

# Chemifil™

Polypropylene  
Membrane Cartridge  
Filters



**Chemifil™ cartridges are manufactured using a polypropylene membrane of uniform thickness and high voids, with a homogeneous structure and controlled pore size.**

Designed for the removal of sub-micron organic and inorganic particulate matter, the inherent structural stability of the membrane eliminates any risk of media migration and minimises the release of particles. For solvent and aggressive chemical filtration applications, Chemifil™ cartridges offer a wide range of chemical compatibility. Suitable for the most demanding microfiltration applications, the cartridges can be used for the filtration of aggressive chemical solutions including acids, alkalis, solvents and etchants.

### Ordering Information

Product Code: **1** **2** **3** **4** **5** **6** **7**

1: Membrane		2: Pore rating		3: Version		4: Length (Nominal)		5: End Fitting		6: Seals		7: Additional	
C	Chemifil™	10	0.1µm	R	Rinsed	1	10" (254mm)	A	Code 3	A	Ethylene Propylene	A	N+U
		20	0.2µm	S	Standard	2	20" (508mm)	B	Code 7	B	Silicone	N	Non-steamable (no insert)
						3	30" (762mm)	C	Code 8	C	Viton®	P	Pharma Grade
						4	40" (1016mm)	F	N SOE	D	Nitrile	U	Unbranded
						5	5" (125mm)	G	G DOE (short)	E	FEP Encap. Viton®		
								H	G SOE	G	FEP Encap. Silicone		
								J	216 (218), fin	J	DOE PTFE		
								K	Code 2				
								L	223, fin (no lugs)				
								M	DOE				
								S	Code 28, fin (3 lugs)				
								T	223, flat (no lugs)				
								U	224, fin				
								V	226, fin				
								W	F20 +Code 7 (SS Core)				
								X	F20 +Code 2 (SS Core)				
								Y	BS832, flat				
								Z	F20 +Code Y (SS Core)				

### Typical Applications

- Fine chemicals and solvents
- Photoresists and developers
- Pure water supply systems
- Sterile process gases
- Sterile vents

### Features and Benefits

- Guaranteed microbial ratings
- Steam sterilisation
- Cartridge integrity and low TOC levels
- Solvents and aggressive chemicals
- Full traceability
- Controlled manufacturing environment

## Specifications

### Materials of Manufacture

Filter membrane:	Polypropylene
Membrane support:	Polypropylene
Irrigation mesh (support):	Polypropylene
Drainage layer:	Polypropylene
Inner core:	Polypropylene
Outer support:	Polypropylene
End fittings:	Polypropylene
Sealing:	Fusion bonding

### Cartridge Dimensions (Nominal)

Diameter:	70mm (2.8")
Length:	1 module: Chemifil™ Junior
	1 module: 254mm (10")
	2 modules: 508mm (20")
	3 modules: 762mm (30")
	4 modules: 1016mm (40")

### Effective Filtration Area

Absolute Microbial Rating	Effective Filtration Area (each 254mm (10") module)
0.1 and 0.2µm	0.66m <sup>2</sup> (7.1ft <sup>2</sup> )

### Cartridge Treatment

Standard:	Cleaned and flushed with pyrogen-free water
Rinsed:	Ultra-clean, pulse flushed to give a system resistivity of 18MΩ.cm

### Gaskets and O-Rings

Ethylene Propylene, FEP encapsulated, Silicone, Viton® or Nitrile

### Maximum Differential Pressure

Normal flow direction at:

20°C (68°F):	6.0bar (87psi)
80°C (176°F):	4.0bar (58psi)
100°C (212°F):	3.0bar (44psi)
120°C (248°F):	2.0bar (29psi)
125°C (257°F):	1.5bar (22psi)

Reverse flow direction at:

20°C (68°F):	2.1bar (30psi)
80°C (176°F):	1.0bar (15psi)
100°C (212°F):	0.5bar (7psi)

### Operating Temperature

Maximum continuous:	80°C (176°F)
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### Sterilisation

*In situ* steam 100 x 30 minute cycles at 125°C (257°F)

### Extractables

Minimum total extractables. Please refer to the Chemifil™ Validation Guide.

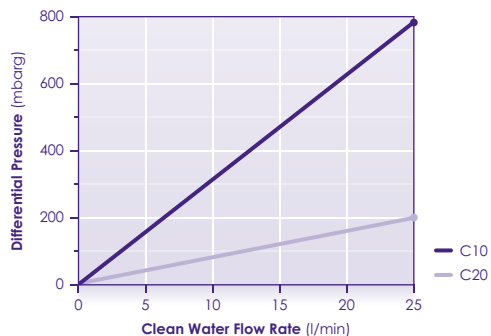
### Integrity Testing

Each Chemifil™ module of every cartridge is individually integrity tested using the Diffusive Flow Test, which correlates to the HIMA and ASTM F838-05 bacterial challenge tests. Non-destructive integrity tests, such as Diffusive Flow, Water Intrusion, Pressure Hold and Bubble Point, can be performed by customers. Please contact us for procedural details.

### Clean Water Flow Rates

(after Solvent Pre-wet and Water Flush)

- Typical clean water flow rate:  
A 254mm (10") Chemifil™ single cartridge exhibits the flow- $\Delta P$  characteristics indicated below, for solutions with a viscosity of 1 centipoise.
- Other solutions:  
For solutions with a viscosity of greater than 1 centipoise, multiply the indicated differential pressure by the viscosity in centipoise.



### Gas Flow Rates

- Typical clean air flow rate:  
A 254mm (10") Chemifil™ single cartridge exhibits the flow- $\Delta P$  characteristics indicated below.

