

Microfiltration Cassettes

The Polypropylene Membrane

The Polypropylene membrane is a stable polymer that features a broad pH and temperature range. Polypropylene wide temperature range makes it possible to sterilize the membrane by either steam or autoclaving. Membrane regeneration, storage and depyrogenation can be accomplished by using NaOH even at elevated temperatures. Because of these features, Polypropylene is ideal for biological applications. Polypropylene cassettes are available in 0.2 μm and 0.1 μm .

Product Profile

Polypropylene can withstand in-line steam sterilization without any loss of integrity or changes in membrane retention. Membrane retention is unaffected by repeated re-use.

Quality Control

Each filter cassette is individually assigned a serial number, integrity tested and certified.

Applications

Polypropylene membranes are designed for use in the biotechnological and pharmaceutical industries. They can be used to remove the following from liquids:

- mammalian cells
- clostridia
- yeasts
- salmonella

Validation

All materials have passed the USP 23 Class VI Plastics Test. The filtrate meets or exceeds USP and EP requirements for Sterile Water for Injection with respect to total solids, oxidizable substances, particulate matter, ammonia, chloride, nitrate, sulfate and heavy metals. 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.

Sartocon Cassette



If you have holding devices from other suppliers, please contact our Application Department. A different torque might be needed due to specific variations in design.

For further assistance, contact your local Sartorius field engineer or our Goettingen based Applications Department in Germany.

Feature	Benefits
Non-protein binding	High product yield
High flow rates	Economical filtrations
Steam stable polymer	Withstands repeated steam-sterilization cycles
Self sealing cassette	No gaskets needed
Silicone sealing compound	No glue
Enlarged inlet and outlet holes	Lower pressure drop

Technical Specifications

Pore Size:	0.2 µm, 0.1 µm	
Surface area:	0.6 m ²	
Feed pressure, P _{in} :	58 psi (4 bar) maximum	
Operating temperature:	50° C maximum	
pH stability:	1–14	
Air diffusion rates at P _{in} = 15 psi (bar):	15 ml air/min.	
Sterilization:	121° C, 30 min., steaming 121° C, 110 min., autoclaving	
Cleaning:	Sodium hydroxide, 1 M DIVOS 124L, (2–4%),	max. 40° C max. 50° C
Disinfection:	NaOH, 1 M, max. 50° C, 30 min	
Storage:	NaOH, 0.1 M	

Examples of Flux for Water

	0.2 µm	0.1 µm
Permeate*	1000 l/h/m ²	900 l/h/m ²

* (Feed pressure, P_{in} = 29 psi (2.0 bar);
retentate pressure, P_{out} = 7 psi (0.5 bar))

Retention Coefficient

Marker:	Retention
Bacteria	> 99%
Mammalian cells	> 99%
Lipids	< 3%
IgG	< 2%
IgM	< 2%
Albumin	< 1%

Materials of Construction

Membrane	Polypropylene
Gaskets	PVDF
Spacer	Polypropylene
Sealing compound	Silicone

Available Types and Order Numbers

Pore Size	Sartocon cassettes
0.2 µm	302 175 07 06 W-SG
0.1 µm	302 175 58 06 W-SG

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