffer prep • HPLC sample preparation
PTFE	<ul style="list-style-type: none"> • Broad chemical compatibility • Hydrophobic and hydrophilic available • pH range: 1-14 • Available supported or unsupported 	<ul style="list-style-type: none"> • Organic solvents • Strong acid and alkaline resistance • Gas filtration • Air sampling
PVDF	<ul style="list-style-type: none"> • High thermal resistance • Broad chemical compatibility • Hydrophobic and hydrophilic available • Low protein binding 	<ul style="list-style-type: none"> • Gas filtration • Food industry • Pharmaceutical filtration
MCE	<ul style="list-style-type: none"> • Hydrophilic • High flow rate • Low protein binding • pH range: 4-8 	<ul style="list-style-type: none"> • Cell culture media • Microorganism enumeration and identification • Acid digestion • Heavy metals testing
CA	<ul style="list-style-type: none"> • Hydrophilic • Low protein binding • pH range: 4-8 	<ul style="list-style-type: none"> • Protein, enzyme and biological solutions • Tissue culture media
Glass Fiber	<ul style="list-style-type: none"> • Broad chemical compatibility • High dirt holding capacity • pH range: 4-14 • High thermal resistance (up to 500 °C) • With or without binders 	<ul style="list-style-type: none"> • Clarification and prefiltration • Tissue Culture media • DNA/RNA adsorption and purification • Qualification and quantification
PP microfiber	<ul style="list-style-type: none"> • Broad chemical compatibility • pH range: 1-14 	<ul style="list-style-type: none"> • Pre-filtration • Clarification

Chrompure™ Syringe Filters

Features and Benefits

- **Color coded and labeled:** Allows easy identification of membrane and filter media type. Each unit is clearly marked with an identifying code to denote pore size and membrane material
- **EZ-Twist™ Ring:** Ridged outer ring allows for better grip
Bonded outer ring on housing: Provides durability under higher working pressures (>87 psi or 6 bar)
- **Specifically designed to maximize sample recovery:** Minimal sample hold-up volume
- **Pre-sterilization available and individually packaged:** Ensures sterility during sample preparation
- **Broad compatibility:** Making them suitable for many types of applications and solvents

Applications

- HPLC sample preparation
- Routine QC analysis
- Removal of protein precipitates
- Dissolution testing
- Food analysis
- Biofuel analysis
- Environmental samples
- DMSO compatible: Nylon, PTFE, PP and GF filtration media



Specification

	13mm	25mm
Filtration Area(cm ²):	0.92	2.98
Housing Material:	PP	
Holdup-Volume(μl):	<10	<100
Volume Throughput(ml):	<10	<50
Connections (Inlet/Outlet):	Female Luer Lock inlet and Male Luer slip outlet	
Max Operating Pressure(psi):	87	
Max Operating Temperature(°C):	100	
Layers:	1	

Part Number Matrix

	Filter Media	Diameter (mm)	Pore Size (μm)	Pre-Sterilized	Wettability	Optional Pre-filter layer	Series
SF	PTFE*	013	022	N	B	G	CU
	NY(0.2~10μm)	013=13	010=0.1	N=No	(blank)=Standard	(blank)=None	CU=
	PES(0.1~3μm)	025=25	022=0.2	S=Yes	B=Hydrophobic*	P=PP microfiber	Chrompure
	CA(0.2~8μm)		045=0.45		L=Hydrophilic*	G=Glass fiber	
	MCE(0.2~8μm)		080=0.8		*PVDF and		
	PVDF(0.2~5μm)		100=1.0		PTFE only		
	PTFE(0.1~5μm)		300=3				
	RC (0.2/0.45μm)		500=5				
	GF(0.2~10μm)						
	PP microfiber(0.2~10μm)						

* SFPTFE013022NBGCU=Chrompure™ Hydrophobic PTFE syringe filter, 13mm, 0.22μm, glass fiber prefilter, non-sterile.

