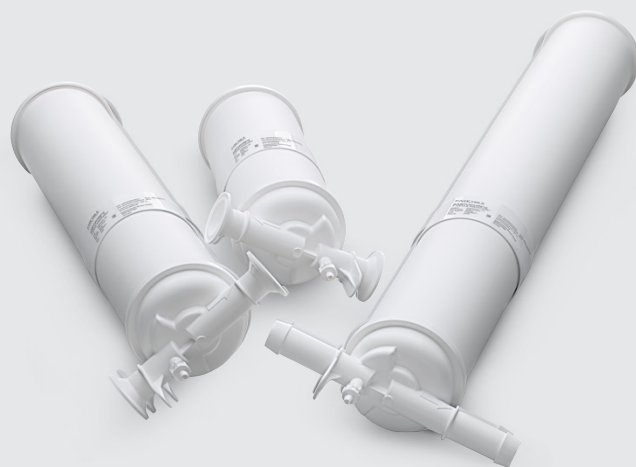


Sartoguard GF

Membrane Prefiltration Filter Elements



Product Information

Sartoguard GF filter elements are polyethersulfone membrane based prefilters. The membrane double layer is protected by a layer of glass fiber fleece material. They combine the defined retention performance of membrane filters with the high total throughput capacity of depth filter material. Therefore, Sartoguard GF prefilters offering optimal protection of sterile filters and validated bioburden reduction.

Applications

Sartoguard GF filter elements are typically used for prefiltration of:

- Cell Culture Media
- Buffers
- Serum
- Ophthalmics
- Large Volume Parenterals
- Colloid and lipid containing liquids

Efficiency

The glassfiber material provides high particle loading capacity and effective retention of large and small particles as well as excellent turbidity reduction. The heterogeneous double layer PES membranes provide secure and reliable retention needed for critical applications.

Reliable Retention

Sartoguard GF filters are available with 0.1 µm and 0.2 µm nominal retention rating. The 0.1 µm rated filters typically provides a LRV of 6 per cm² filtration area for *Brevundimonas Diminuta*, while the 0.2 µm rated filter typically provides a LRV of 6 per cm² filtration area for *Serratia Marcescens*.

Flexibility

Sartoguard GF filters are available as cartridges, capsules, Midicaps® and T-Style Maxicaps® providing utmost flexibility for integration into any filtration process independent from the batch size.

Technical Data

Available Sizes	Filtration Area	Max. Diffusion [mL/min]		Min. Bubble Point [bar psi]	
		0.1 µm (nom.) at 1.5 bar 22 psi	0.2 µm (nom.) at 1.2 bar 17.5 psi	0.1 µm (nom.)	0.2 µm (nom.)
Cartridges, Maxicaps®, T-Style Maxicaps®					
Size 1 (10")	0.45 m² 4.8 ft²	17	19	n. a.	2.3 33
Size 2 (20")	0.9 m² 9.6 ft²	34	38	n. a.	2.3 33
Size 3 (30")	1.35 m² 14.5 ft²	51	57	n. a.	2.3 33
Midicaps®					
Size 8	0.08 m² 0.9 ft²	6	7	n. a.	2.3 33
Size 9	0.15 m² 1.6 ft²	9	10	n. a.	2.3 33
Size 0	0.3 m² 3.2 ft²	11	12	n. a.	2.3 33
Capsules					
Size 4	0.012 m² 0.13 ft²	2	2	n. a.	2.3 33

Quality and Security

Sartoguard GF filter elements are individually tested for integrity during production. The integrity of the filters can be verified onside before and after use by a diffusion or bubble-point (0.2 µm) test.

Scalability

Sartoguard GF filter elements are available in a broad range of sizes and formats to provide linear scale-up from R&D to process scale.

Documentation

Sartoguard GF filter elements are designed, developed and manufactured in accordance with an ISO 9001 certified Quality Management System. A Validation Guide is available for compliance with regulatory requirements.

Max. Allowable Differential Pressure

Cartridges

2 bar | 29 psi at 80 °C

Cartridges | Midicaps® | T-Style Maxicaps®

5 bar | 72.5 psi at 20 °C

T-Style Maxicaps® | Midicaps®

3 bar | 43.5 psi at 50 °C

Capsules

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

(all elements)

Materials

Prefilter Membrane

PES, asymmetric

Final Membrane

PES, asymmetric

Filter active Fleece

Glass Fiber

Support fleeces

Polypropylene

Core

Polypropylene

End caps

Polypropylene

Housing

Polypropylene

O-Rings

Silicone (optional: EPDM
or Fluoroelastomer)

Retention Rates

0.2 µm + 0.1 µm (nom.)

0.8 µm + 0.2 µm (nom.)

Extractables

Sartoguard GF filter elements meet, or exceed the requirements for WFI quality standards set by the current USP after preflushing.

