

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	C – 222 O-Ring & Spear F – 222 O-Ring & Flat Cap	B – Fluorocarbon H – Clear Silicone
			02 – 20		
			03 – 30		
			04 – 40		

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

Intended Use and Product Selection: 3M™ LifeASSURE™ EPF Series Filter cartridges are intended for use in industrial, process water, ultrapure water and high purity chemical filtration applications of aqueous fluids in accordance with the applicable product instructions and specifications. 3M LifeASSURE EPF Series Filter cartridges are also intended for use with non-aqueous fluids where materials of construction are compatible. Since there are many factors that can affect a product's use, the customer and user remain responsible for determining whether the 3M product is suitable and appropriate for the user's specific application, including user conducting an appropriate risk assessment and evaluating the 3M product in user's application.

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3M™ LifeASSURE™ EPF Series Filter cartridges products are not for use in food contact applications.

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