



Kleenpak™ Capsules with Supor® EKV Membrane

Description

Pall Supor® EKV filters are validated sterilizing grade membranes for the most cost effective filtration of a wide range of liquids such as buffers, tissue culture media, and others. The incorporated PES membrane demonstrates very high compatibility over the whole pH range plus very low protein binding to ensure the maximum transmission of the [active ingredients](#).

Pall Kleenpak™ capsules are rugged and compact filter capsules available with a broad range of filter media and in 4 different sized formats designed for a variety of small to large scale pharmaceutical manufacturing applications with volumes of 30 L to 1000 L.

Key Features and Benefits

- Encapsulated format for higher flexibility, minimized cleaning and low installation costs
- Minimal hold up volume
- Hydrophilic polyethersulfone membrane for low adsorption and wide chemical compatibility
- Good wettability for a reliable integrity test
- Patented Ultipleat® technology for high-area and good flow rates
- Built-in, MachV 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

Quality Standards

- Manufactured for use in conformance with cGMP
- 100% integrity tested
- ISO 9000 Certified Quality System
- Meets USP Biological Reactivity Test, in vivo, for Class VI-121 °C Plastics
- Every filter tested during manufacture.
- Test correlated to microbial retention
- Certificate of Test provided includes:
 - Fabrication Integrity
 - Bacterial Retention
 - Materials of constructions
 - Effluent quality for cleanliness, TOC and Water Conductivity, pH and Pyrogens

Specifications

Materials of Construction

Filter Membrane	Hydrophilic PES
Support/Drainage	Polypropylene
End Cap, Core and Cage	Polypropylene
Capsule Shell	Polypropylene
Sealing Technology	Thermal bonding without adhesives

Operating Parameters⁽¹⁾

Maximum Temperature	40 °C
Maximum Operating Pressure	5.2 bar (75 psi) at 20 °C 4.0 bar (58 psi) at 40 °C
Maximum Differential Pressure	4.0 bar (58 psi) at 40 °C

⁽¹⁾ In compatible fluids which do not soften, swell or adversely affect the filter or its materials of construction

Sterilization⁽²⁾

Autoclave	5 x 60 minutes at 125 °C, slow exhaust
Gamma Irradiation	Maximum of 50 kGy

⁽²⁾ Pre-sterilized Kleenpak capsules must not be re-sterilized
Kleenpak capsules must not be sterilized in-situ by passing steam under pressure
Water wet Supor EKV capsules prior to steaming to retain full water wettability for integrity testing

Typical Extractables in Water at 20 °C

KA1 / KA2	< 5 mg per capsule
KA3	< 10 mg per capsule

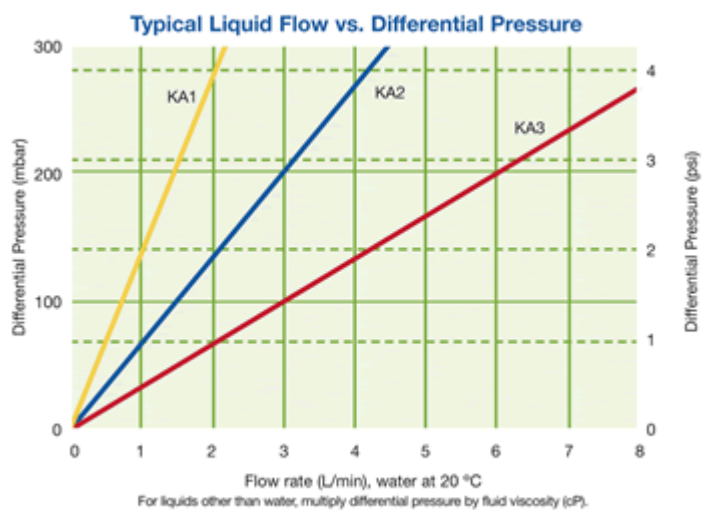
Nominal Dimensions

	KA1	KA2	KA3
Diameter incl. Valves	94 mm (3.7 in.)	94 mm (3.7 in.)	105 mm (4.1 in.)
Length - Code 1	117 mm (4.6 in.)	157 mm (6.2 in.)	174 mm (6.8 in.)
Length - Code 6	157 mm (6.2 in.)	197 mm (7.7 in.)	210 mm (8.3 in.)
Length - Code 16	137 mm (5.4 in.)	177 mm (7.0 in.)	192 mm (7.6 in.)

Nominal Effective Filter Area (EFA)

KA1	375 cm ² (0.4 ft ²)
KA2	750 cm ² (0.8 ft ²)
KA3	1500 cm ² (1.6 ft ²)

Flow Characteristics



Ordering Information

Part Number:		KA	<input type="text"/>	EKVP	<input type="text"/>	<input type="text"/>	
		Code	Code	Inlet/Outlet Connections	Code	Shipping Format	
		1	1	1½ in. sanitary flange	G	Non-sterile Gamma irradiable/ autoclavable	
		2	6	½ in. (13 mm) single hose barb			
		3	16	1½ in. sanitary flange inlet and ½ in. (13 mm) single hose barb outlet	S	Pre-sterilized using gamma irradiation (maximum 25 kGy)	

Contact Information

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This information is accurate as of the revision date indicated.