

# Sartopure® PP3

Particle Reduction Filter  
Elements for food and  
beverage applications



## Product Information

Sartopure® PP3 filter elements are high performance polypropylene fleece based pre-filters that improve your product quality. Advanced fleece materials and composition not only extend service life of your downstream membrane but also reduce filter consumption in total.

The Sartopure® PP3 polypropylene fleece based pre-filter platform is the result of decades of experience in pre-filtration. 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 pre-filtration. Sartopure® PP3 the ideal choice for particle retention, clarification and protection of final membrane for all application in the food and beverage market.

### Robust processes

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

## Respect of your beverage characteristic

The all polypropylene construction of Sartopure® PP3 provides very low adsorption assuring the high respect of your wine, beer aroma and taste.

## 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 pre-filtration applications.

## 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. Polypropylene is a highly chemically resistant material, enabling the Sartopure® PP3 to be chemically regenerated (pH 1–14) The all polypropylene construction guarantees a small extractable footprint.

## Applications

- Clarification and retention of particles and colloids in water
- Clarification of beer downstream of diatomaceous earth filters and/or following PVPP stabilization
- Clarification of fruit juice
- Clarification and fine particles retention of wine and spirits
- Protection of sterile filtration membrane as Aquasart® PS, Aquasart® Plus, Aquasart® Plus XL, Sartocool® and Vinosart® PS...

## Cost Saving

The 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.

## 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.

All the raw materials used to produce the Sartopure® cartridge comply with the European Union Regulation (EC) No. 1935/2004 as well as the Regulation (EU) No. 10/2011 concerning plastic materials and articles intended to come into contact with foodstuffs.

These guidelines for plastics allow the use in food and beverage applications.

All materials used meet the requirements of the FDA.

# Technical Data

Available Sizes		Filtration Area [m <sup>2</sup>   ft <sup>2</sup> ]		
Cartridges   T-Style Maxicaps®   In-line Maxicaps®	Retention Rate	0.45 µm	0.65 µm – 3 µm	5 µm – 100 µm
Size 1		0.4   4.3	0.45   4.8	0.65   7.0
Size 2		0.8   8.6	0.9   9.7	1.3   14
Size 3		1.2   12.9	1.35   14.5	1.95   21
Midicaps®   Mini Cartridges	Retention Rate	0.45 µm	0.65 µm – 3 µm	5 µm – 100 µm
Size 7		0.04   0.43	0.05   0.54	0.065   0.7
Size 8		0.08   0.86	0.09   0.97	0.12   1.3
Size 9		0.13   1.4	0.15   1.6	0.21   2.3
Size 0*		0.26   2.8	0.30   3.2	0.42   4.5
Capsules	Retention Rate	0.45 µm	0.65 µm – 1.2 µm	3 µm – 100 µm
Size 4		0.012   0.13	0.013   0.14	0.018   0.19
Size 5		0.024   0.26	0.026   0.28	0.036   0.39

\*only for Midicaps®

## Max. Allowable Differential Pressure

### Cartridges | Midicaps®

5 bar | 72.5 psi at 20°C

2 bar | 29 psi at 80°C

### T-Style Maxicaps® | In-line Maxicaps®

5 bar | 72.5 psi at 20°C

3 bar | 43.5 psi at 50°C

### Capsules

4 bar | 58 psi at 20°C

2 bar | 29 psi at 80°C

## Max. Allowable Back Pressure

2 bar | 29 psi at 20°C

(for all elements)

## Max. Operating Pressure

### Cartridges | T-Style Maxicaps® | In-line Maxicaps® |

### Midicaps® | Mini Cartridges

5 bar | 72.5 psi at 20°C

### Capsules

4 bar | 58 psi at 20°C

## Materials

### Filter Membrane

Polypropylene fleece

### Support Fleece

Polypropylene

### Core

Polypropylene

### End Caps

Polypropylene

### Housing

Polypropylene

### O-Rings

Silicone (optional EPDM or Fluoroelastomer)

## Available Retention Rates

0.45 µm, 0.65 µm, 1.2 µm, 3 µm, 5 µm,

8 µm, 20 µm, 50 µm, 100 µm

## 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

## 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
- USP Plastic Class VI Test
- Non fiber releasing according to 21 CFR

## Sterilization

### Cartridges

- In-Line Steam Sterilization

134 °C, 20 min. at max differential pressure of 0.5 bar | 7.25 psi

Min. 25 Sterilization Cycles

or

- Autoclaving

134°C, 2 bar, 30 min

Min. 25 Sterilization Cycles

- Other sterilization cycles

In-line steam sterilization 110°C, 30 minutes, ΔP max 0.5 bar

In-line hot water sterilization 85 – 95°C, 30 min, ΔP max 0.5 bar

In-line sterilization: minimum 100 cycles"

