

Double Layer Membrane Filters for Wine and Beer Filtration



Vinofil<sup>™</sup> membrane cartridges are specifically designed for wine and beer filtration, as a final filter for cold biological stabilisation. Vinofil<sup>™</sup> cartridges utilise a double layer of naturally hydrophilic polyethersulfone (PES) membrane with a mirrored asymmetric pore structure, providing graded filtration throughout its depth, resulting in higher throughputs and long service life.

Vinofil<sup>™</sup> cartridges exploit the narrow pore size distribution and high void volume of the media to provide a choice of cartridges capable of meeting the requirements of most applications. These cartridges offer high flux rates and low differential pressures, a feature common to polyethersulfone membranes.

# **Ordering Information**

Vinofil<sup>™</sup> cartridges benefit from the low binding characteristics of polyethersulfone membranes. They are highly resistant to integrity failure caused by steam sterilisation and have excellent compatibility with CIP sterilising agents.

# **Typical Applications**

- Wine and sparkling wine
- Beer
- Mineral water and soft drinks
- Process water supply

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Membrane	2: P	ore rating	3: V	ersion	4: L	.ength	5: E	nd Fitting	6:	Seals	7: /	Additional
Vinofil <sup>™</sup>	20	0.2µm	R	Rinsed		ominal)	А	Code 3	Α	Ethylene	А	N+U
	45	0.45µm	S	Standard	1	10'' (254mm)	В	Code 7		Propylene	Ν	Non-
	65	0.65µm	<u> </u>		2	20"	С	Code 8	В	Silicone		steamable (no insert)
			-		-	(508mm)	F	N SOE	С	Viton®	Р	Pharma
					3	30"	G	G DOE (short)	D	Nitrile		Grade
						(762mm)	н	G SOE	E	FEP Encap.	U	Unbrandeo
					4	40'' (1016mm)	J	216 (218), fin		Viton®		
					5	5"	К	Code 2	G	FEP Encap.		
						(125mm)	L	223, fin (no lugs)		Silicone		
							м	DOE	J	DOE PTFE		
							S	Code 28, fin (3 lugs)				
							Т	223, flat (no lugs)				
							U	224, fin				
							$\vee$	226, fin				
							W	F20 +Code 7 (SS Core)				
							Х	F20 +Code 2 (SS Core)				
							Y	B\$832, flat				
							Z	F20 +Code Y (SS Core)				

Vinofil<sup>tm</sup>

# Vinofil™

## **Features and Benefits**

- Guaranteed microbial ratings
- Low binding and fouling
- Will not hydrolyse
- Excellent chemical compatibility
- Cartridge integrity and low TOC levels
- Suitable for steam sterilising
- Full traceability
- Controlled manufacturing environment

# **Specifications**

### **Materials of Manufacture**

Filter membranes:	Dual Polyethersulfone
Membrane support:	Polypropylene
Irrigation mesh (support):	Polypropylene
Drainage layer:	Polypropylene
Inner core:	Polypropylene
Outer support:	Polypropylene
End fittings:	Polypropylene
Support ring:	Stainless steel

### **Cartridge Dimensions (Nominal)**

Effective Filtration Area:

	0.48m <sup>2</sup> (5.2ft <sup>2</sup> ) per	10" module
Diameter:	70mm (2.8'')	
Length:	1 module (short):	125mm (5'')
	1 module:	254mm (10'')
	2 modules:	508mm (20'')
	3 modules:	762mm (30'')
	4 modules:	1016mm (40'')

#### **Cartridge Treatment**

Standard:	Cleaned and flushed with pyrogen-free
	water

Rinsed:Ultra-clean, pulse flushed to give a system<br/>resistivity of 18MΩ.cm

### **Gaskets and O-Rings**

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

#### Maximum Differential Pressure

6.0bar (87psi)
4.0bar (58psi)
3.0bar (44psi)
2.0bar (29psi)
2.1bar (30psi)
1.0bar (15psi)
0.5bar (7psi)

### **Operating Temperature**

Maximum continuous:

85-90°C (185-194°F)

#### **Sterilisation**

In situ steam 80 x 20 minute cycles at 125°C (257°F) Hot water 200 x 20 minute cycles at 85-90°C (185-194°F)

#### **Extractables**

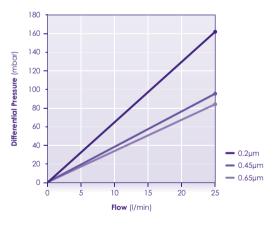
Minimum total extractables. Please refer to the Vinofil<sup>TM</sup> Validation Guide.

### **Integrity Testing**

Each Vinofil<sup>™</sup> 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 Pressure Hold, Diffusive Flow and Bubble Point, can be performed by customers. Please contact us for procedural details.

#### **Clean Water Flow Rates**

- Typical clean water flow rate: A 254mm (10") Vinofil<sup>™</sup> single cartridge exhibits the flow-**Δ**P characteristics indicated below, for solutions with a viscosity of 1 centipoise.
- Other solutions:
  For solutions with a viscosity other than
  1 centipoise, multiply the indicated differential pressure by the viscosity in centipoise.



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#### Contact Information:

UK, New Milton Division Tel: +44 (0)1425 612010 info@porvairfiltration.com

### US, Ashland Division Tel: +1 804 550 1600 infoUS@porvairfiltration.com

India, Mumbai Division Tel: +91 22 2081 1148 infolN@porvairfiltration.com