

Sartoguard NF

Membrane Prefilters with Nanofleece Technology

Product Information

- Exceptional clarification capabilities
- Innovative nanofleece for increased performance of PES membranes
- Protection of downstream filters and bioburden reduction

Sartoguard NF filter elements feature a unique combination of Polyethersulfone (PES) membranes and PES nanofleece technology. The combination of the innovative nanofleece with the proven performance of PES membranes results in outstanding total throughput performance, high flow rates and exceptional clarification capabilities. Sartoguard NF filters are the ideal choice for prefiltration applications where removal of particles and bioburden control is required for protection of sterilizing grade (0.2 µm) and 0.1 µm rated membrane filters.

Nanofleece Technology

The ultrafine structure of the nanofleece provides a unique retention system for fine particles in combination with excep-



tionally high flow rates. The nanofleece effectively protects the downstream PES membranes and leads to an outstanding total throughput performance of this filter type, resulting in a significant reduction in filtration costs.

Reliable Retention

Sartoguard NF filters are available with 0.1 µm and 0.2 µm nominal retention rating. The 0.1 µm and 0.2 µm rated filters typically provide a titer reduction of $>10^6$ per cm² filtration area for *Brevundimonas diminuta* and *Serratia marcescens*, respectively.

Chemical Compatibility

All active materials of the Sartoguard NF filters (membranes and nanofleece) are made of PES that is compatible with a broad range of chemicals from pH 1–14.

Single-Use-Technology

Sartoguard NF filters are also available as Gamma MaxiCaps®, T-Style MaxiCaps® and Gamma MidiCaps® for easy integration into single-use processing solutions. They are gamma irradiatable and can be directly connected to single-use bags to be delivered as pre-sterilized assemblies.

Applications

- Pharmaceuticals
- Buffers
- Cell culture media
- Ophthalmics
- Large volume parenterals

Technical Data

Available Sizes	Filtration Area
Cartridges, Gamma MaxiCaps®, T-Style MaxiCaps®	
Size 1	0.65 m ² 7.0 ft ²
Size 2	1.3 m ² 14.0 ft ²
Size 3	1.95 m ² 21.0 ft ²
Gamma MidiCaps®	
Size 7	0.065 m ² 0.7 ft ²
Size 8	0.13 m ² 1.4 ft ²
Size 9	0.22 m ² 2.35 ft ²
Size 0	0.44 m ² 4.7 ft ²
Capsules	
Size 4	0.019 m ² 0.20 ft ²

Max. Allowable Differential Pressure

Cartridges

5 bar | 72.5 psi at 20°C
2 bar | 29 psi at 80°C

Gamma MidiCaps® | Gamma MaxiCaps® | T-Style MaxiCaps®

5 bar | 72.5 psi at 20°C
3 bar | 43.5 psi at 50°C

Capsules Size 4

4 bar | 58 psi at 20°C
2 bar | 29 psi at 50°C

Max. Allowable Back Pressure

2 bar | 29 psi at 20°C
(for all elements)

Max. Operating Pressure

Cartridges | T-Style MaxiCaps® | Gamma MaxiCaps | Gamma MidiCaps®
5 bar | 72.5 psi at 20°C

Capsules

4 bar | 58 psi at 20°C

Materials

Prefilter Membrane

Polyethersulfone

Endfilter Membrane

Polyethersulfone

Filter active Fleece

Polyethersulfone Nanofleece

Support Fleece

Polypropylene
(in-line steam sterilizable & autoclavable)
Polyester
(γ-irradiatable | autoclavable)

Core

Polypropylene

End Caps

Polypropylene

Capsule Housing

Polypropylene

O-Rings

Silicone
(optional: EPDM or
Fluoroelastomer)

Pore Size Combination

0.2 µm + 0.1 µm (nom.)
0.8 µm + 0.2 µm (nom.)

Regulatory Compliance

- Designed, developed and manufactured in accordance with an ISO 9001 certified Quality Management System
 - Meet or exceed the requirements for WFI quality standards set by the current USP
 - Non-pyrogenic according to USP Bacterial Endotoxins
 - Pass USP Plastic Class VI Test
 - Non-fiber releasing according to 21 CFR 210.3 (b) (6) and 211.72
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Sterilization

Cartridges

- In-Line Steam Sterilization
134 °C, 0.5 bar | 7.25 psi, 20 min.
Min. 25 Sterilization Cycles

