



sartorius stedim
biotech

MidiCaps® and Mini Cartridges for the biopharmaceutical industry



turning science into solutions

A profile of Sartorius Stedim Biotech

Sartorius Stedim Biotech is a leading provider of cutting-edge equipment and services for the development, quality assurance and production processes of the biopharmaceutical industry. Its integrated solutions covering fermentation, filtration, purification, fluid management and lab technologies are supporting the biopharmaceutical industry around the world to develop and produce drugs safely, timely and economically. For next generation processes, Sartorius Stedim Biotech focuses on single-use technologies and added-value services to meet the rapidly changing technology requirements of the industry it serves. Strongly rooted in the scientific community and closely allied with customers and technology partners, the company is dedicated to its philosophy of "Turning science into solutions".

Headquartered in Aubagne, France, Sartorius Stedim Biotech is listed on the Eurolist of Euronext Paris. With its own manufacturing and sales companies in Europe, North America and Asia, Sartorius Stedim Biotech enjoys a worldwide presence. Its key manufacturing and R&D location is in Germany.



Filtration Technology

Sartorius Stedim Biotech MidiCaps® and Mini Cartridges are especially used for development and clinical production as well as for pilot scale applications. Sartorius Stedim Biotech provides a broad range of different membrane materials as well as depth filter materials to match the multiple application requirements of the biopharmaceutical industry. Featuring multiple connector styles, adaptor types and filter formats, Sartorius Stedim Biotech MidiCaps® and Mini Cartridges can be easily incorporated into any filtration process.

Final Sterilizing Grade Filters

The Sartorius Stedim Biotech product range of Sterilizing Grade Filter elements for liquids consists of 3 different types of hydrophilic membrane filters.

- Featuring ultra low binding Cellulose Acetate membranes, Sartobran® P filters are typically used for filtration of high value pharmaceuticals like coagulation factors, vaccines and preservative containing solutions.
- Sartopore® 2 filters provide highest total throughput performance based on the highly asymmetric PES membrane, assuring lowest filtration costs, e.g. in media filtration.
- Sartolon® filter elements are ideal for filtration for a wide range of solvents and liquids containing solvents.

Prefiltration

Biological solutions often contain heavy loads of particles and other contaminants which prematurely plug 0.2 µm rated and smaller size membrane filters. The use of Sartorius Stedim Biotech prefilters protects downstream Sterilizing Grade Filters effectively and enhances significantly their total throughput performance.

Sartoclean® CA membrane prefilters are used for bioburden reduction in front of final membrane filters assuring highest product yields by lowest unspecific adsorption due the cellulose acetate membrane material. In combination with glass fibre fleeces Sartoclean® GF prefilters add adsorptive power to enhance the clarification effect.

Sartopure® PP 2 polypropylene depth filters are the ideal choice for removal of hard, non deformable particles upstream of final membrane filters to enhance their total throughput performance. Featuring highly adsorptive glass fibre fleeces Sartopure® GF Plus filters are the ideal choice for removal of contaminants like colloids, lipids and protein aggregates (Host Cell Protein). They are used for protection of membrane filters, chromatography columns, crossflow systems and other downstream processing equipment to assure efficient purification steps with highest product yields.



MidiCaps®

MidiCaps® feature an innovative capsule housing design which improves security, filter handling and ease of use. The unique labelling, the new valve design, the broad range of connector styles and filter sizes are key features of MidiCaps®.

Applications

MidiCaps® are available for all filter materials. Therefore, MidiCaps® can be used for a broad range of applications in biopharmaceutical manufacturing and form & filling operations like:

- Sterilising Grade Filtration
- Mycoplasma Retentive Filtration
- Bioburden Reduction
- Prefiltration
- Clarification

Unique Labelling

MidiCaps® feature a comprehensive and easy to read out labelling on the capsule housing including:

- Filter Type
- Order Code | Lot-no. | Piece-no.
- Pore-Size or Retention Rating
- Operating Parameters
- Flow Direction Indication

This labelling allows secure identification of each filter and assures traceability of the filter throughout the whole process. Operator errors and filter mishandling as well as filter mix-ups are eliminated. Thereby MidiCaps® contribute significantly to improve the overall safety of manufacturing processes.

