

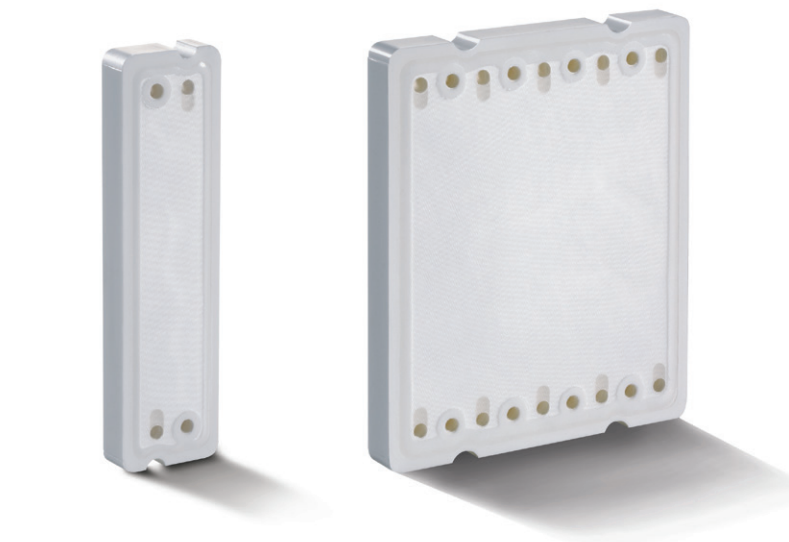
Polyethersulfone Microfiltration Cassettes

Cell Removal and
Mycoplasma Reduction

Description

The Polyethersulfone Membrane

The polyethersulfone membrane (PESU) is a membrane polymer that is well established in the biotechnological and pharmaceutical industries. The PESU membrane is a stable polymer that features a broad pH and temperature range. Membrane regeneration, storage and depyrogenation can be accomplished by using NaOH even at elevated temperatures. Because of these features, the PESU membrane is ideally suited for biotechnological applications.



White Silicone

PESU cassettes are available in 0.1 μm . Polyethersulfone membranes are designed for applications in the biotechnological and pharmaceutical industries.

They can be used to remove the following cells from liquids:

- mammalian cells
- clostridia
- yeasts
- salmonella
- mycoplasma reduction

Product Profile

Membrane retention is unaffected by repeated re-use.

Feature	Benefits
Low adsorption	Minimal loss of proteins
Low protein-binding	High product yield
Wide pH and a wide variety of temperature range	Chemicals can be used for the removal of foulants
High flow rates	Economical filtration runs
Self sealing cassette	No gaskets needed
Silicone sealing compound	No glue
Enlarged inlet and outlet hole	Lower pressure drop

Technical Data

Specifications

Materials of Construction	
Membrane	Polyethersulfone
Gaskets	PVDF
Spacer	Polypropylene
Sealing compound	Silicone white

Pore Size | Retention Rate

PESU microfiltration cassettes are available in 0.1 µm pore size.

Available Sizes

Sartorius crossflow cassettes are available in standard cassette size for pilot- |production scale and in Sartocon® Slice format for reduced volume handling.

Available Filter Holder

Sartorius crossflow cassettes are designed for Sartorius filter holders like Sartocon® Slice (0.1 m² cassettes only), Sartocon®, Sartocon® 2 Plus, and different Sartoflow® holder.

Filtration Area

Filter area Sartocon® Cassette 0.6 m²

Filter area Sartocon® Slice Cassette 0.1 m²

Operating Parameters

Feed pressure, P _{in}	58 psi 4 bar maximum
Operating temperature	50°C maximum
pH stability	1-14
rates at P _{in} = 15 psi 1 bar	15 ml air/min for 0.6 m ² filter area 5 ml air/min for 0.1 m ² filter area
Cleaning	NaOH, 1M, max. 40°C
Disinfection	NaOH, 1 M, max. 50°C, 30 min
Storage	NaOH, 0.1 M

Thermal Sterilization

t.b.d.

Regulatory Compliance

All materials have passed the USP Biological Test. The filtrate meets or exceeds the currently valid USP and EP for sterile Water for Injection, with respect to particulate matter, extractable substances oxidizable substances, pH dependent maximum conductivity, Ammonia, Chloride, Sulfate, Calcium and Bacteria Endotoxins.

Quality Control

Each filter cassette is individually assigned a serial number, integrity tested and certified. It complies with cGMP requirements for non-fiber-releasing filters and is filed under the Drug Master File Number DMF 5967 by the Food and Drug Administration, Washington, DC. Validation information is available upon request.

If you use holding devices from other suppliers, please contact our Applications Department. A different torque might be needed due to specific variations in design. For further assistance, please contact your local Sartorius Stedim Biotech field engineer or our Goettingen- based Applications Department in Germany.

Technical References

Validation Guide

Publication No.: SPC5705-e

Directions for Use (Sartocon® Cassettes and Sartocon® Slice Cassettes)

Average Dynamic Water Flux

Permeate* 1450 l/h/m²

* Feed pressure, Pin = 29 psi | 2.0 bar; retentate pressure, Pout = 7 psi | 0.5 bar

Protein Retention PESU

Substance	Approx. Mol. Wt.	1 kD [%]	5 kD [%]	8 kD [%]	10 kD [%]	PESU _{max} kD [%]	30 kD [%]	50 kD [%]	100 kD [%]	300 kD [%]
Vitamin B12	1,200	>70	50-80	-	-	-	-	-	-	-
Cytocrome C	12,400	-	-	≥99	>95	-	60-90	-	-	-
Albumin	67,000	-	-	-	-	>99.9	-	>95	>80	-
γ-Globulin	169,000	-	-	-	-	-	-	>99	≥98	>70
Dextran	2,000,000	-	-	-	-	-	-	-	-	>95

Retention Coefficient

Marker	Retention (static conditions)
Mycoplasmen LR	LRV ≥ 7
Brevundimonas diminuta LR	LRV ≥ 7

Order Information

Available types and order numbers


Type	Filter area	Pore size	Order No.
Sartocon® Cassettes	0.6 m ²	0.1 μm	302 154 58 06 W--SW
Sartocon® Slice Cassettes	0.1 m ²	0.1 μm	305 154 58 01 W--SW

Germany

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