Simplepure™ Syringe Filters

Features and Benefits

- **Transparent PP housing:** Allows users to observe contaminants in filtrate and filtration process
- **Ultrasonically welded:** Maximizes effective filtration area (EFA)
- **Built-in prefilter:** PP prefilter
High working pressure (>87 psi or 6 bar)
- **Specifically designed to maximize sample recovery:** Minimal sample hold-up volume
- **Available pre-sterilized and individually packaged:** Ensures sterility during sample preparation
- **Broad compatibility:** Making them suitable for many types of applications and solvents
- **Pre-filter:** SimplePure comes standard with polypropylene microfiber pre-filter layer. Glass fiber pre-filter is available as an option.

Applications

- HPLC sample preparation
- Routine QC analysis
- Removal of protein precipitates
- Dissolution testing
- Food analysis
- Biofuel analysis
- Environmental samples



Specification

	4mm	13mm	25mm
Filtration Area(cm ²):	0.125	1.09	4.08
Housing Material:	PP		
Holdup-Volume(µl):	<1	<10	<100
Volume Throughput(ml):	5	20	100
Connections (Inlet/Outlet):	Female Luer Lock inlet and Male Luer slip outlet		
Max Operating Pressure(psi):	87		
Max Operating Temperature(°C):	100		
Layers:	2		

Part Number Matrix

	Filter Media	Diameter (mm)	Pore Size (µm)	Pre-Sterilized	Wettability	Optional Pre-filter layer
SF	PVDF	025	045	S	L	G
	NY(0.2~10µm)	004=4	010=0.1	N=No	(blank)=Standard	(blank)=
	PES(0.1~3µm)	013=13	022=0.2	S=Yes	B=Hydrophobic*	PP microfiber
	CA(0.2~8µm)	025=25	045=0.45		L=Hydrophilic*	G=Glass fiber
	MCE(0.2~8µm)		080=0.8		*PVDF and	
	PVDF(0.2~5µm)		100=1.0		PTFE only	
	PTFE(0.1~5µm)		300=3			
	RC (0.2/0.45µm)		500=5			
	GF(0.2~10µm)					
	PP microfiber(0.2~10µm)					

* SFPVDF025045NLG=Simplepure™ hydrophilic PVDF syringe filter,25mm,0.45µm, glass fiber prefilter, non-sterile.

Ipure™ Syringe Filters

Features and Benefits

- **Color coded and labeled:** Allows easy identification of membrane and filter media type. Each unit is clearly marked with an identifying code to denote pore size and membrane material
- **Bonded outer ring on housing:** Provides durability under higher working pressures (>87 psi or 6 bar)
- **Built-in prefilter:** PP prefilter
- **Specifically designed to maximize sample recovery:** Minimal sample hold-up volume
- **Pre-sterilization available and individually packaged:** Ensures sterility during sample preparation
- **Broad compatibility:** Making them suitable for many types of applications and solvents

Applications

- HPLC sample preparation
- Routine QC analysis
- Removal of protein precipitates
- Dissolution testing
- Food analysis
- Biofuel analysis
- Environmental samples
- DMSO compatible: Nylon, PTFE, PP and GF filtration media



Specification

	13mm	25mm	30mm
Filtration Area(cm ²):	0.92	2.98	4.9
Housing Material:	PP		
Holdup-Volume(μl):	<10	<100	120
Volume Throughput(ml):	10	50	100
Connections (Inlet/Outlet):	Female Luer Lock inlet and Male Luer slip outlet		
Max Operating Pressure(psi):	87		
Max Operating Temperature(°C):	100		
Layers:	1		

