



# Sartopure® PP3

## Particle Reduction Filter Elements

### Benefits

- Improve your product quality
- Increase product yield
- Extend life time of downstream equipment
- Reduce filter consumption



### Product Information

The new Sartopure® PP3 prefilter line is the result of decades of experience in prefiltration technologies for Pharmaceutical and Biopharmaceutical applications. This development has led to a filter with an uncompromising combination of highest total throughput and protective abilities. The outstanding filtration ability allows for a significant reduction in filtration area, a reduction in product contact with the filter, and a higher product yield, essentially reducing filter consumption and the overall cost for prefiltration. Sartopure® PP3 has a targeted design of new high performance fleece materials which have much finer fiber structure compared to current available filter fleece and has been optimized for particle removal in product contact applications. The filters increased effective particle retention results in exceptional clarification performance and an improvement in the quality of the filtered product. These characteristics make the Sartopure® PP3 an ideal candidate for particle retention and protection of downstream equipment for all product contact applications.

#### Applications

- Early clarification steps in vaccine production
- Blood and Plasma fractionation
- Protection of downstream equipment in biopharmaceutical production

#### Cost Saving

The new high performance polypropylene fleeces show significantly increased total throughput performance and outstanding protective effectiveness. This allows downsizing of the required filtration area for pre- and final sterilizing grade filtration steps, resulting in significant cost savings.

### Robust processes

The Sartopure® PP3 series provides highest robustness in prefiltration applications based on the unique retention performance of the new fleece materials. They retain particles with highest efficiency even under varying process conditions. This assures secure and reliable operation.

### Broad Compatibility and Low Extractables

Sartopure® PP3 filter elements are completely made from polypropylene. This assures a broad chemical compatibility with a large number of solvents, acids and bases. The all polypropylene construction guarantees a small extractable footprint.

### High Product Yields

The all polypropylene construction of Sartopure® PP3 provides low unspecific binding assuring highest product yields during your filtration process.

### High Flexibility

Sartopure® PP3 filter elements are available with a broad variety of retention ratings from 0.45 µm all the way up to 100 µm making them ideally suited for numerous prefiltration applications.

### Scalability

Consistent and predictable scale-up and down trials can reliably be performed as all Sartopure® PP 3 filter elements of all sizes are produced with the same type of polypropylene depth filter material and identical materials of construction.

### Documentation

Sartopure® PP3 filter elements are designed, developed and manufactured in accordance with a ISO 9001 certified Quality Management System. A Validation Guide and an Extractables Guide are available for compliance with regulatory requirements.

## Technical Data

### Specifications

Materials	
Filter material	Polypropylene fleeces
Support fleece	Polypropylene
Core	Polypropylene
End caps	Polypropylene
Housing	Polypropylene
O-Rings	Silicone

### Retention Rates

0.45 µm, 0.65 µm, 1.2 µm, 3 µm, 5 µm,  
8 µm, 20 µm, 50 µm, 100 µm

### Available Sizes | Filtration Area | Retention Rate

Cartridges and T-Style MaxiCaps®*	
Size 1 (10")	0.4 m <sup>2</sup>   4.3 ft <sup>2</sup>   0.45 µm
	0.45 m <sup>2</sup>   4.8 ft <sup>2</sup>   0.65 µm – 3 µm
	0.65 m <sup>2</sup>   7 ft <sup>2</sup>   5 µm – 100 µm
Size 2 (20")	0.8 m <sup>2</sup>   8.6 ft <sup>2</sup>   0.45 µm
	0.9 m <sup>2</sup>   9.7 ft <sup>2</sup>   0.65 µm – 3 µm
	1.3 m <sup>2</sup>   14 ft <sup>2</sup>   5 µm – 100 µm
Size 3 (30")	1.2 m <sup>2</sup>   12.9 ft <sup>2</sup>   0.45 µm
	1.35 m <sup>2</sup>   14.5 ft <sup>2</sup>   0.65 µm – 3 µm
	1.95 m <sup>2</sup>   21 ft <sup>2</sup>   5 µm – 100 µm*

Mini Cartridges** and MidiCaps®	
Size 7	0.04 m <sup>2</sup>   0.43 ft <sup>2</sup>   0.45 µm
	0.05 m <sup>2</sup>   0.54 ft <sup>2</sup>   0.65 µm – 1.2 µm
	0.065 m <sup>2</sup>   0.7 ft <sup>2</sup>   3 µm – 20 µm
Size 8	0.08 m <sup>2</sup>   0.86 ft <sup>2</sup>   0.45 µm
	0.09 m <sup>2</sup>   0.97 ft <sup>2</sup>   0.65 µm – 1.2 µm
	0.12 m <sup>2</sup>   1.3 ft <sup>2</sup>   3 µm – 20 µm
Size 9	0.13 m <sup>2</sup>   1.4 ft <sup>2</sup>   0.45 µm
	0.15 m <sup>2</sup>   1.6 ft <sup>2</sup>   0.65 µm – 1.2 µm
	0.21 m <sup>2</sup>   2.3 ft <sup>2</sup>   3 µm – 100 µm
Size 0	0.26 m <sup>2</sup>   2.8 ft <sup>2</sup>   0.45 µm
	0.30 m <sup>2</sup>   3.2 ft <sup>2</sup>   0.65 µm – 1.2 µm
	0.42 m <sup>2</sup>   4.5 ft <sup>2</sup>   3 µm – 100 µm

