



aapptec

advanced automated
peptide protein TECHNOLOGIES

Spirit of Innovation

Sample Preparation



Spirit™ Syringe Filters

Specializing in Separation Sciences



aapptec

Spirit™ Syringe Filters

for Sample Preparation



Spirit Syringe Filters are used for the filtration of liquid samples which contain impurities in the form of suspension or solution. The following tables classify these filters according to specifications and area of applications as well as limitations.

All Spirit Syringe Filters are color-coded for easy identification. In addition, the 0.45µm filters are a darker color than the 0.20µm size.

GENERAL OVERVIEW

Filter Housing:	Polypropylene
Filter Type:	Non-sterile
Membrane Selection:	■ Nylon-66, ■ PVDF, Polypropylene, ■ PES, ■ PTFE, ■ RC, ■ CA, ■ M.E., ■ Nitrocellulose, Glass Microfibre, Membrane Filters
Pore Size:	0.45µm – for most HPLC applications 0.20µm – to eliminate all bacterial contaminations and when 3µm HPLC columns are used
Max Filtration Volume:	13mm D Filter, 5-10mL 25mm D Filter, 100mL
Retention Volume:	13mm D Filter, 28µL 25mm D Filter, 100µL

NYLON-66 (Polyamide) SYRINGE FILTERS WITH POLYPROPYLENE HOUSING

- | | |
|--|---|
| <ul style="list-style-type: none"> • Hydrophilic membrane • very high protein binding • low level of extractables • useful for HPLC and general filtration samples | <ul style="list-style-type: none"> • high bubbling point • resistant to most organic and aqueous solvents • non-resistant to acids and aggressive halogenated solvents • L.E. (Lower Extractable) |
|--|---|

Nylon-66 25mm	Pk/100
SF-200100	Nylon, green, 0.45µm
SF-200101	Nylon, light green, 0.20µm
SF-200475	Nylon L.E., green, 0.45µm
SF-200470	Nylon L.E., light green, 0.20µm

Nylon-66 13mm	Pk/100
SF-200500	Nylon, green, 0.45µm
SF-200501	Nylon, light green, 0.20µm
SF-200465	Nylon L.E., green, 0.45µm
SF-200460	Nylon L.E., light green, 0.20µm



PVDF (Polyvinylidene Difluoride) SYRINGE FILTERS WITH POLYPROPYLENE HOUSING

- Hydrophilic membrane
- low level of extractables
- low protein binding, ideal for peptide and protein samples
- useful for HPLC and general sample filtration
- broad chemical capability
- filtration of polar and non-polar solutions with exception of strong acids, bases and ketones

PVDF 25mm	Pk/100
SF-200106	PVDF Filter, red, 0.45µm,
SF-200107	PVDF Filter, rose, 0.20µm



PVDF 13mm	Pk/100
SF-200506	PVDF Filter, red, 0.45µm,
SF-200507	PVDF Filter, rose, 0.20µm



POLYPROPYLENE SYRINGE FILTERS WITH POLYPROPYLENE HOUSING

- Hydrophilic membrane
- low level of extractables
- filtration of biological samples
- excellent protein recovery
- high resistance to strong acids, bases and most chemicals
- non-resistant to chlorinated solvents
- limited resistance with chloroform and DCM

Polypropylene 25mm	Pk/100
SF-200111	Polypropylene, white, 0.45µm
SF-200112	Polypropylene, natural, 0.20µm



Polypropylene 13mm	Pk/100
SF-200509	Polypropylene, white, 0.45µm
SF-200508	Polypropylene, natural, 0.20µm



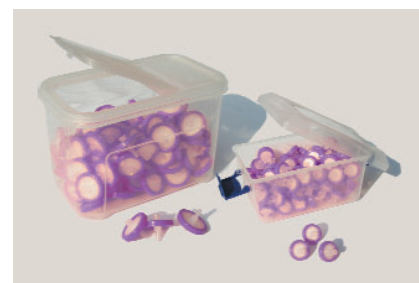
PES (Polyethylsulfone) SYRINGE FILTERS WITH POLYPROPYLENE HOUSING

- Hydrophilic membrane
- low protein and nucleic acid binding
- high flow rates, good throughput volume
- ideal for strong bases, alcohols, high temperature liquids
- non-resistant to strong acids, ketones, esters, aromatic and halogenated solvents

PES 25mm	Pk/100
SF-200401	PES Filter, violet, 0.45µm



PES 13mm	Pk/100
SF-200403	PES Filter, violet, 0.45µm



PTFE (Teflon) SYRINGE FILTERS WITH POLYPROPYLENE HOUSING

- Hydrophobic membrane
- very low protein binding and low level of extractables
- inadequate for aqueous samples unless pre-wetted with alcohol
- resistant to aggressive solvents, strong acids and bases
- excellent thermal stability
- ideal for filtration and degassing of solvents

