FOOD & BEVERAGE Data Sheet





Emflon® PFW Filter Cartridges

for Sterile Filtration of Air

The Pall Emflon PFW Final Air Filters are designed for fermenter inlet air and exhaust venting, sterile process air and sterile venting of tanks in food processes.

Description

The filter element features Pall's advanced 0.2 micron rated polytetrafluoroethylene (PTFE) double-layer membranes, pleated with very high area into single open-end cartridges.

They are built to withstand demanding in situ steaming conditions in either the forward or reverse direction.

Features	Benefits
Hydrophobic 100% PTFE membranes	Prevents wetting out in humid conditions, even after repeated use and steaming cycles, allowing for unimpeded gas throughput
High area pleated, robust double-layer membranes	High throughputs and low pressure drops, with sizing resulting in compressor energy cost savings
Multi-cycle <i>in situ</i> steam challenged in forward and reverse direction	Enhanced steaming resistance
0.2 micron sterilizing grade filters based on liquid bacteria removal	Provides sterile effluent even in humid conditions, resulting in optimal protection of product, improved fermentation yields
Excellent aerosol bacteriophage retention performance	Provides superior bacteriophage protection of microbial cultures
100% integrity tested prior to dispatch	Documented quality
Water intrusion testable (WIT)	Enables <i>in situ</i> user integrity testing

Quality

- \cdot Cartridges produced in a controlled environment
- Manufactured according to ISO 9001:2015 certified Quality Management System



Emflon PFW filter cartridges

Materials of Construction

Component	Description
Filter Membrane	Double-layer PTFE
Support / Drainage	Polypropylene
Cage, Core, Fin End and End Cap	Polypropylene
Adapter	Polypropylene with internal stainless steel reinforcing ring
O-ring Seal	Silicone

Food Contact Compliance

Please refer to the Pall website www.pall.com/foodandbev for a Declaration of Compliance to specific National Legislation and/or Regional Regulatory requirements for food contact use.

Technical Information

The technical information provided is based on controlled laboratory tests done on typical production filters at the conditions described, unless otherwise indicated. Actual operating conditions may affect the filter's performance.

Nominal Filter Area

0.8 m² (8.6 ft²) per 254 mm (10") module

Operating Characteristics in Compatible Cases¹

Maximum Differential Pressure	Operating Temperature	
5.3 barg (77 psid) (forward)	≤20 °C (68 °F)	
5.3 barg (77 psid) (forward)	≤80 °C (176 °F)	

¹ Air, nitrogen, or other compatible gases

Typical Service Life² Under Continuous Operating Conditions

Continuous gas service	12 months to 60 °C (140 °F)
Vent service	6 months to 80°C (176 °F)

² For continuous gas flow above 60 °C (140 °F), Emflon HTPFRW filters are recommended. Emflon PFW can be operated at higher temperatures for shorter periods.

Typical Flow Rates³



³ Typical clean Δp per 254 mm (10") cartridge, air at 20 °C (68 °F). For gases other than air and for multi-round cartridge installations, please contact Pall for proper sizing.



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Autoclave and Steaming⁴

Cumulative Steaming Time	Operating Temperature
165 hours (1-hour cycles, forward)	142 °C (287 °F)
Maximum Steaming Conditions	Operating Temperature
<0.3 barg (4.3 psid) (forward)	142 °C (287 °F)
<0.3 barg (4.3 psid) (reverse)	142 °C (287 °F)
0.5 barg (7.3 psid) (reverse)	125 °C (257 °F)

⁴ For applications requiring autoclaving and sterlization, Pall recommends the use of Code 2 or Code 7 adaptors to ensure filter sealing after cooling. Cartridges should be cooled to system operating temperature prior to use. Data shown for forward steam flow also indicates autoclave resistance.

Removal Performance

Emflon PFW filters have a microbial removal rating of 0.2 micron in liquids and a particulate removal rating of 0.003 micron in dry gases.

- Tested with Brevundimonas diminuta liquid challenge at ≥ 10⁷ cfu/ cm² effective filtration area, according to ASTM Method 838-05.
 Provides sterile effluent according to FDA Guidelines (2004)
- Tested for particle removal at 0.003 micron in dry gases by NaCl aerosol CNC particle analysis

Ordering Information

This information is a guide to the part number structure and possible options. For availability of specific options and housing details, please contact Pall.

Part Number: FA



Table 1 Table 2 Example part number: **FA71RPFWH4** See bold reference code in tables.

Table 1: Adapter

Code	Description
2*	SOE – single open end with flat closed end, 2 locking tabs and external 226 o-rings
7	SOE – single open end with fin end, 2 locking tabs and external 226 o-rings

* Available for 5" only

Table 2: Nominal Length

Code	Length
05*	127 mm (5'')
1	254 mm (10'')
2	508 mm (20'')
3	762 mm (30'')

Note: The delivery unit for Emflon PFW filters is 12 units.

* Code 2 only

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Pall Corporation has offices and plants throughout 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.

IF APPLICABLE Please contact Pall Corporation to verify that the product conforms to your national legislation and/or regional regulatory requirements for water and food contact use.

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