Fluid Containment

The vent design including a double o-ring sealing and an integral hose barb for fluid containment avoid contamination and protect operators in an optimal way. The vent design features a defined open | close position to enhance ease of use.

Flexible Integration

MidiCaps® are available with a broad range of different connector styles and with various filter sizes to allow for an easy integration into any process.



Mini Cartridges

Mini cartridges feature the same construction and materials as all our standard filter elements. They are designed for small scale batch filtration in R&D, pilot scale and production. Mini cartridges are used in stainless steel housings and due to their rigid construction they withstand multiple in-line steam sterilization cycles if required.

Scale-up

Our Sartopore® 2 & Sartobran® P filter elements, for example, are made with the same membranes and materials of construction from the smallest available filter element with 150 cm² | 0.015 ft² to 0.45 m² | 5 ft² up to filter cartridges and MaxiCaps® with 1.8 m² | 18ft² filtration area.

This product selection gives you the opportunity to easily scale-up from R&D laboratory stages to pilot plant and production scale.

ISO 9000:2000 Certified Quality

All Sartorius Stedim Biotech filter elements including MidiCaps® and Mini Cartridges are manufactured according to an ISO 9000:2000 certified Quality Management System. Our manufacturing facilities operate in conformance with cGMP requirements in addition to the ISO standard. Sartorius Stedim Biotech' quality philosophy ensures that our customers receive products and services that meet the strictest quality requirements for reliable operation.

Validation Guides

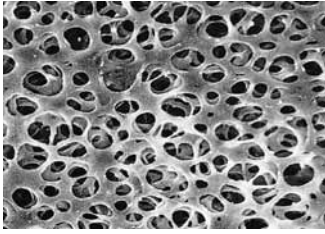
Our entire range of filter elements are supplied with a quality assurance certificate to assist you in the validation of your manufacturing process. Comprehensive product specific validation packages are available for all Sartorius Stedim Biotech filter elements.

Process Validation

Sartorius Stedim Biotech offers a wide range of validation support services to qualify the use of our filter products for your processes. The Sartorius Stedim Biotech validation service has a proven track record in assisting customers in validating their products and achieving regulatory approval.



Membranefilters



Sartobran® P 523...

Description

Sterilizing grade pharmaceutical filter cartridge for low unspecific adsorption

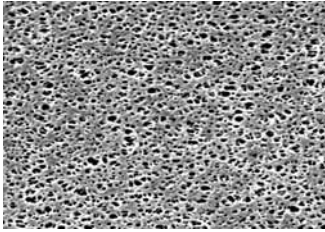
Applications

Sartobran P filters are ideally suited for all applications that require highest product recovery rates like:

- Coagulation Factors, Albumine, IgG
- Bacterial and Viral Vaccines
- MAB's
- Bio-processed Pharmaceuticals
- Diagnostics
- Purified Protein Solutions
- Biological Fluids
- Solutions containing Preservatives

Construction

- Protective polypropylene layer
- Reinforced cellulose acetate membrane
- Reinforced cellulose acetate membrane
- Polypropylene drainage layer
- Polypropylene outer cage, core and end caps
- Silicone O-rings standard – optional EPDM, Viton



Sartopore® 2 544...

Description

Sterilizing grade pharmaceutical filter cartridge with broad chemical compatibility

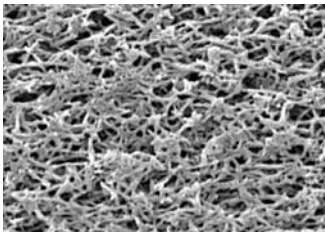
Applications

Typical applications include sterilizing grade filtration of:

- Therapeutics
- Biological Fluids
- Ophthalmics
- SVPs, LVPs
- Antibiotics
- WFI
- Chemicals
- Cleaning and sanitizing agents
- Bulk pharmaceutical products
- Mycoplasma removal

Construction

- Protective polypropylene layer
- Polyethersulfone membrane
- Polyethersulfone membrane
- Polypropylene drainage layer
- Polypropylene outer cage, core and end caps
- Silicone O-rings standard – optional EPDM, Viton
- Silicone O-rings standard – optional EPDM, Viton



Sartolon® 510...