Part Number Matrix

	Filter Media	Diameter (mm)	Pore Size (μm)	Pre-Sterilized	Wettability	Optional Pre-filter layer	Series
SF	NY	013	022	N	B	G	I
	NY(0.2~10μm)	013=13	010=0.1	N=No	(blank)=Standard	(blank)=	I=Ipure
	PES(0.1~3μm)	025=25	022=0.2	S=Yes	B=Hydrophobic*	PP microfiber	
	CA(0.2~8μm)	030=30	045=0.45		L=Hydrophilic*	G=Glass fiber	
	MCE(0.2~8μm)		080=0.8		*PVDF and		
	PVDF(0.2~5μm)		100=1.0		PTFE only		
	PTFE(0.1~5μm)		300=3				
	RC (0.2/0.45μm)		500=5				
	GF(0.2~10μm)						
	PP microfiber (0.2~10μm)						

* SFNY013022NGI=Ipure™ nylon syringe filter, 13mm, 0.45μm, glass fiber, non-sterile.

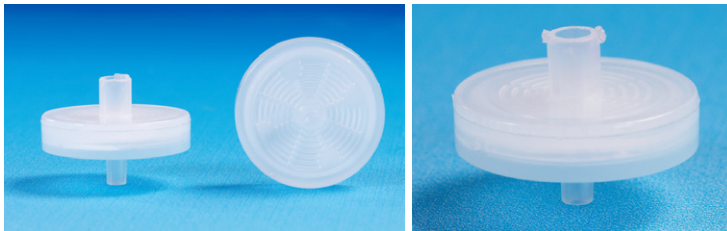
G-MP™ Syringe Filters

Introduction

Membrane Solutions (MS) G-MP™ syringe filters are designed specifically to purify highly contaminated solutions. Built-in 4 layers ensures higher throughput without requiring higher syringe pressures.

Features and Benefits

- **Multiple 4 pre-filter layers:** Graded 10µm~0.7µm glass fiber prefilter above the membrane filter
- **Maximized throughput:** reduces syringe force required and hand fatigue. Also offers cost savings because less syringe filters are required.



Applications

- Difficult-to-filter samples
- Routine QC analysis
- Removal of protein precipitates
- HPLC sample preparation
- Dissolution testing
- Food analysis
- Environmental samples
- Sterile filtration and clarification of biological fluids

Specification

25mm	
Filtration Area(cm²):	4.08
Housing Material:	PP
Holdup-Volume(µl):	<400
Volume Throughput(ml):	200
Connections (Inlet/Outlet):	Female Luer Lock inlet and Male Luer slip outlet
Max Operating Pressure(psi):	87
Max Operating Temperature(°C):	100
Layers:	4

Part Number Matrix

SF	Filter Media	Diameter (mm)	Pore Size (µm)	Pre-Sterilized	Wettability	Series
	NY	025	045	N		M
	NY(0.2~10µm)	025=25	010=0.1	N=No	(blank)=Standard	G-MP
	PES(0.1~3µm)		022=0.2	S=Yes	B=Hydrophobic*	
	CA(0.2~8µm)		045=0.45		L=Hydrophilic*	
	MCE(0.2~8µm)		080=0.8		*PVDF and	
	PVDF(0.2~5µm)		100=1.0		PTFE only	
	PTFE(0.1~5µm)		300=3			
	RC (0.2/0.45µm)		500=5			

* SFNY025045NM=GMP™ nylon syringe filter,25mm,0.45µm, non-sterile.

ICPure™ Syringe Filters

Introduction

Membrane Solutions (MS) ICPure™ PES syringe filters are certified for use in Ion Chromatograph. The ICPure syringe filter series are factory flushed with ultra-pure water and dried to minimize extractables.

