

## Filter Data Sheet

### *EPS<sup>grade</sup> Polyethersulfone Membrane Media Filter Cartridges developed for the special needs of the electronics industry*

**Dist. by: H.R. Peterson Co. - 814 Prior Ave. No. - St. Paul, MN 55104**  
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EPS cartridges are designed to meet the special needs of the electronics and high purity chemical industries. Polyethersulfone membrane cartridges are resistant to most acids and bases and capable of handling strong sanitization agents. High flow rates make Polyethersulfone a good choice for central DI water systems. This membrane will also handle elevated process temperatures in compatible fluids. To minimize extractables, each cartridge module is pulse, power flushed until the rinse effluent reaches 17+ Megohm-cm and less than 3 ppb TOC. Each cartridge module is also individually tested.

#### Flow Rate

The following table represents typical water flow at a one psi (69 mbar) pressure differential across a single 10 inch cartridge element. The test fluid is water at ambient temperature. Extrapolation for housings with multiple elements and higher pressure drops is acceptable, but as flows increase the pressure drop of the housing becomes more apparent.

Pore Size	0.03 µm	0.05 µm	0.1 µm	0.22 µm	0.45 µm	0.65 µm
GPM	1.5	1.75	2.5	4.5	7.0	8.3

#### Dimensions

**Length:** .....10 to 40 inches (25.4 to 101.6 cm.) nominal  
**Outside Diameter:** .....2.75 inches (7.0 cm.) nominal

#### Maximum Differential Pressures

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

#### Ordering Information

The cartridge catalog number is made up of several variable characters i.e. pore size, end cap code, length, and O-ring material. For example: a 0.10 µm , 20 inch (50.8 cm.) long cartridge with 2-222, Teflon® Encapsulated Viton O-rings, no spear (flat top) and no 316 SS Ring would be designated as: EPS\*10N00002T5.

EPS	□ □ □	□ 0000	□	□	□
	<u>Pore size code</u>	<u>316 SS Ring</u>	<u>Cartridge Length</u>	<u>O-ring code</u>	<u>End cap code</u>
	<p>*03 - 0.03 µm                      *10 - 0.10 µm                      *20 - 0.22 µm                      *40 - 0.45 µm                      *60 - 0.65 µm</p>	<p>S = Ring                      N = No Ring</p>	<p>1 = 10 inches (25.4 cm)                      2 = 20 inches (50.8 cm)                      3 = 30 inches (76.2 cm)                      4 = 40 inches (101.6 cm)</p>	<p>S - Silicone                      B - Buna                      V - Viton                      T - Teflon®                      Encapsulated Viton                      E - EPR                      R - Teflon®                      Encapsulated Silicone</p>	<p>0 - Flat Gasket, double open end                      5 - 2-222 O-ring                      7 - 020 O-ring                      8 - 2-222 O-ring with Spear                      9 - 2-226 O-ring with Spear</p>

#### Construction Materials

**Filtration Media:** .....Polyethersulfone  
**Filtration Media Support:** .....Polypropylene  
**End Caps:** .....Polypropylene  
**Center Core:** .....Polypropylene  
**Outer support Cage:** .....Polypropylene  
**O-rings:** Buna, Viton, Silicone, EPR, Teflon®  
 Encapsulated Silicone, Teflon® Encapsulated Viton

#### Sterilization/Sanitization

**Chemical Sanitization:**.....Industry standard concentrations of hydrogen peroxide, paracetic acid, sodium hypochlorite and other selected chemicals. Sanitization protocols designed to extend the useful life of EPS cartridges are available from Critical Process Filtration®.

#### Integrity Test Specifications (per 10 inch length) (water wetted membrane)

Pore Size	Air Diffusion Rate
0.03 µm	≤ 30 cc/min at 60 psi (4137 mbar)
0.05 µm	≤ 30 cc/min at 56 psi (3860 mbar)
0.10 µm	≤ 30 cc/min at 48 psi (3307 mbar)
0.22 µm	≤ 30 cc/min at 35 psi (2412 mbar)
0.45 µm	≤ 30 cc/min at 20 psi (1378 mbar)
0.65 µm	≤ 30 cc/min at 15 psi (1044 mbar)