Description

Sterilizing grade pharmaceutical filter cartridge with reinforced Nylon membrane for broad solvent compatibility

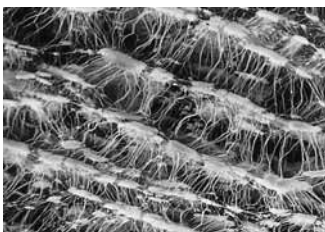
Applications

Featuring a unique hydrophilic nylon membrane, Sartolon® filters are ideally suited for e.g. sterilizing grade filtration of:

- Solvents
- Antibiotics
- Bulk Pharmaceutical Chemicals
- LVP

Construction

- Protective polypropylene layer
- Reinforced Nylon membrane
- Nylon membrane
- Polypropylene drainage layer
- Polypropylene outer cage, core and end caps
- Silicone O-rings standard – optional EPDM, Viton



Sartoflour® GA|LG 518...

Description

Pharmaceutical grade hydrophobic PTFE membrane filter cartridge

Applications

- Sterile venting of tanks
- Sterile air filtration for filling equipment
- Fermentation air filtration
- Sterile filtration of gases
- Bioreactor inlet and outlet streams
- Sterile filtration of aggressive media and solvents (LG)

Construction

- Protective polypropylene layer
- PTFE membrane filter
- Polypropylene drainage layer
- Polypropylene outer cage, core and end caps
- EPDM O-rings standard – optional Viton

MidiCaps® Connectors

Available Pore Sizes	Filtration Area	Construction Codes	MidiCaps® Connectors
0.65 + 0.45 µm	0.015; 0.03; 0.05; 0.1;	15, 18 Mini Cartridges	SS, SO, OO, FF, FO, HH (only Size 7)
0.45 + 0.2 µm	0.2; 0.45 m ² 0.15; 0.3;	53 MidiCaps®	
0.45 + 0.1 µm	0.5; 1; 2; 5 ft ²		



Connector Type S:
1 1/2" sanitary flange

Available Pore Sizes	Filtration Area	Construction Codes	MidiCaps® Connectors
0.8 + 0.45 µm	0.015; 0.03; 0.05; 0.1;	15, 18 Mini Cartridges	SS, SO, OO, FF, FO, HH (only Size 7)
0.45 + 0.2 µm	0.2; 0.45 m ² 0.15; 0.3;	53 MidiCaps®	
0.2 + 0.1 µm	0.5; 1; 2; 5 ft ²		
XLG 0.8 + 0.2 µm	0.021; 0.065; 0.13;		
XLI 0.35 + 0.2 µm	0.26; 0.52 m ² 0.22;		
	0.7; 1.4; 2.8; 5.6 ft ²		



Connector Type F:
3/4" sanitary flange

Available Pore Sizes	Filtration Area	Construction Codes	MidiCaps® Connectors
0.45 + 0.2 µm	0.2 m ² 2 ft ²	15, 18 Mini Cartridges 53 MidiCaps®	SS, SO, OO, FF, FO



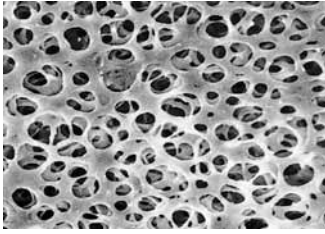
Connector Type O:
1/2" single stepped hose barb

Available Pore Sizes	Filtration Area	Construction Codes	MidiCaps® Connectors
0.45 µm	0.015; 0.03; 0.05; 0.1;	12, 15, 18 Mini	SS, SO, OO, FF, FO, HH (only Size 7)
0.2 µm	0.2 m ² 0.15; 0.3; 0.5;	Cartridges	
0.1 µm	1; 2 ft ²	53 MidiCaps®	



Connector Type H:
1/4" multiple stepped hose barb

Prefilters



Sartoclean® CA 562...