PTFE 25mm	Pk/100
SF-200102	PTFE Filter, blue, 0.45µm
SF-200103	PTFE Filter, light blue, 0.20µm



PTFE 13mm	Pk/100
SF-200502	PTFE Filter, blue, 0.45µm
SF-200503	PTFE Filter, light blue, 0.20µm



RC (Regenerated Cellulose) SYRINGE FILTERS WITH POLYPROPYLENE HOUSING

- Hydrophilic membrane
- very low protein binding
- compatible with all HPLC solvents and aqueous samples in pH 3-12
- ideal for biological sample filtration, protein recuperation and tissue culture media filtration
- cannot be used with strong acids, chloroform and THF

RC 25mm	Pk/100
SF-200445	RC Filter, brown, 0.45µm
SF-200440	RC Filter, brown, 0.20µm



RC 13mm	Pk/100
SF-200435	RC Filter, brown, 0.45µm
SF-200430	RC Filter, light brown, 0.20µm



CA (Cellulose Acetate) SYRINGE FILTERS WITH POLYPROPYLENE HOUSING

- Hydrophilic membrane
- ideal for aqueous base samples, tissue culture media filtration and sensitive biological samples
- lowest protein binding compared to PVDF and PES
- cannot be used with organic solvents

CA 25mm	Pk/100
SF-200406	CA-filter, orange, 0.45µm
SF-200407	CA filter, light orange, 0.20µm



CA 13mm	Pk/100
SF-200408	CA-filter, orange, 0.45µm
SF-200409	CA filter, light orange, 0.20µm



ME (Mixed Esterified Cellulose) SYRINGE FILTERS WITH POLYPROPYLENE HOUSING

- Hydrophilic membrane
- low protein retention for sterilizing or clarification of most aqueous and polar media
- high filter capacity and high flow throughput

M.E. 25mm	Pk/100
SF-200104	ME filter, yellow, 0.45µm
SF-200105	ME filter, light yellow, 0.20µm



M.E. 13mm	Pk/100
SF-200504	ME filter, yellow, 0.45µm
SF-200505	ME filter, light yellow, 0.20µm



NITROCELLULOSE SYRINGE FILTERS WITH POLYPROPYLENE HOUSING

- Hydrophilic membrane
- natural membrane recommended for clarification and filtration of aqueous samples.

PES 25mm	Pk/100
SF-200480	Nitrocellulose pistachio, 0.45µm

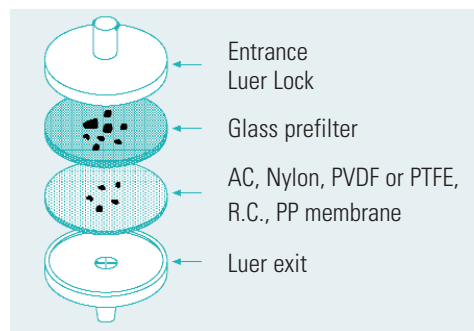


PES 13mm	Pk/100
SF-200466	Nitrocellulose pistachio, 0.45µm



25MM SYRINGE FILTERS AND GLASS PRE-FILTERS (GMF) WITH POLYPROPYLENE HOUSING

aaptec offers a wide range of syringe filters with a 1µm pore size Glass Microfiber (GMB) membrane as a pre-filter. The glass pre-filter is mounted upstream from the microporous filter membrane in order to eliminate the need of a pre-filtration step, minimize sample loss, prolong life-time of the membrane and increase the flow rate. These filters are ideal for general filtration of samples containing an excessive amount of particulates.

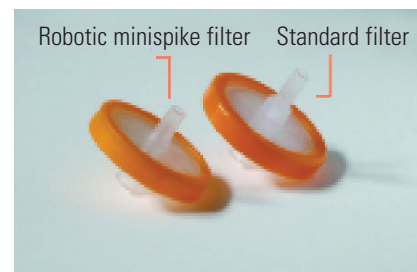


Pk /100 Item	Housing: Polypropylene Pore(µm)	Description
SF-200406G	0.45	Cellulose Acetate/Glass Fiber
SF-200407G	0.20	Cellulose Acetate/Glass Fiber
SF-200401G	0.45	Polyethersulfone/Glass Fiber
SF-200480G	0.45	Nitrocellulose/Glass fiber
SF-200000G	1.00	Glass Microfiber (GMF)
SF-200100G	0.45	Nylon/Glass fiber
SF-200101G	0.20	Nylon/Glass fiber
SF-200102G	0.45	PTFE/Glass fiber
SF-200103G	0.20	PTFE/Glass fiber

