

amcHydroFlow

Cartridges-Modified Polyethersulfone Filters



amcHydroFlow cartridge is a filter specifically designed for reduction of bioburden and particulate levels to protect final 0.1 and 0.2 µm system filters. The filter medium is amcAccupor membrane, i.e., modified polyethersulfone hydrophilic membrane developed by AMC for various applications.

amcHydroFlow cartridge is designed for low cost, higher throughput than Nylon, PVDF, or cellulose esters membrane cartridges.

Performance Advantages

Constructed of only two materials, i.e., modified polyethersulfone and polypropylene with no adhesives to ensure lower extractables

All components meet USP Class VI-121°C Plastics Tests for biosafety, and are listed as being acceptable for food contact applications according to the Code of Federal Regulation, Title 21

Provides faster flow rate and higher throughput than Nylon, PVDF or cellulose esters membrane filters

Reduced microbial bioburden and particulate levels to protect final filters

Available in a variety of configurations allowing for easy installation in commonly used filtration systems

Typical Applications

Pharmaceuticals and Biologicals: parenterals, ophthalmics, oral and topical medicines, serum, tissue culture media, wash and rinse water, diagnostic reagents, buffers, vaccines, bottle and vial washers, dry compressed gases, make-up water

Food and Beverages: alcohols, mineral water, DI and RO water, dry compressed gases, juices and other potable liquids

Bulk Chemicals: selected acids, diluted bases, alcohols

Inks: water and alcohol based inks

Specifications

Materials of Construction

Filter media: Single layer of pleated amcAccupor membrane (modified hydrophilic PES membrane)

Support Materials: Polypropylene

Structure Components: Polypropylene

Sealing Technology: Thermal Bonding

Dimensions

Nominal Length: 10, 20, 30 and 40 inch
(25.4, 50.8, 76.2 and 101.6 cm)

Diameter: 2.7 inches (6.9 cm)

Nominal Pore Sizes

0.2, 0.45, 0.8 µm

Typical Effective Filtration Area

7 ft² (0.65 m²) per 10 inch

Maximum Operating Temperature

85°C (185°F) at 30 psi (2.1 bar)

(Supported adapters are recommended for applications at elevated temperatures over 60°C)

Sterilization/Sanitization Methods

Chemical: peracetic acid, chlorinated alkaline products, bleach, sulfur dioxide, and hydrogen peroxide at typical sanitization concentrations and temperatures

Hot Water: 88°C (190°F) at 5 psi (0.3 bar)

Autoclave: 121°C (250°F) for 30 minutes up to 30 cycles

In-line Steam: 140°C (284°F) for 60 minutes at 2 psi (0.14 bar) up to 15 cycles

Maximum Differential Forward Pressure

0.2 µm, 0.45 µm: 60 psi (4.1 bar) at ambient temperature

0.8 µm: 50 psi (3.4 bar) at ambient temperature

Maximum Differential Back Pressure

15 psi (1.0 bar) at ambient temperature

Recommended Integrity Tests

Minimum Bubble Point:

0.2 µm: 45 psi (3.1 bar) - water

0.45 µm: 28 psi (1.9 bar) - water

0.8 µm: 10 psi (0.7 bar) - water

Typical Water Flow Rate

0.2 µm: 3 gpm/psi/10 inch
(16.5 lpm/0.1 bar/25.4 cm)

0.45 µm: 5.2 gpm/psi/10 inch
(28.5 lpm/0.1 bar/25.4 cm)

0.8 µm: 10 gpm/psi/10 inch
(54.9 lpm/0.1 bar/25.4 cm)

Oxidizable Substances

Filtrate meets USP XXII requirements for purified water with < 1 L flush after autoclaving

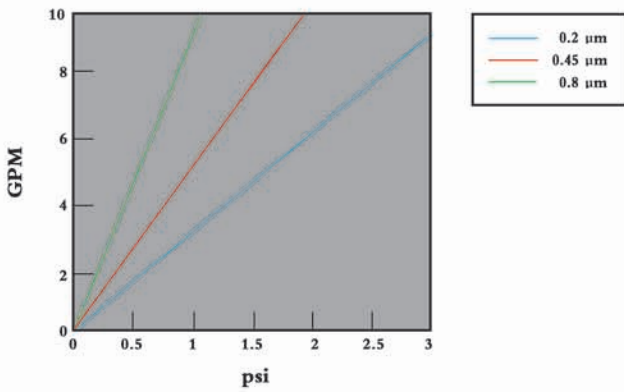
Biosafety

Materials pass USP Class VI-121°C Plastics Tests, and are listed as being acceptable for food contact according to the Code of Federal Regulation, Title 21

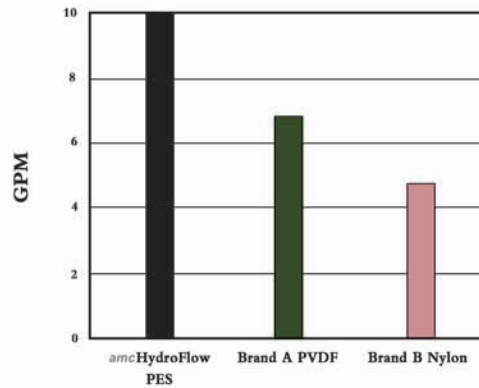
Endotoxin Level

< 0.25 EU/ml utilizing Limulus Amoebocyte Lysate (LAL) test

Typical Water Flow Rates (10 inch length)



amcHydroFlow Water Flow Rates



Cartridge Type (0.2 μm)

P = 3.4 psi, 10 inch cartridge at ambient temperature

Cartridges Ordering Information



Rated	20	0.2 μm
Pore	45	0.45 μm
Size	80	0.8 μm
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Nominal	1	10 inch (25.4 cm)
Length	2	20 inch (50.8 cm)
	3	30 inch (76.2 cm)
	4	40 inch (101.6 cm)
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Seal	S	Silicone
Material	V	Viton
	E	Ethylene Propylene

Cartridge Configuration	D	SOE, Flat
	F	DOE, Gasket/Gasket 10 inch increments
	J	SOE, -222/Flat/SS*
	K	SOE, -222/Fin/SS*
	M	SOE, -222/Flat
	P	SOE, -222/Fin
	Q	SOE, -226/Fin
	R	SOE, -226/Fin/SS*
	V	SOE, -226/Flat
	W	SOE, -226/Flat/SS*

* SS indicates stainless steel supported adapter