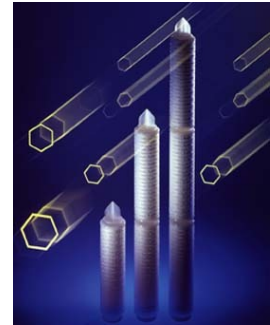


## STERYFLUS TSP MULTI-LAYERS

- Integrity testable in situ
- Repeatedly steamable in situ or in autoclave
- Sanitizable
- Thermowelded construction
- EC-listed materials for Food contact
- FDA-listed materials per CFR21
- Bio-Safety per USP-Plastics



STERYFLUS TSP MULTI-layers is utilized in the pharmaceutical and food & beverage general application.

The filter media is constituted by PES (Hydrophilic Polyethersulfone) absolute filtration rating membrane; upstream borosilicate microfibers layer provides prefiltration to protect the membrane; the depth matrix of the borosilicate media retains particle matters as well as deformable contaminants like colloids, granting the cartridges with longer service life.

Manufacturing is completed in a controlled environment; each cartridge is integrity tested and the limits of acceptability are monitored on regular basis by bacteria challenge test.

### MATERIALS OF CONSTRUCTION

<b>Filter media</b>	PES membrane + borosilicate microfiber
<b>Upstream supports</b>	polypropylene
<b>Downstream supports</b>	polypropylene
<b>Internal Core</b>	polypropylene
<b>External Cage</b>	polypropylene
<b>End caps / Adapters</b>	polypropylene

### FOOD-SAFETY

STERYFLUS TSP MULTILAYERS filter element materials meet (EU) regulation 10/2011 and its amendments, regulations (EC) 1935/2004 and 1895/2005.

### BIO-SAFETY

Filter media and components pass USP Biological Reactivity and Chemical-Physical tests for CLASS VI plastics.

### QUALITY STANDARDS

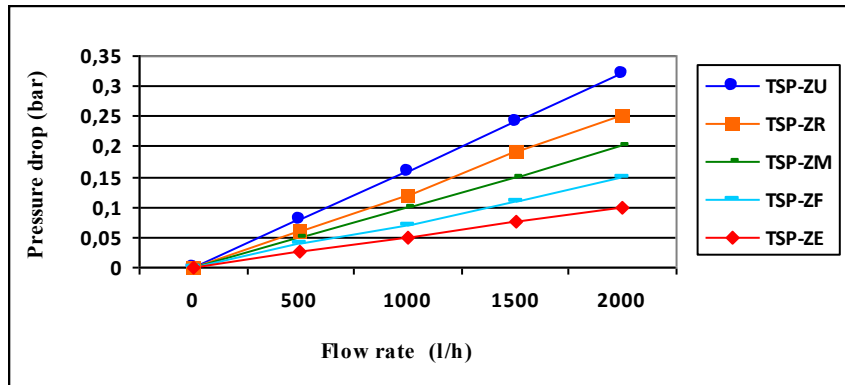
Produced under a certified Quality System to guarantee traceability of manufacturing records and integrity testing results.

### OPERATING CONDITIONS

- max. continuous temperature	65 °C
- max. cumulative time of steam sterilization	20 hours at 125 °C or 40 hours at 121 °C with cycles of 30 minutes
- sanitization with hot water	80 °C max
- sanitization with chemicals	can be sanitized by standard chemical agents
- max. differential pressure	5,0 bar at 25 °C - 1,7 bar at 80 °C
- recommended change out differential pressure	2,0 bar at 25 °C
- recommended rinse up volume	3 liters/10" cartridge

CODE	ABSOLUTE FILTRATION RATING IN LIQUIDS	BACTERIAL RETENTION >10 <sup>7</sup> CFU/cm <sup>2</sup>	ACCEPTABLE LIMIT FOR DIFFUSION TEST WITH WATER FOR 10" CARTRIDGE (ml/min)
ZU	0,2 µm	Brevundimonas diminuta	≤ 16,5 @ 2,3 bar
ZR	0,45 µm	Serratia marcescens	≤ 13 @ 1,7 bar
ZM	0,65 µm	N.A	≤ 20 @ 1,1 bar
ZF	0,8 µm	N.A	≤ 25 @ 0,9 bar
ZE	1,2 µm	N.A	≤ 25 @ 0,8 bar
*as per ASTM F838			

## WATER FLOW RATE FOR 10" CARTRIDGE



## STERYFLUS TSP MULTILAYER ORDERING INFORMATION

**TSP - 207 1 - ZU -**   -  

END FITTING	CODE
DOE: double open end with flat gaskets.	<b>200</b>
SOE: open end with (1) O-Ring 2.20. Blind end with flat top.	<b>202</b>
SOE: open end with (2) O-Ring 2.222. Blind end with flat top.	<b>203</b>
SOE: open end with (2) O-Ring 2.226 and 2 bayonet locks. Blind end with fin.	<b>207</b>
SOE: open end with (2) O-Ring 2.222. Blind end with fin.	<b>208</b>
SOE: open end with (2) O-Ring 2.222 and 3 bayonet locks. Blind end with fin.	<b>212</b>

ABSOLUTE FILTRATION RATING micron	CODE
0,2	<b>ZU</b>
0,45	<b>ZR</b>
0,65	<b>ZM</b>
0,8	<b>ZF</b>
1,2	<b>ZE</b>

CODE	PRODUCT GRADE
<b>No code</b>	Biological Grade; Tested and prefluxed

CODE	NOMINAL LENGTH
<b>1</b>	10"
<b>2</b>	20"
<b>3</b>	30"
<b>4</b>	40"

CODE	GASKETS	
<b>No code</b>	Standard	Silicone
<b>E</b>	On request	EPDM
<b>T</b>	On request	Teflon only for code 200