Regulatory Compliance

- Individually integrity tested during production
- Onside integrity testable by diffusion or bubble-point test
- Non pyrogenic according to USP Bacterial Endotoxins
- Pass USP Plastic Class VI Test
- Non fiber releasing according to 21 CFR



Sterilization

Cartridges

In-Line Steam Sterilization:
Max. 134 °C, 20 min. at max differential pressure
of 0.5 bar | 7.25 psi

or

Autoclaving:
Max. 134 °C, 2 bar, 30 min

Maxicaps | T-Style Maxicaps® | Midicaps® | Capsules

Autoclaving:
Max. 134 °C, 2 bar, 30 min

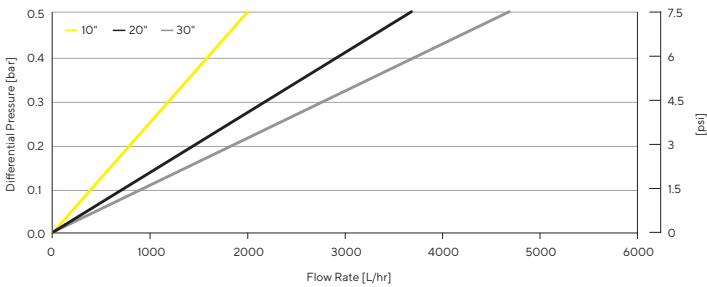
Only cartridges can be in-line steam sterilized

Technical References

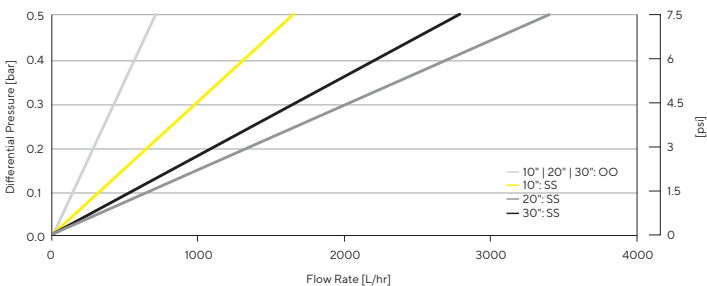
Validation Guide DIR No.: 2980189

Performance

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



Water Flow Rates for Midicaps® of Sartoguard GF 0.2 µm nominally



Ordering Information

Cartridges



548	25	■	■	■			
Retention Rates 58: 0.1 µm (nom.) 07: 0.2 µm (nom.)		Pore Size Filter M: 0.2 µm G: 0.8 µm		Filter Size 1: 0.45 m ² 4.8 ft ² (10") 2: 0.9 m ² 9.6 ft ² (20") 3: 1.35 m ² 14.5 ft ² (30")			

Maxicaps®



548	73	■	■	■	■	■	■	
Retention Rates 58: 0.1 μm (nom.) 07: 0.2 μm (nom.)		Pore Size Filter M: 0.2 μm G: 0.8 μm		Filter Size 1: 0.45 m² 4.8 ft² (10") 2: 0.9 m² 9.6 ft² (20") 3: 1.35 m² 14.5 ft² (30")		Sterilization --: autoclavable	Connector Inlet S: ½" Tri-Clamp 50.5 mm O: ¼" single stepped hose barb F: ¾" tri-clamp 25 mm	Connector Outlet S: ½" Tri-Clamp 50.5 mm O: ¼" single stepped hose barb F: ¾" tri-clamp 25 mm

Midicaps®



548	53	■	■	■	■	■	--	■	
Retention Rates 58: 0.1 μm (nom.) 07: 0.2 μm (nom.)		Pore Size Filter M: 0.2 μm G: 0.8 μm		Filter Size 8: 0.08 m ² 0.9 ft ² 9: 0.15 m ² 1.6 ft ² 0: 0.3 m ² 3.2 ft ²		Sterilization --: autoclavable		Connector Inlet S: 1½" Tri-Clamp 50.5 mm O: ½" single stepped hose barb F: ¾" tri-clamp 25 mm	Packing Size A: box of 4 (size 7, 8, 9) V: box of 2 (size 0)
									Connector Outlet S: 1½" Tri-Clamp 50.5 mm O: ½" single stepped hose barb F: ¾" tri-clamp 25 mm

T-Style Maxicaps®



548	83	■	■	■	--	■	■
Retention Rates 58: 0.1 µm (nom.) 07: 0.2 µm (nom.)		Pore Size Filter M: 0.2 µm G: 0.8 µm		Filter Size 1: 0.45 m ² 4.8 ft ² (10") 2: 0.9 m ² 9.6 ft ² (20") 3: 1.35 m ² 14.5 ft ² (30")		Connector Inlet S: 1½" Tri-Clamp 50.5 mm O: ½" single stepped hose barb Y: 1" single stepped hose barb	Connector Outlet S: 1½" Tri-Clamp 50.5 mm O: ½" single stepped hose barb Y: 1" single stepped hose barb

Capsules



548	13	■	■	4	■	■	■	--	B
Retention Rates 58: 0.1 µm (nom.) 07: 0.2 µm (nom.)		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

Germany

Sartorius Stedim Biotech GmbH
August-Spindler-Strasse 11
37079 Goettingen
Phone +49 551 308 0

USA

Sartorius Stedim North America Inc.
565 Johnson Avenue
Bohemia, NY 11716
Toll-Free +1 800 368 7178

 For further contacts, visit
www.sartorius.com