

## Mini Kleenpak™ Capsules with Emflon® PFR Membrane

Efficient sterilizing filtration of air and gas at small scale

### Description

Pall® Mini **Kleenpak** capsules with **Emflon** PFR media are designed for air filtration and vent applications where the use of a filter of small size and low weight is critical. Having a surface area of 280 cm<sup>2</sup>, each Mini **Kleenpak** capsule filter contains a proprietary high performance PTFE membrane which is inherently hydrophobic and chemically resistant. This membrane is designed to remove bacteria, viruses and particles from air and gas streams, even in the presence of humidity and moisture. The same membrane is used in other **Emflon** PFR capsules and cartridges, allowing scale up from development to production.

These filters have an absolute rating of 0.2 µm in liquid based on microbial retention.

### Key Features

- Small, lightweight pleated membrane capsule filter (280 cm<sup>2</sup> [0.3 ft<sup>2</sup>] filter area)
- Highly retentive **Emflon** PFR membrane
- High flow rates associated to low Delta P enables the use of small filters – reducing installation and operating costs
- High resistance to autoclaving cycles and long filter life – reducing filtration costs
- Integrity testable using the Forward Flow test
- Choice of connection options for enhanced flexibility
- Ease of venting with newly designed valve



### High Quality Standards

- Validated in liquids with *Brevundimonas diminuta* (ATCC 19146) at a challenge level of 10<sup>7</sup> organisms/cm<sup>2</sup> of filter area
- 100 % integrity tested during manufacturing
- Identified by a lot number and a unique serial number for complete traceability of manufacturing history and for user's traceability systems
- Each filter supplied with a Certificate of Test
- Comprehensive validation guide available
- Manufactured under a Quality Management System certified to ISO 9001:2000
- Meets USP Biological Reactivity Tests *in vivo*, in accordance with USP Class VI plastics at 121°C

## Materials of Construction

Membrane	Hydrophobic PTFE
Support and Drainage Layers	Polypropylene
Capsule	Polypropylene
Vent	Polypropylene
Sealing Technology	Thermal bonding

## Operating Parameters<sup>(1)</sup>

Max Operating Pressure	4.1 bar (59 psi) at 38°C (100°F)
Max Operating Temperature	80°C (176°F) at 2.1 bar (30 psi)

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

## Sterilization<sup>(2)</sup>

Autoclave at 125°C (257°F)	20 x 30 minute cycles
Autoclave at 142°C (287°F)	10 x 30 minute cycles

**Warning:** This product must not be sterilized *in-situ* by passing steam through under pressure.

<sup>(2)</sup> The figures are maximum allowable figures determined by testing under controlled laboratory conditions to the length of time indicated. Actual operating conditions may affect the filter's long term response to sterilization. Filters should be qualified for each process application.

## Nominal Effective Filtration Area

280 cm<sup>2</sup> (0.3 ft<sup>2</sup>)

## Nominal Dimensions

Maximum diameter including valves	41 mm (1.6 in.)
Length with ½ in. Tri-Clover compatible connection	72.6 mm (2.9 in.)
Length with 6 mm to 13 mm (¼ in. to ½ in.) hosetail connections	104.6 mm (4.1 in.)
Length with ¼ in. NPT connection	97.4 mm (3.8 in.)

## Ordering Information

Part Number	Description
KA02PFRP2	Non-sterile with stepped hosebarb ½ in. to ¼ in. connections, 3 per box
KA02PFRP3	Non-sterile with NPT ¼ in. connection, 3 per box
KA02PFRP8	Non-sterile with ½ in. Tri-Clover* compatible connection, 3 per box

\* Tri-Clover is a trademark of Alfa-Laval, Inc.



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