### T-Style Maxicaps® | In-line Maxicaps® | Midicaps® | Capsules

- Autoclaving

134°C, 2 bar, 30 min

Min. 5 Sterilization Cycles (T- Style Maxicaps® | In-line Maxicaps®)

Min. 25 Sterilization Cycles (Midicaps® | Capsules)

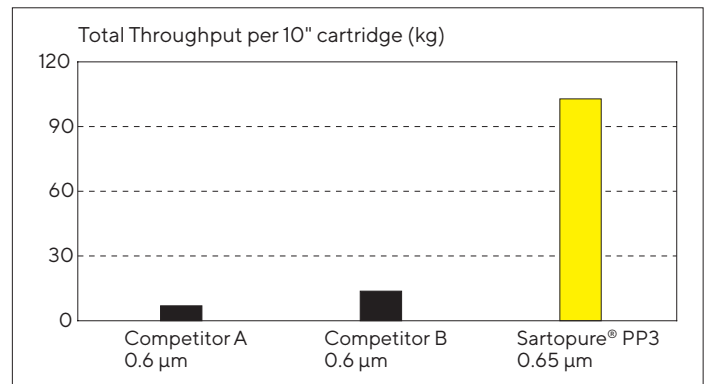
Note: T-Style Maxicaps®, In-line Maxicaps®, Midicaps® and

Capsules cannot be in-line steam sterilized

## Performance

### Standard Test Media 3-fold Concentrated

### Total Throughput Comparison



# Ordering Information



## Cartridge

505 ■ ■ P ■

### Filter Design

- 21: Double open end cartridge with flat gasket
- 25: 2 Flange Bayonet adapter with 226 double o-ring
- 27: Bayonet adapter with 222 double o-ring
- 28: 3 Flange Bayonet adapter with 222 double o-ring

### Pore Size

- 06: 0.45  $\mu\text{m}$
- 05: 0.65  $\mu\text{m}$
- 03: 1.2  $\mu\text{m}$
- 02: 3  $\mu\text{m}$
- 42: 5  $\mu\text{m}$
- 01: 8  $\mu\text{m}$
- 20: 20  $\mu\text{m}$
- 50: 50  $\mu\text{m}$
- 98: 100  $\mu\text{m}$

### Filter Size

- 1: 0.4 m<sup>2</sup> | 4.3 ft<sup>2</sup> (10")
- 2: 0.8 m<sup>2</sup> | 8.6 ft<sup>2</sup> (20")
- 3: 1.2 m<sup>2</sup> | 12.9 ft<sup>2</sup> (30")
- 1: 0.45 m<sup>2</sup> | 4.8 ft<sup>2</sup> (10")
- 2: 0.9 m<sup>2</sup> | 9.7 ft<sup>2</sup> (20")
- 3: 1.35 m<sup>2</sup> | 14.5 ft<sup>2</sup> (30")
- 1: 0.65 m<sup>2</sup> | 7 ft<sup>2</sup> (10")
- 2: 1.3 m<sup>2</sup> | 14 ft<sup>2</sup> (20")
- 3: 1.95 m<sup>2</sup> | 21 ft<sup>2</sup> (30")



## T-Style Maxicaps® | In-line Maxicaps®

505 ■ ■ P ■ -- ■ ■

### Filter Design

- 73: In-line Maxicaps®
- 83: T-Style Maxicaps®

### Pore Size

- 06: 0.45  $\mu\text{m}$
- 05: 0.65  $\mu\text{m}$
- 03: 1.2  $\mu\text{m}$
- 02: 3  $\mu\text{m}$
- 42: 5  $\mu\text{m}$
- 01: 8  $\mu\text{m}$
- 20: 20  $\mu\text{m}$
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- 98: 100  $\mu\text{m}$

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- 2: 1.3 m<sup>2</sup> | 14 ft<sup>2</sup> (20")
- 3: 1.95 m<sup>2</sup> | 21 ft<sup>2</sup> (30")

### 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



## Midicaps®

505 53 ■ P ■ -- ■ ■ -- ■

### Pore Size

- 06: 0.45  $\mu\text{m}$
- 05: 0.65  $\mu\text{m}$
- 03: 1.2  $\mu\text{m}$
- 02: 3  $\mu\text{m}$
- 42: 5  $\mu\text{m}$
- 01: 8  $\mu\text{m}$
- 20: 20  $\mu\text{m}$
- 50: 50  $\mu\text{m}$
- 98: 100  $\mu\text{m}$