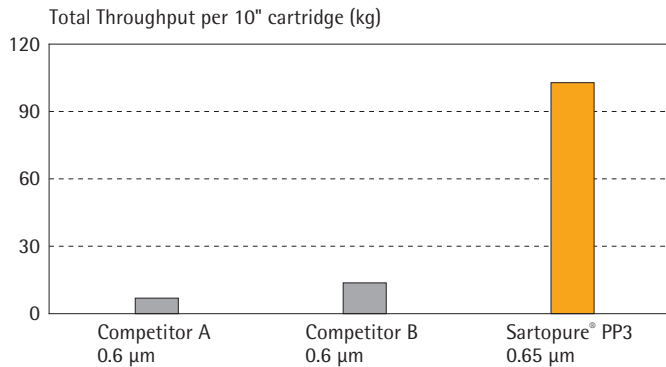
Capsules	
Size 4	0.012 m <sup>2</sup>   0.13 ft <sup>2</sup>   0.45 µm
	0.013 m <sup>2</sup>   0.14 ft <sup>2</sup>   0.65 µm – 1.2 µm
	0.018 m <sup>2</sup>   0.19 ft <sup>2</sup>   3 µm – 20 µm
Size 5	0.024 m <sup>2</sup>   0.26 ft <sup>2</sup>   0.45 µm
	0.026 m <sup>2</sup>   0.28 ft <sup>2</sup>   0.65 µm – 1.2 µm
	0.036 m <sup>2</sup>   0.39 ft <sup>2</sup>   3 µm – 20 µm

\* T-Style MaxiCaps® are available up to 20 µm

\*\* Mini Cartridges are available up to 20 µm

## Standard Test Media 3-fold Concentrated

### Total Throughput Comparison



### Available Adapters

**Cartridges**  
21, 25, 27, 28

**Mini Cartridges**  
15

### Available Connectors

**T-Style MaxiCaps®, MidiCaps®**  
F: Tri-Clamp 25 mm (3/4") (only MidiCaps®)  
S: Tri-Clamp 50 mm (1 1/2")  
O: single stepped hose barb (1/2")

### Capsules

S: Tri-Clamp 25 mm (3/4")  
O: Multiple stepped hose barb (1/4")

### Operating Parameters

Max. allowable differential pressure 5 bar | 72.5 psi at 20°C (Cartridges, MidiCaps®, T-Style MaxiCaps®)  
4 bar | 58 psi at 20°C (Capsules)  
2 bar | 29 psi at 80°C (Cartridges, MidiCaps®, Capsules)  
3 bar | 43.5 psi at 50°C (T-Style MaxiCaps®)

Max. allowable back pressure 2 bar | 29 psi at 20°C (all elements)

## Sterilization

### Cartridges

In-Line Steam Sterilization: 134°C, 20 min. at max differential pressure of 0.5 bar | 7.25 psi  
Autoclaving: 134°C, 2 bar, 30 min

### T-Style MaxiCaps® | MidiCaps®

Autoclaving: 134°C, 2 bar, 30 min

### Capsules

Autoclaving: 134°C, 2 bar, 30 min

## Sterilization Cycles

### Cartridges

In-Line Sterilization: Min. 25  
Autoclaving: Min. 25

### T-Style MaxiCaps®

Autoclaving: Min. 5

### MidiCaps®

Autoclaving: Min. 25

### Capsules

Autoclaving: Min. 25  
T-Style MaxiCaps®, MidiCaps® and Capsules cannot be in-line steam sterilized

## Technical References

Validation Guide  
85037-544-50, SPK5805-e

### Extractables Analysis

EA 0.45 85037-544-51, SPK5806-e  
EA 0.65-100 58037-544-52, SPK5807-e

## Ordering Information

Type	Retention Rate [ $\mu\text{m}$ ]	Pack Size [Pieces]
<b>Cartridges</b>		
505**06Px	0.45	1
505**05Px	0.65	1
505**03Px	1.2	1
505**02Px	3	1
505**42Px	5	1
505**01Px	8	1
505**20Px	20	1
505**50Px	50	1
505**98Px	100	1

<b>T-Style MaxiCaps®</b>		
5058306Px--**	0.45	1
5058305Px--**	0.65	1
5058303Px--**	1.2	1
5058302Px--**	3	1
5058342Px--**	5	1
5058301Px--**	8	1
5058320Px--**	20	1

<b>MidiCaps®</b>		
5055306Px--**--A	0.45	4
5055305Px--**--A	0.65	4
5055303Px--**--A	1.2	4
5055302Px--**--A	3	4
5055342Px--**--A	5	4
5055301Px--**--A	8	4
5055320Px--**--A	20	4

Type	Retention Rate [ $\mu\text{m}$ ]	Pack Size [Pieces]
<b>Capsules</b>		
5051306Px--**--B	0.45	5
5051305Px--**--B	0.65	5
5051303Px--**--B	1.2	5
5051302Px--**--B	3	5
5051342Px--**--B	5	5
5051301Px--**--B	8	5
5051320Px--**--B	20	5

<b>Mini Cartridges</b>		
5051506Px-----B	0.45	5
5051505Px-----B	0.65	5
5051503Px-----B	1.2	5
5051502Px-----B	3	5
5051542Px-----B	5	5
5051501Px-----B	8	5
5051520Px-----B	20	5
5051550Px-----B	50	5
5051598Px-----B	100	5

\*\* Connector Styles (first code letter represents the inlet, the second the outlet)

x Size of T-Style MaxiCaps and MidiCaps (size 0 is only available in packs of two. Then add --V instead of --A to the order code)

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