Supor® EKV Sterilizing-grade Filter Cartridges

Optimized for Filtration of Biological Fluids

Supor EKV polyethersulfone membrane cartridges are validated, 0.2 µm sterilizing-grade filters with a unique combination of Pall **Ultipleat** filter construction and optimized built-in prefiltration to give longer filter life and lower filtration costs. The filters are suitable for sterile filtration of a wide range of fluids including buffers, biological fluids, tissue culture media, ophthalmic products and many others. The low protein and preservative binding of the **Supor** polyethersulfone membrane also ensures maximum transmission of active ingredients.

Features and Benefits

- Hydrophilic polyethersulfone membrane for low adsorption and wide chemical compatibility
- Easy to wet for a reliable integrity test
- Patented **Ultipleat** filter construction for high-area and good flow rates
- Built-in, Mach*V* asymmetric prefilter layer for long-life and low filtration costs
- High-strength construction tolerates up to 1 bard (14.5 psid) differential pressure during steam-in-place sterilization
- High-strength design allows for multiple autoclave cycles and extended use

High Quality Standards

Forward Flow value correlated with sterile removal of *Brevundimonas diminuta* (ATCC 19146) at $10^7/cm^2$.

A comprehensive validation guide is available upon request.

Note: *These filters are also available in* ***Kleenpak*** *Nova capsule format.*

Every filter is:

- Integrity-tested during manufacture
- Identified by a lot number and a unique serial number for complete traceability of manufacturing history and for user's traceability system
- Supplied with a certificate of test confirming the quality standards and quality control tests performed by Pall
- Manufactured under a Quality Management System certified to ISO 9000

Quality and Bio-Safety

Biological Tests

- Meets USP Biological Reactivity Test, in vivo, in accordance with USP Class VI-121 °C Plastics

Effluent Quality Tests*

- Meets Cleanliness per USP Particulate Matter in Injections
- Non-Fiber-Releasing
- Non-Pyrogenic per USP Bacterial Endotoxins (< 0.25 EU/mL)
- Meets Total Organic Carbon and Water Conductivity per USP Purified Water, pH per USP Sterile Purified Water

** Per lot sample soak or rinse-up flush aliquots.*

A comprehensive validation guide is available upon request.

Supor EKV Sterilizing-grade Filter Cartridges

Technical Specifications

Materials of Construction

Membranes	Hydrophilic Polyethersulfone (PES)
Support and Drainage	Polypropylene
Core and End Caps	Polypropylene
Cage	Polypropylene with TiO_2 (white-colored)
Internal Adapter Support Ring	Stainless steel
O-rings	Silicone elastomer
Sealing Technology	Thermal bonding without adhesives

Operating Parameters[1]

Maximum Differential Pressure (Forward Direction)	5.5 bar (80 psi) @ 40 °C (104 °F) 3.0 bar (43.5 psi) @ 80 °C (176 °F)
Maximum Differential Pressure (Reverse Direction)	2.0 bar (29 psi) @ 40 °C (104 °F)

[1] In compatible fluids which do not soften, swell, or adversely affect the filter or its materials of construction.

Sterilization[2]

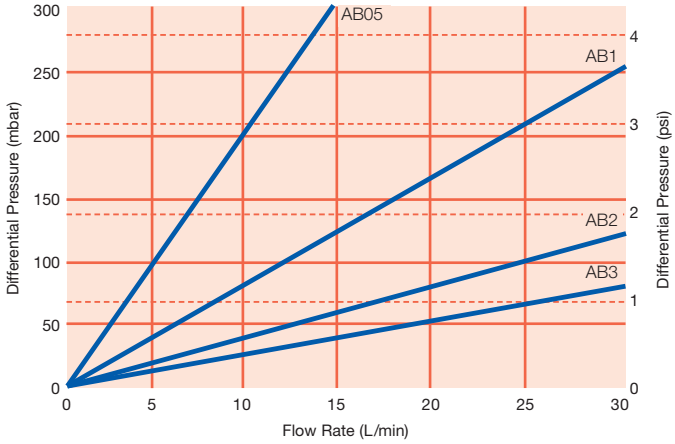
Autoclave	30 x 60 minutes cycles at 125 °C (261 °F) - slow exhaust
In Situ Steam	30 x 60 minutes cycles at 125 °C (261 °F) 5 x 60 minutes cycles at 142 °C (287 °F)

[2] Contact Pall for confirmation of extended sterilization conditions
Maximum differential pressure during steam sterilization is 1 bar (14.5 psi) in forward direction for the 10 in. and 300 mbar (4.5 psi) for the 5 in. cartridges. Filter must be fully wetted for sterilization.

Nominal Dimensions

Lengths	10 in. (254 mm), 20 in. (508 mm), 30 in. (762 mm), 40 in. (1016 mm)
Diameter	70 mm (2.75 in.)

Typical Liquid Flow Rate[3]



[3] Typical initial clean media ΔP 10 in. (254 mm) element; water at 20 °C (68 °F); viscosity 1 cP. For assistance in filter assembly sizing and housing selection, contact your local Pall representative.

Typical Extractables[4] per 10 in. (254 mm) Element

< 25 mg in water at 20 °C (68 °F) after 4 hours extraction

[4] Tested on elements without pre-flushing

Integrity Test Values for 10 in. (254 mm) Filter at 20 °C (68 °F)

Maximum Allowable Forward Flow (Air Test Gas)	Water wet ≤ 17 mL/min at 2760 mbar (40 psi)

Contact Pall for multi-element integrity test values and recommended test procedures.

Typical Effective Filtration Area[5]

0.6 m^2 (6.5 ft^2) per 10 in. (254 mm) module

0.26 m^2 (2.8 ft^2) per 5 in. (125 mm) module

[5] 5 in. (125 mm) filters are standard pleated.

Ordering Information

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Code	Nominal Length
05	5 in. (125 mm)
1	10 in. (254 mm)
2	20 in. (508 mm)
3	30 in. (762 mm)
4	40 in. (1016 mm)

Code	Removal Rating
EKV	0.2 µm sterilizing-grade

Code	Cartridge Style
2	Double 226 O-ring bayonet lock, without fin
7	Double 226 O-ring bayonet lock and fin end

Code	Filter Grade
P	Pharmaceutical*

* Pall pharmaceutical-grade filters are designed for use in conformance with CGMP in Manufacturing, Processing, Packing or Holding of Drugs (21CFR210) and CGMP for finished Pharmaceuticals (21CFR211.72) including batch release certificate and full traceability.

Code	O-ring Material
H4	Silicone elastomer

Other materials available on request.