

# HYDROPHOBIC ABSOLUTE RATED FILTER ELEMENT

Excellent chemical inertness, high porosity  
membrane rate

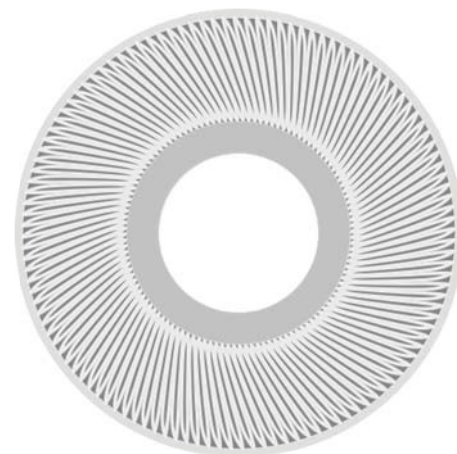
## TEFLOW

### Superior performances in non-aqueous liquid filtration and gases

The superior technology in the design and manufacture of Ionex filter elements for critical applications is demonstrated in the TEFLOW PTFE, a cartridge specifically created to filter aggressive chemicals (including acids, alkalis, solvents, etchants and photoresists), D.I. – R.O. water, process gases and air venting.

TEFLOW PTFE offers outstanding filtration performance with extremely high levels of biosafety. The heart of this cartridge is a PTFE polytetrafluoroethylene membrane, designed for the removal of sub-micron organic and inorganic particulate matter. A new 'veil' membrane pleating system, allows a filtration area of  $0.8\text{m}^2/10''$  and a particularly ergonomic structure in polypropylene, make this a very durable filter cartridge, with excellent contaminant holding characteristics and limited pressure drop during operation.

All filter elements are manufactured under clean environmental conditions and are tested individually to verify integrity before packaging. TEFLOW PTFE is inherently hydrophobic and offers a natural barrier against water, without requiring the use of surfactants or modifying agents. If used to filter water based fluids or solvents, the cartridge must be pre-wet with a low surface tension liquid, such as isopropyl alcohol or isopropanol.



**➤ TEFLOW**

Optimized pleating system

## TECHNICAL SPECIFICATIONS

- 100% inherently hydrophobic, contains no adhesives or surfactants
- absolute retention ratings, high margins of operational safety
- excellent porosity characteristics (80-95%), low  $\Delta p$  values
- biologically inert membrane, non-fiber releasing; no colour or odour adsorption or release
- Pre-flush with 18Mohm DI water (optional)
- tested individually for integrity prior to packing
- all materials meet the requirements of FDA CFR Title 21 for food contact
- in compliance with EC Directive for food contact. Regulation (EU) No.10/2011+amendments;1935/2004-1895/2005

## OPERATING CONDITIONS

<b>Max operating pressure (<math>\Delta p</math>)</b>	90°C @ 1.0 bar 20°C @ 5.0 bar
<b>Recommended replacement pressure drop</b>	2.0 bar @20°C
<b>Suggested operating pressure range</b>	0.1 to 1.0 bar

## PORE SIZE RATING & TYPICAL DATA

**0.1  $\mu\text{m}$  - 0.2 $\mu\text{m}$  - 0.45 $\mu\text{m}$  - 1.0 $\mu\text{m}$  - 3.0 $\mu\text{m}$  - 5.0 $\mu\text{m}$**

<b>Retention Efficiency - 350l/h/10"</b>	<b>Microbial Titer Reduction (<math>T_R</math>) ASTM F 838-05</b>
>99.99 gm [Brevundimonas Diminuta]	$T_R > 10^7$ (<1CFU) // 0.1 $\mu\text{m}$
>99.99 gm [Brevundimonas Diminuta]	$T_R > 10^7$ (<1CFU) // 0.2 $\mu\text{m}$
>99.99 gm [Saccharomyces Cerevisiae]	$T_R > 10^7$ (<1CFU) // 0.45 $\mu\text{m}$

## FLOW RATE

<b>Water Flow 20°C@0.1 bar/10"</b>	0.1 $\mu\text{m}$	0.2 $\mu\text{m}$	0.45 $\mu\text{m}$	1.0 $\mu\text{m}$	3.0 $\mu\text{m}$
<b>Typical Flow Rate (l/min)</b>	18	20	30	35	42

Extrapolation for multiple housings and higher pressure drops is acceptable, but as flows increase the pressure drop of the housing becomes more apparent

## FILTRATION AREA

0.8m<sup>2</sup>/10"

## MATERIALS OF CONSTRUCTION

<b>Filtering media</b>	PTFE membrane
<b>Supports</b>	High Strength Polypropylene
<b>Inner sleeve</b>	High Strength Polypropylene + ss316 insert
<b>Connections and tip</b>	High Strength Polypropylene
<b>Gaskets</b>	Silicone (standard), EPDM, Viton, FEP

## DIMENSION

<b>Length</b>	254mm (10")-508mm (20")-762mm (30")-1016mm (40")
<b>Outer diameter</b>	69mm
<b>Inner diameter</b>	26mm

## TRACEABILITY

Each filter element is identified by a lot number for complete traceability.