Pk /100 Item	Housing: Polypropylene Pore(µm)	Description
SF-200111G	0.45	PP/Glass fiber
SF-200112G	0.20	PP/Glass fiber
SF-200445G	0.45	CR/Glass fiber
SF-200440G	0.20	CR/Glass fiber
SF-200104G	0.45	M.E.C/Glass fiber
SF-200105G	0.20	M.E.C/Glass fiber
SF-200106G	0.45	PVF/Glass fiber
SF-200107G	0.20	PVDF/Glass fiber

SPIRIT ROBOTIC SYRINGE FILTERS FOR AUTOMATIC LIQUID HANDLING EQUIPMENT

- The robotic filters are high quality 25mmD which enables them to avoid leakage of
- excellent choice for dissolution test
- can be adapted to automated equipment such as Sotax or Zymark samples, etc.
- Availability: 1000/PK



■ WITHOUT GLASS MICROFIBER (GMF) PRE-FILTER

0.45µm	25mm D
SF-200100R	Nylon, green
SF-200102R	PTFE, blue
SF-200104R	ME Cellulose, yellow
SF-200106R	PVDF, red

0.20µm	25mm D
SF-200101R	Nylon, light green
SF-200103R	PTFE, light blue
SF-200105R	ME Cellulose, light yellow
SF-200107R	PVDF, rose

0.45µm	25mm D
SF-200111R	Polypropylene, white
SF-200445R	Regenerate Cellulose, brown
SF-200406R	Cellulose Acetate, orange
SF-200480R	Nitrocellulose, pistachio

0.20µm	25mm D
SF-200112R	Polypropylene, natural
SF-200440R	Regenerate Cellulose, beige
SF-200407R	Cellulose Acetate, light orange
SF-200000R	GMF, grey, 1.00µm (not 0.2µm)

■ WITH GLASS MICROFIBER (GMF) PRE-FILTER 1.00µM

0.45µm	25mm D
SF-200100GR	Nylon, green
SF-200102GR	PTFE, blue
SF-200104GR	ME Cellulose, yellow
SF-200106GR	PVDF, red

0.20µm	25mm D
SF-200101GR	Nylon, light green
SF-200103GR	PTFE, light blue
SF-200105GR	ME Cellulose, light yellow
SF-200107GR	PVDF, rose

0.45µm	25mm D
SF-200111GR	Polypropylene, white
SF-200445GR	Regenerate Cellulose, brown
SF-200406GR	Cellulose Acetate, orange
SF-200480GR	Nitrocellulose, pistachio

0.20µm	25mm D
SF-200112GR	Polypropylene, natural
SF-200440GR	Regenerate Cellulose, beige
SF-200407GR	Cellulose Acetate, light orange

SPIRIT MEMBRANE FILTERS

■ FOR MOBILE PHASE FILTRATION

0.45µm	PK/50 47mmD
SF-200140	Nylon
SF-200200	PTFE
SF-200260	ME Cellulose
SF-200320	PVDF
SF-200380	Polypropylene
SF-200420	Regenerated Cellulose
SF-200456	Nitrocellulose
SF-200458	Cellulose Acetate

0.20µm	PK/50 47mmD
SF-200150	Nylon
SF-200210	PTFE
SF-200270	ME Cellulose
SF-200330	PVDF
SF-200390	Polypropylene
SF-200425	Regenerated Cellulose
SF-200458	Cellulose Acetate

■ MEMBRANE FILTERS FOR SAMPLE FILTRATION

0.45µm	PK/100 13mmD
SF-200109	Nylon
SF-200220	ME Cellulose
SF-200160	PTFE
SF-200280	PVDF
SF-200340	Polypropylene
SF-200400	Regenerated Cellulose

0.20µm	PK/100 13mmD
SF-200110	Nylon
SF-200230	ME Cellulose
SF-200170	PTFE
SF-200290	PVDF
SF-200350	Polypropylene
SF-200405	Regenerated Cellulose

1.00µm	PK/50 47mmD
SF-200457G	Glass Microfiber

0.45µm	PK/50 25mmD
SF-200120	Nylon
SF-200240	ME Cellulose
SF-200180	PTFE
SF-200300	PVDF
SF-200360	Polypropylene
SF-200410	Regenerated Cellulose

0.20µm	PK/50 25mmD
SF-200130	Nylon
SF-200250	ME Cellulose
SF-200190	PTFE
SF-200310	PVDF
SF-200370	Polypropylene
SF-200415	Regenerated Cellulose

1.00µm	PK/50 25mmD
SF-200002G	Glass Microfiber



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aapptec • 6309 Shepherdsville Rd., Louisville, KY 40228-1027, U.S.A.

phone: 502.968.2223 • toll-free: 888.692.9111 • fax: 502.968.3338

email: info@aapptec.com • www.aapptec.com

Spirit™
Syringe Filters