Description

Pharmaceutical grade membrane prefilter cartridge

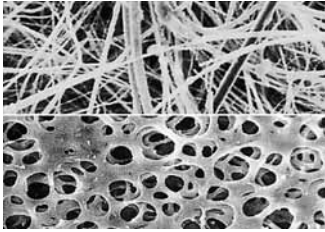
Applications

Featuring ultra low binding cellulose acetate membranes, Sartoclean® CA filters are typically used for membrane prefiltration of:

- Plasma Fractions
- Vaccines
- MAB
- Diagnostics
- Purified Protein Solutions
- Biological Fluids
- Solutions containing Preservatives

Construction

- Protective polypropylene layer
- Reinforced cellulose acetate membrane(s)
- Polypropylene drainage layer
- Polypropylene outer cage, core and end caps
- Silicone O-rings standard – optional EPDM, Viton



Sartoclean® GF 560...

Description

Prefilter cartridge for pharmaceutical liquids containing colloids and high bioburdens

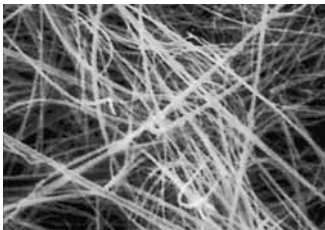
Applications

Ideally suited for the bioburden reduction as well as effective colloid and lipid removal from:

- Fermentation broth
- Serum
- Plasma
- Cell Culture Media
- Colloid and Lipid containing solutions

Construction

- Protective polypropylene layer
- Non-woven glass fiber material
- Reinforced cellulose acetate membrane
- Reinforced cellulose acetate membrane
- Polypropylene outer cage, core and end caps
- Silicone O-rings, standard – optional EPDM, Viton



Sartopure® GF Plus 555...

Description

Highly adsorptive glassfiber prefilter with outstanding total throughput performance

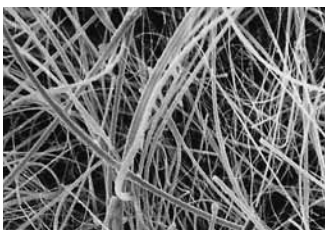
Applications

Sartopure GF Plus adsorptive depth filters are the ideal choice for prefiltration and clarification of:

- Cell Culture fluids after cell harvest
- Fermentation broths
- Serum free or serum containing cell culture media
- Serum
- Highly viscous ophthalmic and LVP solutions
- All media containing lipids and colloids as contaminants

Construction

- Protective polypropylene layer
- Multiple non-woven glass fibre layers with progressively finer retention ratings
- Polypropylene drainage layer
- Polypropylene outer cage, core and endcaps
- Silicone O-rings standard – optional EPDM, Viton



Sartopure® PP2 559...

Description

Particle removing polypropylene depth filter cartridge

Applications

Typical applications are particle removal from various media like:

- Plasma Fractions
- Vaccines
- MAB
- Diagnostics
- Purified Protein Solutions
- Biological Fluids
- Ophthalmics
- Solutions containing Preservatives
- WFI

Construction

- Protective polypropylene layer
- Multiple polypropylene layer with progressively finer retention ratings
- Polypropylene drainage layer
- Polypropylene outer cage, core and end caps
- Silicone O-rings, standard – optional EPDM, Viton
- MidiCaps® Connectors

Mini Cartridge Adapters

Available Pore Sizes	Filtration Area	Construction Codes	MidiCaps® Connectors
3 + 0.8 µm	for single layer	15, 18 Mini Cartridges	SS, SO, OO, FF, FO, HH
0.8 + 0.65 µm	0.08; 0.16; 0.3; 0.6 m ²	53 MidiCaps®	(only Size 7)
0.45 µm	0.8; 1.6; 3; 6 ft ²		
0.2 µm	for double layer		
	0.05; 0.1; 0.2; 0.45 m ²		
	0.5; 1; 2; 4.5 ft ²		



Adapter Type 15

Available Pore Sizes	Filtration Area	Construction Codes	MidiCaps® Connectors
0.8 + 0.65 µm	0.05; 0.1; 0.2 m ²	15, 18 Mini Cartridges	SS, SO, OO, FF, FO, HH
3.0 + 0.8 µm	0.5; 1; 2 ft ²	53 MidiCaps®	(only Size 7)