or

- Autoclaving
134°C, 2 bar | 29 psi, 30 min
Min. 25 Sterilization Cycles
-

Gamma MidiCaps®

- Autoclaving
134°C, 2 bar | 29 psi, 30 min
Min. 5 Sterilization Cycles

or

- Gamma Irradiation
≤ 50 kGy
1 Sterilization Cycle
-

Gamma MaxiCaps® | T-Style MaxiCaps®

- Autoclaving
134°C, 2 bar | 29 psi, 30 min
Min. 5 Sterilization Cycles

or

- Gamma Irradiation
< 50 kGy
1 Sterilization Cycle
-

Capsules Size 4

- Autoclaving
134°C, 2 bar | 29 psi, 30 min
Min. 25 Sterilization Cycles
-

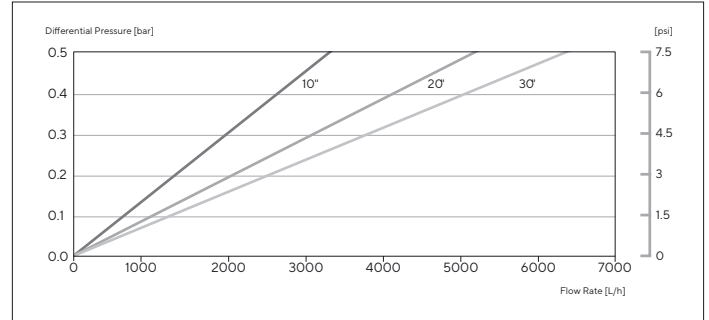
Technical References

Validation Guide

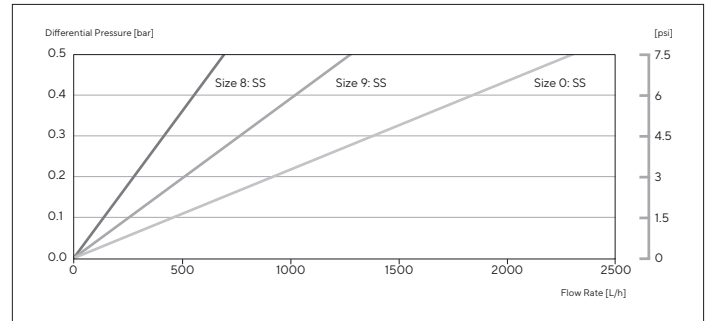
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Performance

Water Flow Rates for Standard Cartridges of Sartoguard NF 0.2 µm nominally



Water Flow Rates for Gamma MidiCaps® of Sartoguard NF 0.2 µm nominally



Ordering Information

Cartridges



546	25	■	■	■			
Retention Rates 58: 0.1 µm 07: 0.2 µm		Pore Size Filter M: 0.2 µm G: 0.8 µm		Filter Size 1: 0.65 m ² 7.0 ft ² (10") 2: 1.3 m ² 14.0 ft ² (20") 3: 1.95 m ² 21.0 ft ² (30")			

Gamma MaxiCaps®



546	73	■	■	■	G-	■	■	
Retention Rates 58: 0.1 µm 07: 0.2 µm		Pore Size Filter M: 0.2 µm G: 0.8 µm		Filter Size 1: 0.65 m ² 7.0 ft ² (10") 2: 1.3 m ² 14.0 ft ² (20") 3: 1.95 m ² 21.0 ft ² (30")		Sterilization G-: γ-irradiatable and autoclavable	Connector Inlet S: 1½" Tri-Clamp 50 mm O: ½" single stepped hose barb	Connector Outlet S: 1½" Tri-Clamp 50 mm O: ½" single stepped hose barb

T-Style MaxiCaps®



546	83	■	■	■	G-	■	■	
Retention Rates 58: 0.1 µm 07: 0.2 µm		Pore Size Filter M: 0.2 µm G: 0.8 µm		Filter Size 1: 0.65 m ² 7.0 ft ² (10") 2: 1.3 m ² 14.0 ft ² (20") 3: 1.95 m ² 21.0 ft ² (30")		Sterilization G-: γ-irradiatable and autoclavable	Connector Inlet S: 1½" Tri-Clamp 50 mm O: ½" single stepped hose barb	Connector Outlet S: 1½" Tri-Clamp 50 mm O: ½" single stepped hose barb

Gamma MidiCaps®



546	53	■	■	■	G-	■	■	--	■
Retention Rates 58: 0.1 µm 07: 0.2 µm		Pore Size Filter M: 0.2 µm G: 0.8 µm		Filter Size 7: 0.065 m ² 0.7 ft ² 8: 0.13 m ² 1.4 ft ² 9: 0.22 m ² 2.35 ft ² 0: 0.44 m ² 4.7 ft ²		Sterilization G-: γ-irradiatable and autoclavable	Connector Inlet S: 1½" Tri-Clamp 50 mm O: ½" single stepped hose barb		Packing Size A: box of 4 (size 7, 8, 9) V: box of 2 (size 0)
							Connector Outlet S: 1½" Tri-Clamp 50 mm O: ½" single stepped hose barb		

Capsules



546	13	■	■	4	■	■	■	--	B
Retention Rates 58: 0.1 µm 07: 0.2 µm		Pore Size Filter M: 0.2 µm G: 0.8 µm		Sterilization --: autoclavable	Connector Inlet S: ¾" Tri-Clamp 25 mm O: ¼" multiple stepped hose barb		Connector Outlet S: ¾" Tri-Clamp 25 mm O: ¼" multiple stepped hose barb		Packing Size B: box of 5

Check the availability of your desired configuration with your Sartorius sales representative or online at sartorius.com

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