# **HARMSCO®**

# **PES FB**

# All-Poly Absolute Rated Food & Beverage Grade

**Absolute Rated** 

## **Hydrophilic Polyethersulfone Membrane Cartridges**

Harmsco<sup>®</sup> High Purity Pleated Cartridges are manufactured for use in most applications where absolute rated filtration is needed.

Long service life
High flow rates
Low pressure drop
High permeability

### **Features**

- ▶ 100% polypropylene; nothing to leach/contaminate
- High efficiency for critical filtration applications
- Pleated design for extended surface area
- Polypropylene end cap, thermally welded to media, cage and core
- USP Class VI 121°C (250°F) for plastics
- 8.5 square feet of filtration media per 9-3/4" cartridge
- Offered in multiple lengths and end cap configurations to fit in competitive filter housings
- FDA Listed Materials: Manufactured from materials which are listed for food contact applications in Title 21 of the U.S. Code of Federal Regulations



Pleated Hydrophilic Polyethersulfone Membrane Cartridges

## **Applications**

- Wine
- Beer
- Juices
- R/O Pre-filtration

- Soft Drinks
- Bottled Water
- Distilled Water
- Chemicals

### **Specifications**

#### **Construction Materials**

Membrane	Polyethersulfone (PES)
Support Media	Polypropylene
End Caps	Polypropylene
Center Core	Polypropylene
<b>Outer Support Cage</b>	Polypropylene
O-rings/Gaskets	Buna, Viton, EPDM,
Silicone,	Teflon® Encapsulated Viton

**Toxicity** 

All polypropylene components meet the specifications for biological safety per USP Class VI: 250°F (121°C) for plastics.

**Dimensions** 

Length: 10 to 40 inches (25.4 to 101.6 cm) nominal Outside Diameter: 2.7 inches (7.0 cm) nominal

**Media Surface Area** 

8.5 square feet per 9-3/4" length

## **All-Poly Absolute Rated**

Maximum Recommended **Operating Conditions** 

**Maximum Differential Pressures** 

Forward ...... 50 psi (3.4 bar) at 68°F (20°C) **Reverse**......40 psi (2.7 bar) at 68°F (20°C)

**FDA Listed Materials** 

Manufactured from materials which are listed for food contact applications in Title 21 of the U.S. Code of Federal Regulations.

Sanitization/Sterilization

Filtered Hot Water ......190°F (88°C) for 30 minutes

Steam Sterilization\*: 250°F (121°C) for 30 minutes, multiple cycles

Chemicals: cartridges are chemically compatible with most chemicals and sanitizing agents

\*Note: stainless insert option needed for all cartridges being hot water sanitized or steam sterilized.

## **Cartridge Selection/Sizing Guide**

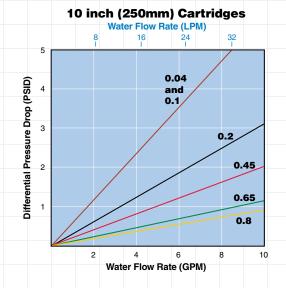
Packed 6 per case, with cartridges individually bagged and cartoned.

	~	Model	~	Length	~	Micron Size	~	End Cap Code	~	O-Rings/Gaskets	~	Adders
-		PES FB		975 (9-3/4")		0.04		DOE (double open end)		E (EPDM)*		I (stainless steel insert)
				195 (19-1/2")		0.1		213 (internal o-ring)		B (Buna)		HP (heavy poly core)
				20 (20")		0.2		222 (flat cap)		S (Silicone)		
				2925 (29-1/4")		0.45		222-F (fin)		V (Viton)		
-				30 (30")		0.65		226 (flat cap)		T (Teflon Encapsulated Viton)		
_				40 (40")		0.8		226-F (fin)				

**Example:** PES FB - 195 - 0.2 - 222-F - E

\*EPDM is standard for all o-rings and gaskets, unless otherwise noted.

#### **Flow Rate**



#### **Cartridge End Cap Configurations**







Fin

Flat Cap

226 (w/SS insert)









226

222 (w/SS insert)

222

Flat Cap









213 (internal o-ring)

PP Core Ext.

Spring

DOE (double open end)

Note: This publication is to be used as a quide. The data within has been obtained from many sources and is considered to be accurate. Harmsco does not assume liability for the accuracy and/or completeness of this data. Changes to the data can be made without notification. Temperature, Pressure, Flow Rates, Differential Pressures, Chemical Combinations and other unknown factors can affect performance in unknown ways. Limited Warranty: Harmsco warrants their products to be free of material and workmanship defects. Determination of suitability of Harmsco products for uses and applications contemplated by Buyer shall be the sole responsibility of Buyer. The end user/installer/buyer shall be liable for the product's performance and suitability regarding their specific intended applications. End users should perform their own tests to determine suitability for each application.



#### **HARMSCO®** Filtration Products