Adapter Type 18

Available Retention Rates	Filtration Area	Construction Codes	MidiCaps® Connectors
0.65 µm	0.04; 0.08; 0.12 m ²	15, 18 Mini Cartridges	SS, SO, OO, FF, FO, HH
1.2 µm	0.4; 0.8; 1.2 ft ²	53 MidiCaps®	(only Size 7)



Adapter Type 12

Available Retention Rates	Filtration Area	Construction Codes	MidiCaps® Connectors
0.65 µm	0.05; 0.1; 0.2 m ²	15, 18 Mini Cartridges	SS, SO, OO, FF, FO, HH
1.2 µm	0.5; 1; 2 ft ²	53 MidiCaps®	(only Size 7)
3 µm			
5 µm			
8 µm			
20 µm			
50 µm			

Integrity Testing

Filter Integrity Testing

Sartorius Stedim Biotech offers a broad range of filter integrity test solutions – beginning with our stand-alone units of the Sartocheck® family for standard applications up to customized solutions like the WIThin concept and special filter management systems. There are no limits in terms of technical feasibility.

Sartocheck® 3 Plus

The stand-alone integrity tester for standard applications. This unit can be used to perform all established integrity test methods. Due to its paper-based concept the requirements regarding 21 CFR part 11 are not applicable.

Sartocheck® 4 plus

The state-of-the-art integrity tester Sartocheck® 4 plus offers a variety of additional features: An optional barcode scanner can be used for easy and error-free data entry. Moreover, an intelligent, automatic selection of test program after scanning increases the efficacy and safety of filter integrity testing. Short test times, new safety parameters and a unique cleaning function are only some of the key characteristics. And the compliance with 21 CFR Part 11 is a matter of course.

Sartocheck® 4 MultiUnit

Up to four different MultiUnits can be connected to one Sartocheck® 4 plus allowing independent and parallel integrity testing of five filters. This significantly reduces the time required for integrity testing and therefore improves the cost effectiveness.



Filter Management Systems

WITHin Concept

The WITHin concept allows to integrity test the filters inside specific equipment like autoclaves and freeze-dryers without connecting an external integrity tester. The system utilizes the existing hardware and software platforms. The control functions as well as the algorithms are directly integrated into the existing system.

Filter Management System

The concept of the Filter Management System decouples the filter handling procedure from the point-of-use of the filter. The in-place and off-line method saves expensive time and eliminates the risk of integrity test failures before production runs.



Biotech Services

Our capabilities are your key to success.

Source all your needs from one reliable partner for process optimization, customized validation and regulatory support, substantiated by practical training courses and instrument services.

We are aware of our responsibilities toward the success of your business, and take them seriously. That's why we are rapidly deployable and globally available. You can expect the very best in science-driven consulting service, maximum regulatory expertise by our specialists, fast turnaround, on-site support and globally valid standards from Sartorius Stedim Biotech. But don't take our word for it. We invite you to see for yourself. Count on the people who know your industry inside and out: Sartorius Stedim Biotech.



DISCOVER®

Our audit and survey services:

- Compliance audits
- Regulatory inspection readiness
- Plant|Process surveys
- Validation surveys
- Quality system surveys
- Technical studies

INCREASE®

Our optimization services:

- Corrective actions guidance
- Process optimization and development support
- Design review and technology transfer
- Documentation and submittal optimization
- Regulatory guidance

CONFIDENCE®

Our validation services:

- Validation designs
- Pre-approval inspection preparation
- Post-approval change support
- CFR 21 Part 11|GAMP compliance
- Regulatory liaison
- Equipment qualification
- Filter|Cleaning|Process validation
- Risk assessment support
- Grouping support
- Extractables|Leachables testing for filters, fluid management systems and other polymer-based process components like tubing, gaskets, stoppers.

