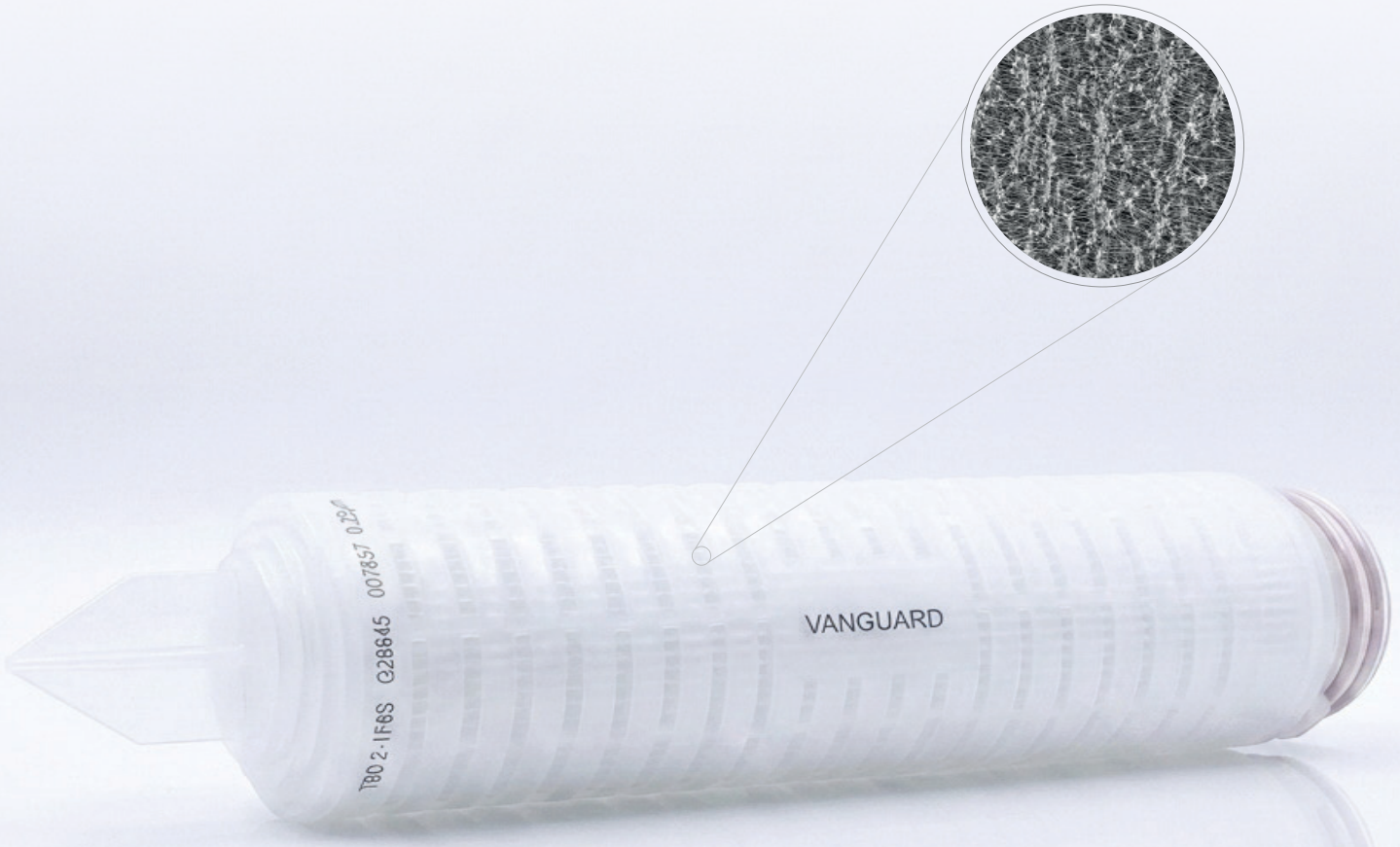
TEFguard®

Polytetrafluoroethylene Membrane Filter



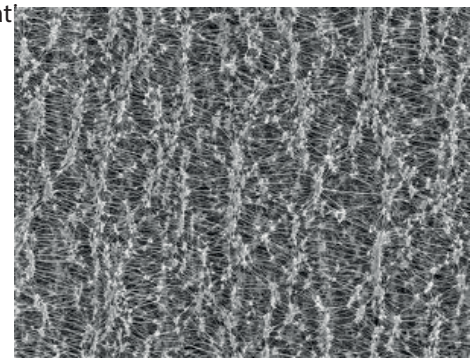
VANGUARD

TEFguard® Air/Gas Venting Filter Cartridge

The TEFguard® filters are absolute-rated high efficiency membrane type filters constructed of chemically resistant polyproylene (PP) and polytetrafluoroethylene (PTFE). They are economical, premium quality products that deliver consistently high filtration efficiency, superior flow rates, substantial dirt holding capacity and exceptionally long service life. All polypropylene support strcture construction makes TEFguard® filters a cost-effective choice for clarification applications. Whether you are in the biopharmaceutical, food and beverage, chemical, or other industries, TEFguard® filters offer reliable, high-quality, and cost-effective filtrat solutions that will exceed your expectations.

TEFguard® Efficiency

TEFguard® filter cartridges combine a high dirt holding capacity, protective abilities and extremely high flow rates, These cartridges are easy to clean for an efficient regeneration if necessary.



TEFguard® SEM

TEFguard® User Manual

TEFguard® filter cartridges user manual is available at www.vanguard.com.bd/ecodocs for your ready download. This eco approach from our side as a contribution to reserve the environment.

