

# PREPOR PES Filter Cartridges

- liquid filters
- polyethersulphone



PREPOR PES is an innovative particulate grade membrane prefilter cartridge designed to work in harmony with final sterilizing filters, to guarantee the highest levels of performance and security.

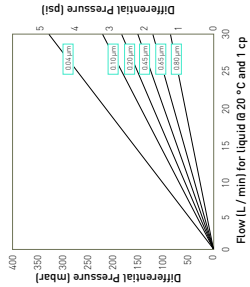
PREPOR PES combines high flow rate characteristics with good microbial reduction and minimum product adsorption by using the latest hydrophilic polyethersulphone membrane technology.

PREPOR PES uses all polypropylene hardware to offer good chemical compatibility and low extractables and is suitable for use in many pharmaceutical applications including terminal and aseptic filtration, ophthalmics, biologicals, serum, SVPS, LVPs and other complex liquids.

## Features and Benefits

- Micron rating from 0.04 to 0.8 micron
- Versatile particulate membrane filter for bioburden reduction and prefiltration duties
- Available in a comprehensive range of end cap configurations for retrofitting existing applications

## Performance Characteristics



For K size for a given flow rate multiply 10<sup>3</sup> size differential pressure by 2

10<sup>3</sup> Size (250 mm) Cartridge



Note: PREPOR is a registered trademark of Parker danmick hunter

## Specifications

### Materials of Construction

- Filtration Membrane: Polyethersulphone
- Upstream Support: Polypropylene
- Downstream Support: Polypropylene
- Inner Support Core: Polypropylene
- Outer Protection Cage: Polypropylene
- End Caps: Polypropylene
- End Cap Insert Hardware: 316L Stainless Steel\*
- Standard O-rings/gaskets: Silicone / EPDM
- Capsule Body: Polypropylene
- Capsule Vent Seals: Silicone
- Filling Bell: Polycarbonate

### Food and Biological Safety

Materials conform to the relevant requirements of 21CFR Part 177, EC1935 / 2004, and current USP Plastics Class VI - 121 °C and ISO10993 equivalents.

### Recommended Operating Conditions

Up to 70 °C (158 °F) continuous operating temperature and higher short-term temperatures during CIP to the following limits:

°C	Temperature of F	Max. Forward LP (bar)
20	68	3.0
40	104	2.5
60	140	2.0
80	176	1.5
90	174	1.0
>100 (Intermittent)	>212 (Intermittent)	0.3

Capsules may be operated up to a temperature of 40 °C (104 °F) at line pressures up to 5.0 barg (72.51 psig) for liquids.

### Effective Filtration Area (EFA)

Up to 0.69 m<sup>2</sup> (7.42 ft<sup>2</sup>)

### Cleaning and Sterilization

PREPOR PES cartridges can be repeatedly steam sterilized in situ or autoclaved at up to 130 °C (266 °F). They can be sanitized with hot water at up to 70 °C (154 °F) and are compatible with a wide range of chemicals. Capsules can be repeatedly autoclaved up to 130 °C (266 °F).

To maximize the life of the cartridge, the differential pressure across the cartridge should not exceed 0.3 barg (4.35 psig) at 130 °C (266 °F).

### Retention Characteristics

While the PREPOR PES product is rated for particulate retention, the performance of PREPOR PES products has been assessed to bacterial titre reduction using a challenge methodology based on the ASTM F838-05 method applied to sterilizing grade filters. Typical levels are given below:

Organism	Approx. Cut-off Size (µm)	Typical Titre Reduction
Brevibacterium divivum	0.5 - 10 x 1.5 - 3.0	>10 <sup>10</sup>
Serratia marcescens	0.5 - 0.8 x 0.9 - 2.0	>10 <sup>10</sup>
Microcococcus	0.5 - 0.7 x 0.7 - 1.2	>10 <sup>10</sup>

## Ordering Information

### Cartridges

#### ZCPS

Code   Length (Nominal)	Code   Micron	Code   Endcap (10 <sup>3</sup> )	Code   Variant	Code   O-rings
B* 2.5	04	04	E	EPDM
K 5	125	125	F	ETFE
1 10	1250	1250	G	Silicone
2 20	1500	1500	H	Viton
3 30	1750	1750	I	
4 40	1000	1000	J	

Code   Endcap (Dermi)	Code   Inlet Connection	Code   Outlet Connection	Code   Grade	Code   Pack No.	Code   Accessory
SK	Retract	T	Pharmaceutical	3	Filling Bell
T	TRUESEAL	H	Non-Sterile		
Y	Dermi Stub	G	Supplied Gamma		
Z	Dermi A & B Sid	M	Pre-sterilized		

### Capsules

#### ZEPS

Code   Length (Nominal)	Code   Micron	Code   Inlet Connection	Code   Outlet Connection	Code   Variant	Code   Grade	Code   Pack No.	Code   Accessory
E 4.5	004	T	T	P	N	3	Filling Bell
B 5.5	010	N	N		S		
A 7.9	020	H	H				
	045	G	G				
	065	M	M				
	080	O	O				
	080	R	R				
	080	V	V				

\* Approx. values only. Not for use in aseptic applications. For more information, please contact your local sales office.

Please refer to the product literature for detailed information on the use of these products. This publication is for general information only and does not constitute an offer of any product. The products are sold subject to the company's standard conditions of sale.