EXPAND®

Our training and seminar services:

- FDA risk-based approach
- Regulatory inspection
- CFR 21 Part 11|GAMP
- Aseptic processing
- Upstream|Downstream processing
- Process validation
- Cell culture|Fermentation
- Sterilization and integrity testing
- Quality control and quality assurance

Explore your possibilities – we continue to lead and innovate in the field of services to increase the added value to the biopharmaceutical and pharmaceutical industry. Visit our website www.sartorius-stedim.com

Ordering Information

MidiCaps® and Filter Capsules Type 150 & 300

Type	Pore Size (µm)	Filtration Area 0.015 m ² 0.15 ft ²	Filtration Area 0.03 m ² 0.3 ft ²	Filtration Area 0.05 m ² 0.5 ft ²	Filtration Area 0.1 m ² 1 ft ²	Filtration Area 0.2 m ² 2 ft ²	Filtration Area 0.45 m ² 4.8 ft ²
Sartobran P	0.45		5231306D500B	5235306D7■■■A	5235306D8■■■A	5235306D9■■■A	5235306D0■■■V
	0.2	5231307H4■■■B	5231307H500B	5235307H7■■■A	5235307H8■■■A	5235307H9■■■A	5235307H0■■■V
Sartopore 2	0.45		5441306G500B	5445306G7■■■A	5445306G8■■■A	5445306G9■■■A	5445306G0■■■V
	0.2	5441307H4■■■B	5441307H500B	5445307H7■■■A	5445307H8■■■A	5445307H9■■■A	5445307H0■■■V
	0.1	5441358K4■■■B	5441358K500B	5445358K7■■■A	5445358K8■■■A	5445358K9■■■A	5445307K0■■■V
Sartolon	0.2		-	-	-	5105307H9■■■A	-
Sartofluor	0.45		-	5185306T7■■■A	5185306T8■■■A	5185306T9■■■A	-
	0.2	5181307T4■■■B	5181307T500B	5185307T7■■■A	5185307T8■■■A	5185307T9■■■A	-
	0.1		-	5185358T7■■■A	5185358T8■■■A	5185358T9■■■A	-
Sartoclean CA	0.8		-	5625304E7■■■A	5625304E8■■■A	5625304E9■■■A	5625304E0■■■V
	0.65		-	5625305G7■■■A	5625305G8■■■A	5625305G9■■■A	5625305G0■■■V
	0.45		-	5625306A7■■■A*	5625306A8■■■A*	5625306A9■■■A*	5625306A0■■■V*
	0.2		-	5625307A7■■■A*	5625307A8■■■A*	5625307A9■■■A*	5625307A0■■■V*
Sartoclean GF	0.8		-	5605304E7■■■A	5605304E8■■■A	5605304E9■■■A	5605304E0■■■V
	0.65		-	5605305G7■■■A	5605305G8■■■A	5605305G9■■■A	5605305G0■■■V
Sartopure PP2	50		5591350P500B	5595350P7■■■A	5595350P8■■■A	5595350P9■■■A	5595350P0■■■V
	20		5591320P500B	5595320P7■■■A	5595320P8■■■A	5595320P9■■■A	5595320P0■■■V
	8		5591301P500B	5595301P7■■■A	5595301P8■■■A	5595301P9■■■A	5595301P0■■■V
	5		5591342P500B	5595342P7■■■A	5595342P8■■■A	5595342P9■■■A	5595342P0■■■V
	3		5591302P500B	5595302P7■■■A	5595302P8■■■A	5595302P9■■■A	5595302P0■■■V
	1.2		5591303P500B	5595303P7■■■A	5595303P8■■■A	5595303P9■■■A	5595303P0■■■V
	0.65		5591305P500B	5595305P7■■■A	5595305P8■■■A	5595305P9■■■A	5595305P0■■■V
Sartopure GF Plus	1.2		-	5555303P7■■■A	5555303P8■■■A	5555303P9■■■A	5555303P0■■■V
	0.65		-	5555305P7■■■A	5555305P8■■■A	5555305P9■■■A	5555305P0■■■V
Type	Pore Size (µm)	Filtration Area 0.021 m ² 0.22 ft ²	Filtration Area 0.065 m ² 0.7 ft ²	Filtration Area 0.13 m ² 1.4 ft ²	Filtration Area 0.26 m ² 2.8 ft ²	Filtration Area 0.52 m ² 5.6 ft ²	
Sartopore 2 XLG	0.2	5441307G4■■■B	5445307G7■■■A	5445307G8■■■A	5445307G9■■■A	5445307G0■■■V	
Sartopore 2XLI	0.2	5441307I4■■■B	5445307I7■■■A	5445307I8■■■A	5445307I9■■■A	5445307I0■■■V	

■■■ Please replace the blanks with the appropriate two-letter combination for the capsule connectors (see order code information).

