

3M™ LifeASSURE™ EPF Series

Polyethersulfone Membrane Filters

3M™ LifeASSURE™ EPF Filter Cartridges have been designed to provide fast rinse-up time and flow rates with low pressure drop for process water, ultrapure water and aqueous based chemical applications. The hydrophilic PES membrane with polypropylene hardware construction provides excellent chemical and thermal compatibility.

3M LifeASSURE EPF Filter Cartridges are ideally suited for critical applications requiring high particle retention, and high flow rates needing 0.04µm and 0.20µm filter rating.

Features & Benefits

Hydrophilic PES Membrane

- The high flow rate increases the rate of re-circulation which allows particle counts to be achieved more rapidly
- No IPA pre-wetting, PES is hydrophilic

Superior Filter Construction

- Excellent compatibility with wide range of chemicals
- Provides consistent performance throughout filter life
- Low cartridge extractables, flushed with 18 Mohm UPW prior to packaging



Operating Parameters & Specifications

Cartridge Component	Materials of Construction
Filtration Ratings	0.04 micron, 0.20 micron
Cartridge Length (Nominal)	10 in. (254 mm), 20 in. (508 mm), 30 in. (762 mm), 40 in. (1,016 mm)
Filtration Surface Area (per 10" cartridge)	8.6 ft. ² (0.8 m ²)
Outside Diameter (Nominal)	2.7 in. (69 mm)
Membrane Material	Hydrophilic PES
Cage, Core, End Caps, Membrane Support Layer	Polypropylene
Operating Parameters	Specification
Maximum Operating Temperature	176 °F (80 °C)
Maximum Differential Pressure	60 psid @ 77 °F (4.1 bar @ 25 °C) 25 psid @ 176 °F (1.7 bar @ 80 °C)

Applications

- Process Water
- Ultrapure Water (UPW)
- Aqueous Cleaning Chemistry
- Aqueous Based Chemicals
- Hot UPW (up to 80 °C)
- Solvent Cleaning

Table 1: 3M™ LifeASSURE™ EPF Filter Cartridge Specific Pressure Drop*

Grade	Removal Rating (µm)	Specific Pressure Drop per 10" Cartridge	
EPF004	0.04	0.94 psi/gpm – cps	0.017 kg/cm ² /lpm – cps
EPF020	0.20	0.30 psi/gpm – cps	0.006 kg/cm ² /lpm – cps

*Specific aqueous pressure drop at ambient temperature for a single length equivalent (10") cartridge.
For multiple cartridge lengths, divide the total flow by the number of equivalent lengths.

3M™ LifeASSURE™ EPF Series Filter Cartridge Ordering Guide

Cartridge Type	Filter Rating (µm)	Configuration	Length (Inches)	End-modification	O-ring Material
EPF	004 – 0.04µm 020 – 0.20µm	F	01 – 10 02 – 20 03 – 30 04 – 40	C – 222 O-Ring & Spear F – 222 O-Ring & Flat Cap	B – Fluorocarbon H – Clear Silicone

Please consult with your 3M Representative to determine the appropriate part number for your application.

Intended Use

LifeASSURE EPF Filter Cartridges are intended for filtration of process water, ultrapure water and Aqueous based chemical applications. LifeASSURE EPF Filter Cartridges are not intended for filtration of potable water, or for use in food & beverage or bioprocessing & pharmaceutical applications.

Product Selection and Use
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70201600189 REV0319