### Filter Size

- 7: 0.04 m<sup>2</sup> | 0.43 ft<sup>2</sup>
- 8: 0.08 m<sup>2</sup> | 0.86 ft<sup>2</sup>
- 9: 0.13 m<sup>2</sup> | 1.4 ft<sup>2</sup>
- 0: 0.26 m<sup>2</sup> | 1.8 ft<sup>2</sup>
- 7: 0.05 m<sup>2</sup> | 0.54 ft<sup>2</sup>
- 8: 0.09 m<sup>2</sup> | 0.97 ft<sup>2</sup>
- 9: 0.15 m<sup>2</sup> | 1.61 ft<sup>2</sup>
- 0: 0.30 m<sup>2</sup> | 3.23 ft<sup>2</sup>
- 7: 0.65 m<sup>2</sup> | 0.7 ft<sup>2</sup>
- 8: 0.12 m<sup>2</sup> | 1.3 ft<sup>2</sup>
- 9: 0.21 m<sup>2</sup> | 2.26 ft<sup>2</sup>
- 0: 0.42 m<sup>2</sup> | 4.52 ft<sup>2</sup>

### Connector Inlet

- S: 1½" Tri-Clamp 50 mm
- O: ½" single stepped hose barb

### Connector Outlet

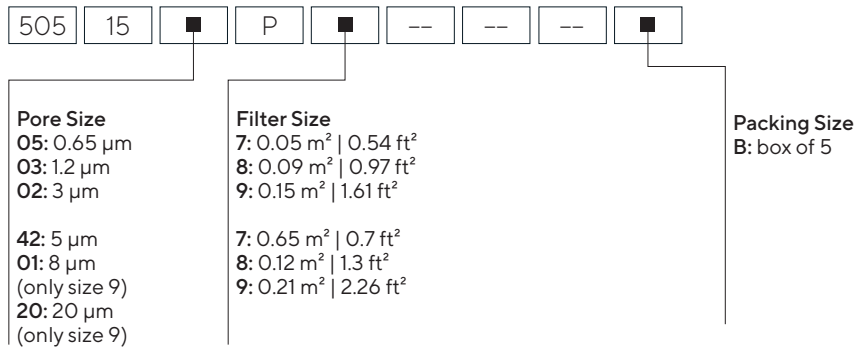
- S: 1½" Tri-Clamp 50 mm
- O: ½" single stepped hose barb

### Packing Size

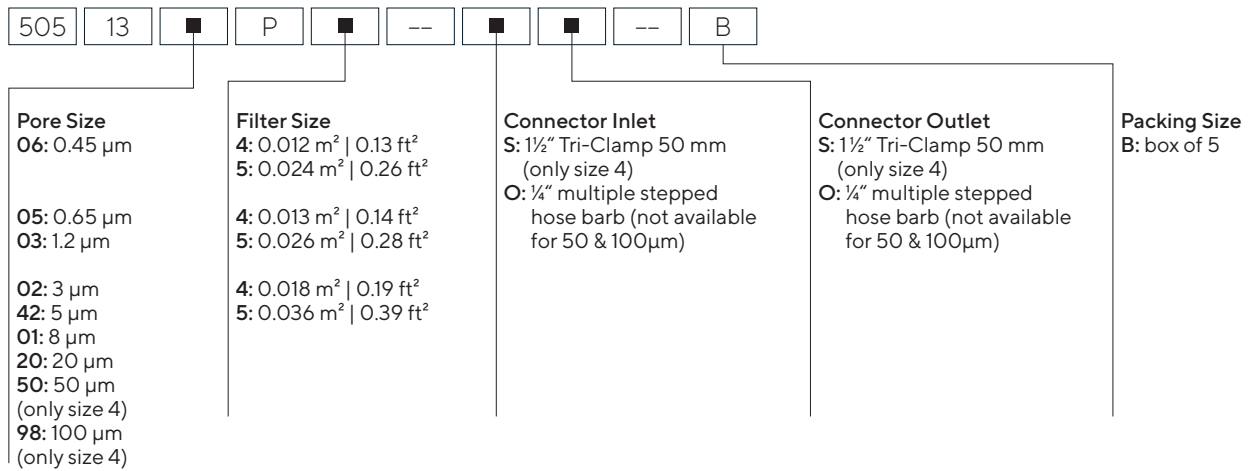
- A: box of 4 (size 7,8,9)
- V: box of 2 (size 0)



### Mini Cartridge



### Capsules




Check the availability of your desired configuration with your Sartorius sales representative or online at [www.sartorius.com](http://www.sartorius.com)

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