* Filter area for single layer
0.08; 0.16; 0.3; 0.6 m² | 0.8; 1.6; 3; 6 ft²

Ordering Information

Mini Cartridges

Cartridge Type	Pore Size Retention Rating (µm)	Filtration Area		Filtration Area		Filtration Area	
		0.05 m ² 0.5 ft ²		0.1 m ² 1 ft ²		0.2 m ² 2 ft ²	
Sartobran P	0.45	5231506D7	B	5231506D8	B	5231506D9	B
	0.2	5231507H7	B	5231507H8	B	5231507H9	B
	0.1			5231558H8	B	5231558H9	B
Sartopore 2	0.45	5441506G7	B	5441506G8	B	5441506G9	B
	0.2	5441507H7	B	5441507H8	B	5441507H9	B
	0.1	5441558K7	B	5441558K8	B	5441558K9	B
Sartolon	0.2	-		-		5101507H9	B
Sartofluor	0.45	-		5181506T8	B	5181506T9	B
	0.2	5181507T7	B**	5181507T8	B**	5181507T9	B**
	0.1	5181558T7	B	5181558T8	B	5181558T9	B
Sartoclean CA	0.8	-		5621504E8	B	5621504E9	B
	0.65	-		5621505G8	B	5621505G9	B
	0.45	5621506A7	B*	5621506A8	B*	5621506A9	B*
	0.2	5621507A7	B*	5621507A8	B*	5621507A9	B*
Sartoclean GF	0.8	5601504E7	B	5601504E8	B	5601504E9	B
	0.65	5601505G7	B	5601505G8	B	5601505G9	B
Sartopure PP2	50	-		-		5591550P9	B
	20	-		-		5591520P9	B
	8	-		-		5591501P9	B
	5	5591542P7	B	5591542P8	B	5591542P9	B
	3	5591502P7	B	5591502P8	B	5591502P9	B
	1.2	5591503P7	B	5591503P8	B	5591503P9	B
	0.65	5591505P7	B	5591505P8	B	5591505P9	B

Mini cartridges with a filtration area 0.05 m²|0.5 ft² or 0.1 m²|1 ft² are optionally available with construction code 18.

**Sartofluor Mini cartridges with a 0.2 µm pore size are optionally available with construction code 12.

Order Code Information

Code	Cartridge Type
523	Sartobran P
544	Sartopore 2
510	Sartolon
518	Sartofluor
562	Sartoclean CA
560	Sartclean GF
559	Sartopure PP2
555	Sartopure GF Plus

Code	Construction Mini
15	Bayonet type
18	Double O-Ring
13	150 & 300
53	MidiCaps®

Code	Pore Size Final Filter [µm]
50	50
20	20
01	8
42	5
02	3
03	1.2
04	0.8
05	0.65
06	0.45
07	0.2
58	0.1

Code	Pore Size Pre Filter [µm]
A	No prefilter
P	Only polypropylene layers
T	Only one teflon membrane
E	3 µm
G	0.8 µm
D	0.65 µm
H	0.45 µm
I	0.35 µm
K	0.2 µm

Code	Filtration Area*
4	0.015 m ² 0.15 ft ²
5	0.03 m ² 0.3 ft ²
7	0.05 m ² 0.5 ft ²
8	0.10 m ² 1 ft ²
9	0.20 m ² 2 ft ²
0	0.45 m ² 4.5 ft ²

Code	O-Rings for Cartridges and Capsules
- -	Silicone
- E	EPDM
- V	Viton

Code	Capsule Connectors	Size
N	1/4" NPT Thread	Only Type 150 & 300
S	1/2" Tri-Clamp (sanitary)	Only Type 150
H	1/4" multiple stepped hose barb	MidiCaps® (only Size 7) Type 150 & 300
F	3/4" Tri-Clamp (sanitary)	MidiCaps®
O	1/2" single stepped hose barb	MidiCaps®
S	1 1/2" Tri-Clamp (sanitary)	MidiCaps®

Code	Pack Size
V	Box of 2
A	Box of 4
B	Box of 5

* single layer deviate

Order Code Information



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