Life Sciences

USD3270

Mini Kleenpak™ Filter Capsules with Supor® EX Grade ECV Filter Media

High capacity, high flow rate sterilizing grade capsules for process development and small scale GMP manufacture

Supor EX grade ECV filters incorporate high capacity, high flow rate 0.2 µm sterilizing grade filter media validated for the retention of *Brevundamonas diminuta* (ATCC 19146) at a challenge level of 10^7 colony forming units (CFU) per cm^2 membrane.

A unique polyethersulfone (PES) membrane pairing ensures rapid filtration of cell harvest material, process intermediates, growth media, buffers and final bulk biological process fluids. Supor EX grade ECV filter media also delivers outstanding efficiency with viscous fluids incorporating hyaluronic acid, carboxymethyl cellulose (CMC), or hydroxypropyl cellulose (HPC).

The Mini Kleenpak capsules are the smallest capsule filters in the Supor ECV range to utilize a pleated membrane, and are suitable for filtration of fluid volumes of 2 L to 50 L in process development and in pilot and manufacturing scale operations.

*Filtration. Separation. Solution.*SM

Features and Benefits

Feature	Benefit
Minimal hold-up volume	High yield for low volume production
Small scale pleated filter capsule	Ideal for scaling trials
Hydrophilic PES membrane	Low adsorptions and wide chemical compatibility
Built-in asymmetric prefilter layer	Long-life and low filtration costs

Quality Standards

Manufactured for use in conformance with cGMP	
ISO 9000 Certified Quality System	
Meets USP<88> Biological Reactivity Test, *In Vivo*, for Class VI-121 °C Plastics	
Every filter element integrity tested during manufacture	
Certificate of test	Fabrication integrity Bacterial retention Compliance with USP standards for effluent cleanliness TOC Water conductivity pH and pyrogens

Specifications

Materials of Construction

Membrane	Hydrophilic polyethersulfone (PES) membrane
Support and Drainage Layers	Polypropylene
Capsule Shell	Polypropylene
Filling Bell	Polycarbonate
Sealing Technology	Thermal bonding without adhesives

Operating Parameters[1]

Maximum Operating Temperature	40 °C
Maximum Operating Pressure	4.1 bar (60 psi) at 40 °C
Maximum Differential Pressure	4.1 bar (60 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	3 x 60-minute cycles at 125 °C
Gamma Irradiation	Maximum of 50 kGy

(2) Pre-sterilized Mini Kleenpak capsules must not be re-sterilized. Mini Kleenpak capsules must not be sterilized in-situ by passing steam under pressure. Water wet filter capsules with Supor ECV filter media prior to autoclave sterilization to retain full water wettability for integrity testing.

Typical Extractables[3]

Water at 20 °C	<5 mg / capsule

(3) After irradiation or autoclave sterilization

Nominal Effective Filter Area (EFA)

220 cm^2 (0.24 ft^2)

Typical Water Flow Performance

460 mL/min at 100 mbar differential pressure at 20 °C

Nominal Dimensions

Maximum Diameter Including Valves	53 mm (2.1 in.)
Code 2 Length Inlet and Outlet Connections	 105 mm (4.1 in.) 6 – 13 mm (¼ – ½ in.) hosebarb
Code 8 Length Inlet and Outlet Connections	 73 mm (2.9 in.) 13 – 19 mm (½ – ¾ in.) sanitary flange

Ordering Information

Part Number	Description	Pkg
KA02ECVP2G	Mini Kleenpak capsule with Supor EX grade ECV membrane 6 – 13 mm (¼ – ½ in.) hosebarb inlet and outlet connections. Supplied non-sterile.	3/pkg
KA02ECVP2S	Mini Kleenpak capsule with Supor EX grade ECV membrane 6 – 13 mm (¼ – ½ in.) hosebarb inlet and outlet connections. Supplied sterile.	3/pkg
KA02ECVP8G	Mini Kleenpak capsule with Supor EX grade ECV membrane 13 – 19 mm (½ – ¾ in.) sanitary flange. Supplied non-sterile.	3/pkg
KA02ECVP8S	Mini Kleenpak capsule with Supor EX grade ECV membrane 13 – 19 mm (½ – ¾ in.) sanitary flange. Supplied sterile	3/pkg

PALL Life Sciences

Corporate Headquarters
Port Washington, NY, USA
+1.800.717.7255 toll free (USA)
+1.516.484.5400 phone
biopharm@pall.com e-mail

European Headquarters
Fribourg, Switzerland
+41 (0)26 350 53 00 phone
LifeSciences.EU@pall.com e-mail

Asia-Pacific Headquarters
Singapore
+65 6389 6500 phone
sgcustomerservice@pall.com e-mail

Filtration. Separation. Solution.SM

Visit us on the Web at www.pall.com/biopharm
E-mail us at biopharm@pall.com

International Offices
Pall Corporation has offices and plants throughout the world in: Argentina, Australia, Austria, Belgium, Brazil, Canada, China, France, Germany, India, Indonesia, Ireland, Italy, Japan, Korea, Malaysia, New Zealand, Norway, Philippines, Poland, Russia, Singapore, South Africa, Spain, Sweden, Switzerland, Taiwan, Thailand, United Kingdom, and Vietnam. Distributors in all major industrial areas of the world. To locate the Pall office or distributor nearest you, visit **www.pall.com/contact.**

The information provided in this literature was reviewed for accuracy at the time of publication. Product data may be subject to change without notice. For current information consult your local Pall distributor or contact Pall directly.

© 2018, Pall Corporation. Pall, PALL, Kleenpak, and Supor are trademarks of Pall Corporation. ® indicates a trademark registered in the USA. TM indicates a common law trademark. ***Filtration.Separation.Solution.*** is a service mark of Pall Corporation.

1/18, PDF, GN18.07003 USD3270