Applications

- Low drug and protein binding
- Specifically designed for ion chromatograph (IC) sample preparation
- Ion analyses



Features

- Low ion chromatograph (IC) extractables
- High flow rates
- Low protein and drug binding characteristics
- Compatible with an extensive range of solvents
- Individually packaged to minimize the risk of contamination
- Convenient sizes for small sample volumes

Ion Chromatography Certification

IC levels	<p>Cl⁻ < 50 ppb NO₃⁻ < 50 ppb SO₄²⁻ < 50 ppb PO₄³⁻ < 50 ppb</p> <p>This is based on 2 mL of ultra-pure water filtrate being concentrated on-line and injected into an ion chromatograph with conductivity detection.</p>
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Part Number Matrix

SF	Membrane Material	Filter Diameter (mm)	Pore Size (µm)	Pre-Sterilized	Wettability	Series
	PES	025	022	N		IC
	PES PTFE	013=13 025=25	022=0.22µm 045=0.45µm	N=No S=Yes	(blank)= Hydrophilic B=Hydrophobic L=Hydrophilic	IC= ICpure

* SFPES025022NIC= ICPure™ PES syringe filter, 25mm, 0.22µm non-sterile

Universal MSP™ Syringe Filters

Introduction

Membrane Solutions (MS) MSP™ syringe filters is made with a specifically modified hydrophilic PTFE membrane that offers significant performance advantages over hydrophilic polypropylene filters when comparing flow rate, particle retention, extractables, protein/drug binding and chemical compatibility.

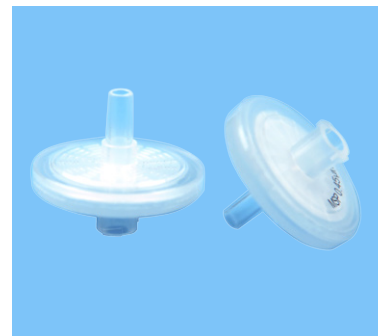
All the syringe filters are certified by HPLC Extractable Test.

Features

- Broader chemical compatibility than regenerate cellulose or polypropylene membranes
- Safe to use with DMSO
- Lower API binding and extractables
- Superior flow rate
- Higher throughput compared to hydrophilic polypropylene
- Higher sample recovery prevents loss of precious samples and ensures accurate results

Applications

- Extremely Low drug and protein binding
- Routine QC analysis
- HPLC sample preparation
- Dissolution testing
- Food analysis
- Environmental samples
- Sterile filtration and clarification of biological fluids



Part Number Matrix

	Membrane Material	Filter Diameter (mm)	Pore Size (µm)	Pre-Sterilized	Wettability	Optional Pre-filter layer
SF	MSP	013	022	N	L	P
	MSP (Hydrophilic PTFE)	004=4 013=13 025=25	022=0.2 045=0.45 080=0.8 100=1.0 300=3 500=5	N=No S=Yes	L=Hydrophilic	(blank)=None P=PP microfiber G=Glass fiber

* SFMSP013022NLP= MSP™ hydrophilic PTFE syringe filter, 13mm, 0.22µm non-sterile, PP prefilter

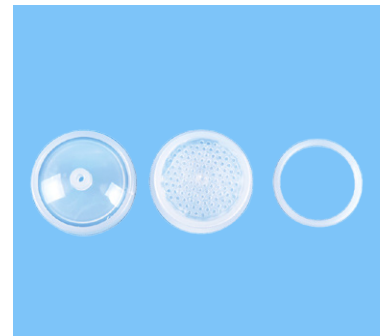
RSFH™-Reusable Syringe Filter Holder

Introduction

Membrane Solutions (MS) MS® RSFH™ Reusable Syringe Filter Holder are designed to be reused with interchangeable filter discs (sold separately). Ideal for filtering small volumes using a syringe filter or peristaltic pump. Can be used with multiple filter disc layers, as pre-filters, to filter high particle laden solutions. Made with virgin polypropylene, they offer broad chemical compatibility and low extractables. Well suited for custom filtration needs and cost-savings. Its construction and sealing ring avoid wrinkling of filter media when tightening and ensures a leak proof design.

Features

- Leak proof
- Autoclavable
- Easy to use and reusable
- Syringe compatible
- Low hold-up volume
- Broad chemical compatibility



Part Number Matrix

SF	Housing Material	Filter Diameter (mm)
	RPP	13
	Polypropylene housing	13=13 25=25 50=50

* Notice: 10 pcs/pk