GDPES-Series DuoGrade™ Serial Layer Polyethersulfone

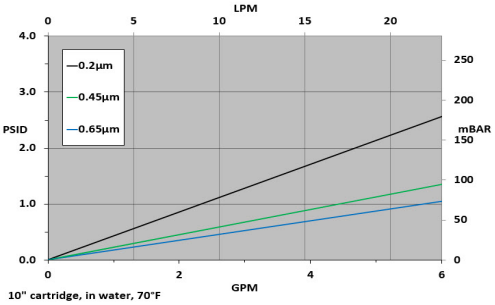
GDPES-Series DuoGrade™ Serial Layer Polyethersulfone Filter Cartridges deliver extended life and excellent retention. Featuring a Microglass prefiltration layer, this serial construction makes the GDPES an ideal choice for clarification of particulate-heavy solutions in a variety of food/beverage, pharmaceutical, biological, and chemical applications. With excellent flowrates, low pressure drops, and superior throughput volumes, GDPES cartridges can be used as final filters or to protect downstream sterilizing grade cartridges. Each cartridge is flushed with 18 megaohm High Purity deionized water and is integrity tested to ensure the delivery of clean effluent with low extractables. Designed to tolerate repeated hot water sanitization and *in-situ* steam sterilization cycles for maximum service life.

Microbial Retention Performance

Rating	Challenge Microbe	Log Reduction Value (LRV)
0.2µ	*Brevundimonas diminuta*	7.6
0.45µ	*Serratia marcescens*	6.6
0.65µ	*Saccharomyces cerevisiae*	4.8

* Independently tested in accordance with ASTM F838.

Flow Rate vs Pressure Drop



Typical Applications

- Wine, Beer, & Spirits
- Bottled Water, Juices, Soft Drinks
- Cell Culture Media
- Large Volume Parenterals
- Bulk Pharmaceutical Solutions

Construction Materials

Membrane.....Polyethersulfone
Support Media.....Microglass
End Caps.....Polypropylene
Center Core.....Polypropylene
Outer Support Cage.....Polypropylene
O-Rings/Gaskets.....Buna, EPDM, Silicone, Teflon® Encapsulated Viton®, Viton®, Teflon® Encapsulated Silicone

Sanitization/Sterilization

Filtered Hot Water.....80˚C for 30 min.
Steam Sterilization.....121˚C for 30 min., multiple cycles

Chemicals: Cartridges are compatible with most chemical sanitizing agents.

Note: Stainless steel insert option required for all cartridges being hot water sanitized or steam sterilized.

Dimensions

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

Operating Conditions

Change Out ΔP (recommended.....35 PSID
Temperature (max).....176˚F (80˚C)
Differential Pressure (max).....50 PSID (3.4 bar) at 68˚F (20˚C)

Toxicity

All polypropylene components meet the specifications for biological safety per USP Class VI – 121˚C for plastics.

Food Safety Compliance

Materials of construction comply with FDA regulations for food and beverage contact use as detailed in the US Code of Federal Regulations, 21CFR. Materials used to produce filter media and hardware are deemed safe for use in contact with foodstuffs in accordance with EU Directives 2002/72/EC, 1935/2004, and/or 10/2011.

Ordering Information

GDPES	Rating (µ)	A	Length	C	End Cap Style	O-Rings/Gaskets	-	Adders
	0.2		10” (25.4 cm)		2 = DOE Flat Gasket	B = Buna		CS = 316SS Compression Spring
	0.45		20” (50.8 cm)		3 = 222 w/ Fin	E = EPDM		I = Stainless Steel Insert
	0.65		30” (76.2 cm)		4 = 222 w/ Flat Cap	S = Silicone		
			40” (101.6 cm)		6 = 226 w/ Flat Cap	T = Teflon® Encapsulated Viton®		
					7 = 226 w/ Fin	V = Viton®		
					16 = 213 Internal O-Ring	Z = Teflon® Encapsulated Silicone		
					28 = 222 3-tabs/FIN			

DISCLAIMER: Filtration data presented is representative of performance observed in controlled laboratory testing. It is not given as a warranty, specification or statement of fitness for use. Specific performance can vary widely depending on contaminant type, fluid properties, flow rates and environmental conditions. It is recommended that users conduct thorough qualification testing to assure the product functions as required. For additional technical support, a product Performance Guide is available upon request.

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