

The Donaldson LifeTec® PES-BN-A is an absolute grade, high performance polyethersulfone filter element that offers:

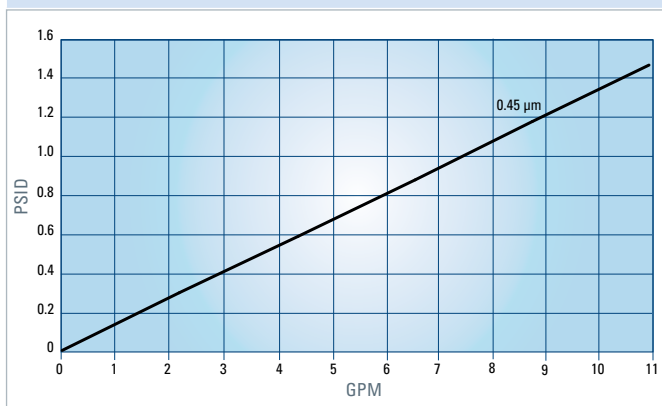
- Outstanding filtration performance for microbial stabilization of highly colloidal liquids
- Validated log 7 retention efficiency for *pediococcus damnosus* and *lactobacillus linderi*
- Extremely low absorption of proteins
- Highly asymmetrical pore structure for consistent porosity and contamination removal throughout service life
- Compliance with EC/1935/2004 and FDA CFR Title 21 for food contact use
- Conformity with GMP manufacturing requirements as defined by ED/2023/2006
- Robust construction to help resist installation torque and many caustic CIP chemicals



**PES-BN-A**

FEATURES	BENEFITS
Log 7 retention of many beer and wine spoilage organisms	Absolute retention of spoilage organisms for critical applications
Excellent flow characteristics	Minimizes production down time and energy consumption
Highly resistant materials	Materials of construction are resistant to many caustic chemicals that are used in CIP processes for prolonged service life
Extremely low absorption of proteins	Removes spoilage organisms while allowing desirable proteins to remain in the final product
Compliant with EC/1935/2004 and FDA CFR Title 21	Approved for food contact use

**PES-BN-A Flow Characteristics (Water)**



Filter Grade	Maximum Diffusion Values
0.45 µm	25 ml/min @ 1 Bar

Integrity test to be done by Bubble Point or Forward Flow Test. For information on test equipment or test services, please contact your Donaldson Sales Engineer and visit our website at [www.donaldsonprocessfilters.com](http://www.donaldsonprocessfilters.com).

## APPLICATIONS

INDUSTRIES & APPLICATIONS		
Breweries	Mineral Water	Chemical
Wineries	Soft Drinks	
BEVERAGE CLARIFICATION & COLD STABILIZATION		
Beer	Wine	
	Wine Coolers	

CLARIFICATION AND FINAL FILTRATION		
Deionized Water	Process Water	Bottled Water
Chemically Treated Water	Ingredient Water	Soft Drinks

## SPECIFICATIONS

### CUMULATIVE STEAM CYCLES

The PES-BN-A is rated for 100 steam sterilization cycles with 250°F saturated steam.

- Figures based on steaming resistance lab tests.
- Filter elements must be checked in actual use.
- Contact Donaldson for recommended Autoclaving/Steam procedures.

### QUALITY TEST

All products have been inspected and released by Quality Assurance as having met the following requirements:

- All 10" sterile filter modules are integrity tested to verify compliance with established quality and design specifications and to assure consistent and reliable performance.
- The traceability of each filter element according to EC/1935/2004 is provided by serial number.
- All PES-BN-A filter elements are completely staged, assembled, tested and packaged in Class 7 clean room facility, whose Quality Management System is approved by an accredited registering body to the appropriate ISO 9001 Quality Systems Standard.

### MATERIAL COMPLIANCE USA

All components of the PES-BN-A filter element are FDA listed for food contact use in the Code of Federal Regulations (CFR), Title 21.

MATERIALS		CFR TITLE 21
Membrane	Polyethersulfone	177.2240
Upstream Support	Polypropylene	177.1520
Downstream Support	Polypropylene	177.1520
Outer Guard	Polypropylene	177.1520
Core	Polypropylene	177.1520
End Caps	Polypropylene	177.1520
O-Rings	EPDM	177.2600
	Silicone	177.2600
Sealing Method	Thermal Bonding	

## INTEGRITY TESTING

BACTERIA RETENTION RATES (ACCORDING TO HIMA CHALLENGE PER ASTM)		
Filter Grade	Microorganism	LRV / cm <sup>2</sup>
PES-BN-A 0.45 µm	pediococcus damnosus and lactobacillus linderi	> 7

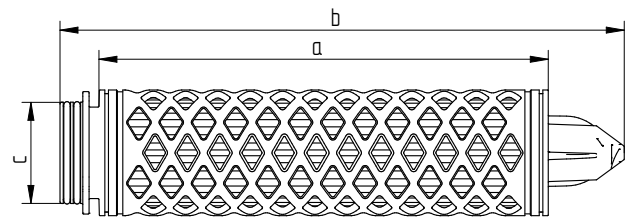
Filter Grade	0.45 µm (Absolute Retention Rate)	
Filtration Surface	0.72 m <sup>2</sup> per 250 mm element (10")	
Maximum Differential Pressure	Operating Temperature	Differential Pressure
	100°F	80 psi
	150°F	60 psi
	180°F	30 psi

\* Figures are based on lab tests to evaluate steaming resistance. Filter elements need to be checked in actual use. Contact Donaldson for recommended Autoclaving/Steaming procedures.

## DIMENSIONS

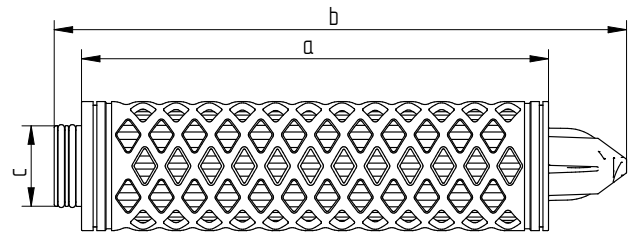
CODE 7 Connection			
Filter Size	Dimensions (in)		
	a	b	c
10"	9.9	12.4	2.2
20"	19.4	21.9	2.2
30"	28.9	31.5	2.2
40"	38.5	41.0	2.2

Code 7: 2 x 226 O-Rings, bayonet 2 locking tabs, locating fin, integrated reinforcement ring



CODE 8 Connection			
Filter Size	Dimensions (in)		
	a	b	c
10"	10.0	12.2	1.7
20"	19.5	21.8	1.7
30"	29.1	31.3	1.7
40"	38.6	40.8	1.7

Code 8: 2 x 222 O-Rings, plug connection, locating fin, integrated reinforcement ring



### Important Notice

Many factors beyond the control of Donaldson can affect the use and performance of Donaldson products in a particular application, including the conditions under which the product is used. Since these factors are uniquely within the user's knowledge and control, it is essential the user evaluate the products to determine whether the product is fit for the particular purpose and suitable for the user's application. All products, specifications, availability and data are subject to change without notice, and may vary by region or country.



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**F117021 ENG (07/20) PES-BN-A Absolute Membrane Filter Elements**

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