
Emflon™ FM

FILTERS

Emflon™ FM filters are designed for cost-effective clarification of solvents used in the manufacture of antibiotics and other active pharmaceutical ingredients (APIs). These pharmaceutical grade filters contain a proprietary polytetrafluoroethylene (PTFE) membrane and are compatible with a broad range of chemicals. They can also be used to ensure cleanliness of high purity solvents. Applications include removal of carbon or catalyst fines, and these filters are often used downstream of bulk solids removal systems.

Key features

- Broad chemical compatibility.
- Very high flow rates.
- Low extractables.
- Tolerant of high operating temperatures.
- "No cage" option further reduces potential extractables.

High quality standards

- Each filter supplied with a certificate of test.
- Lot number traceable.
- Meets USP biological reactivity, *in vivo*, for Class VI – 121°C for plastics.
- FDA listed materials per 21 CFR.



Fig 1. Emflon FM filters.

Compatibility at 20°C

This filter was specifically designed for improved compatibility and optimized economics in polishing a broad array of challenging solvents, including:

Acetic acid, glacial	Acetone	Acetonitrile dimethylacetamide (DMAC)
Dimethylformamide (DMF)	Dimethylsulfoxide (DMSO)	Ethanol
Ethyl acetate	n Heptane	Hexane
Hydrochloric acid 38%	Isopropyl alcohol (IPA)	Methanol
Methylene chloride	Methyl isobutyl ketone (MIBK)	Methyl tertiary butyl ether (MTBE)
Pyridine	Sodium hydroxide, 50%	Tetrahydrofuran (THF)
Toluene	Water	Xylene

This partial list is provided for general guidance only.

Note: Because so many factors (e.g., elevated temperatures) can affect the chemical resistance of a given product, you should pre-test under your own operating conditions observing applicable safety practices such as those given in the Material Safety Data Sheet for each chemical.

Cytiva can provide specific compatibility guidance, testing, and data upon request.

Specifications

Material of construction

Membrane	PTFE (hydrophobic)
Support and drainage layers	Polypropylene
Core, cage, and endcaps (where applicable)	Polypropylene

Operating parameters

Maximum differential pressure	4.1 bar (60 psi) at 23°C 2.1 bar (31 psi) at 60°C
Maximum operating temperature	95°C at 1.0 bar (14 psi)

Extractables ¹

Water	< 5 mg
Acetone	90 mg
Ethyl acetate	240 mg
Methylene chloride	600 mg
Toluene	515 mg

¹ These typical extractables are based on tests of sampled 254 mm (10 in.) modules with cages at 20°C.

Filter area per 254 mm (10 in.) module

Typical effective filtration area	0.58 m ²
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Typical liquid flow rates

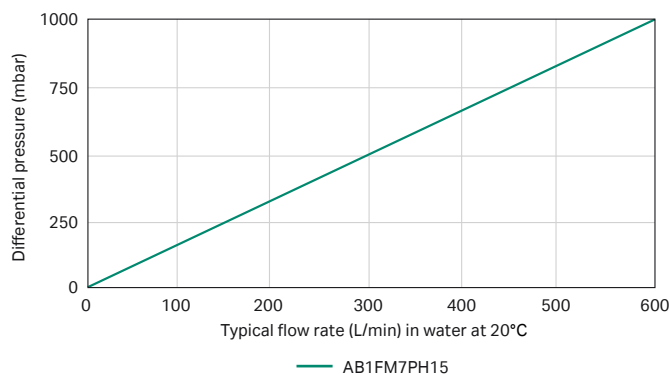


Fig 2. Typical liquid flow rate (L/min) vs differential pressure (mbar).

Removal ratings ²

Particle size	Beta ratio	Efficiency
0.6 µm	100	99.0%
1 µm	2000	99.2%
2 µm	5000	99.98%
3 µm	> 5000	99.98%
4 µm	> 5000	99.98%
> 5 µm	> 5000	99.98%

² As determined by a modified OSU-F2 test, please contact Cytiva for test details.

Seal options

AB-series	FEP encapsulated silicone
MCY-series	PTFE

Ordering information

AB style cartridges

Cage option	Adapter style	Nominal length	Product code
Polypropylene cage	Single O-ring with locating fin and bayonet lock	254 mm (10 in.)	AB1FM47PH15
		508 mm (20 in.)	AB2FM47PH15
		762 mm (30 in.)	AB3FM47PH15
		1016 mm (40 in.)	AB4FM47PH15
No cage	Double O-ring with locating fin and bayonet lock	254 mm (10 in.)	AB1FM7PH15
		508 mm (20 in.)	AB2FM7PH15
		762 mm (30 in.)	AB3FM7PH15
		1016 mm (40 in.)	AB4FM7PH15
No cage	Single O-ring with locating fin and bayonet lock	254 mm (10 in.)	ABA1FM47PH15
		508 mm (20 in.)	ABA2FM47PH15
		762 mm (30 in.)	ABA3FM47PH15
		1016 mm (40 in.)	ABA4FM47PH15
No cage	Double O-ring with locating fin and bayonet lock	254 mm (10 in.)	ABA1FM7PH15
		508 mm (20 in.)	ABA2FM7PH15
		762 mm (30 in.)	ABA3FM7PH15
		1016 mm (40 in.)	ABA4FM7PH15

MCY 1000 style cartridges

Cartridge style	Nominal length	Product code
Double open-ended 70 mm (2.75 in.) diameter element with gaskets on both ends	254 mm (10 in.)	MCY1001FMPH2
	508 mm (20 in.)	MCY1002FMPH2
	762 mm (30 in.)	MCY1003FMPH2
	1016 mm (40 in.)	MCY1004FMPH2



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