Features and Benefits

- Absolute ratings of 0.2 µm to 0.45 µm
- 100% integrity tested
- Meets ASTM bacterial validation standards
- Self-bonded, non fiber-releasing filter media
- Extremely high flow rates at low pressure drops
- Ultraclean – no binders, adhesives or surfactants
- Extended service life in sterilizing hot compressed air
- Minimal extractables levels
- High dirt holding capacity
- Wide chemical compatibility
- Cleanroom manufactured
- Meets FDA requirements for food contact use, passes USP Class VI Plastics biological reactive test.

Bacterial Retention

ASTM F838-05 Challenge:
0.2 µm, 0.45 >107 cfu/cm2 Brevundimonas diminuta and meet the FDA definition of a sterilizing grade filter.

Typical Application

TEFGuard® polytetrafluoroethylene filter cartridges may be used as either final filters. TEFguard® filters are most appropriate for use when high efficiency filtration and economy are crucial.

Common industries that use TEFGuard® filters include:

- Highly concentrated acids
- Bases
- Alcohols
- Chlorinated and fluorinated solvents
- Esters
- Ketones
- Etchants

For aqueous solutions, the TEFguard® filter must be prewet by ummersion in a suitable low surface tension fluid.

The TEFguard® filter is ideal for gas filtration applications that include:

- Compress air
- Tank Venting
- Pressurized gases
- Fermentation air

Materials of Construction

Filter Media:	Polytetrafluoroethylene (PTFE)
Upstream Support:	Polypropylene
Downstream Support:	Polypropylene
Core/Outer Guard:	Polypropylene
End Cap:	Polypropylene
Sealing Method:	Thermal Bonding
O-ring/Gasket Seal:	EPR, polyethylene, silicone



TEFguard® filters are manufactured in conformance to cGMP. All materials of construction listed above are FDA approved for food contact use per 21 CFR 177. TEFguard® filters meet the requirements as specified in the current USP Class VI plastics, cytotoxicity and pyrogenicity tests. No binders, adhesives or surfactants are used in its construction. The filters comply with European Commission Directive 2002/72/EC and subsequent amendments up to 2008/39/EC and Commission Regulation (EU) No 10/2011.

Filtration Ratings

Pore Sizes:
0.2 and 0.45 µm

Cartridge Dimensions

Diameter: 2.75" (7cm)
Lengths: 10", 20", 30", 40" (25cm, 50cm, 75cm, 100cm)
Effective Filtration area per 10" Cartridge: 0.75m²

Maximum Operating Temperature And Pressure

Δp 80 psi @ 32 °F to 100 °F (Δp 5. 5 bar @ 0 °C to 38 °C)
Δp 60 psi @ 150 °F (Δp 4.1 bar @ 66 °C)
Δp 30 psi @ 180 °F (Δp 2.1 bar @ 82 °C)

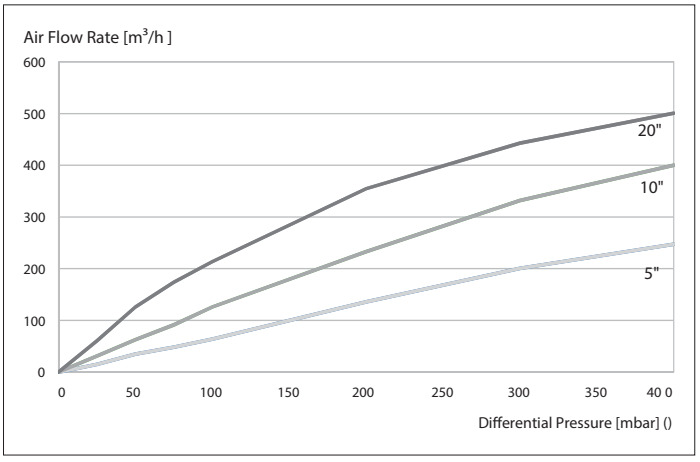
Sterilization

Steam-in-place (SIP): Min. 150 cycles
Saturated steam @ 134°C for 30 minutes.
[15 psi (1 bar) to 30 psi (2 bar) for 30 minutes]

Autoclave: Min. 25 cycles, 121-135 °C for 30-60 minutes.

TEFguard® cartridges are capable of repeated sterilization cycles. For applications requiring autoclave/SIP, a stainless steel reinforcement ring must be ordered. See "Reinforcement Ring Option" within "Ordering Information".

Typical air flow rate per 5"/10"/20" cartridge



End Cap Configuration

External -226 O-ring with locking tab; open end for C6 and F6 SOE configurations



External -222 O-ring with locking tab; open end for C2 and F2 SOE configurations



Flat Gasket; open end for OO DOE configurations



Fin; Close end for B2, F2, B6 and F6 configurations



Button Cap; Close end for B2, F2, B6 and F6 configurations



Flat Gasket; open end for OO DOE configurations

DOE = Double Open End
SOE = Single Open End

Ordering Information

Filter Media	Rating (µm)		Cartridge Length		End Cap Configuration		Reinforcement Ring Option	Seal Material (O-ring or Gasket
TEF	0.2	-	3		F2		R	S
TEF = TEFguard polytetrafluoro-ethylene Membrane	0.2 0.45		1 10" (25cm) 2 20" (50cm) 3 30" (75cm) 4 40" (100CM)	OO = B2 = F2 = B6 = F6 =	DOE; Flat gaskets (9.75", 19.5", 29.25", 39" length filters) SOE; -222 O-ring, button cap end SOE; -222 O-ring, fin end SOE; -226 O-ring, button cap end SOE; -226 O-ring, fin end		(Blank) = Standard - no reinforce-ment ring R = Reinforce-ment ring; required for autoclave/SIP applications (not "OO")	O-ring Seal E = ERP (For DOE only) S = Silicone

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