



## MICROGARD™ PLUS AND PLUS LE CARTRIDGE FILTERS

*Hydrophobic UPE filters with superior cleanliness for solvent, chemical and photochemical filtration*

### Delivering Quality Performance

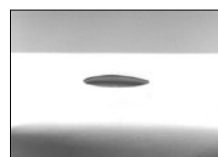
Microgard™ Plus filters use patented ultra-high molecular weight polyethylene (UPE) membranes, with the highest retention efficiency of any membrane ( $\geq 99.9\%$ ) available for ultrapure solvent and photoresist chemical filtration. This membrane has excellent retention capabilities to meet the increasing demands of today's leading edge technology and is now available to 3 nm retention rating. Microgard Plus filters offer low surfactant binding, excellent wettability and superior downstream cleanliness.

### Low Cost of Ownership

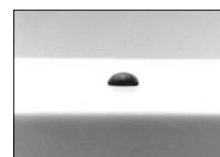
Microgard Plus filters do not require prewetting with solvent-based chemicals. The result is lower operational costs and a more consistent, reliable process.

### Superior Downstream Cleanliness

Microgard Plus cartridges are extensively cleaned during manufacturing and are constructed entirely from high-density and ultra-high molecular weight polyethylene. As such, Microgard Plus filters have better initial cleanliness and lower contaminant extractables compared to polypropylene, polysulfone, polyethersulfone or nylon construction technologies.



*UPE membrane—photoresist wets within 10 seconds*



*PTFE membrane—resists instantaneous wetting*

Features	Benefits
3 nm and 5 nm asymmetric UPE	3 nm retention for the tightest membrane technology available in the industry. Asymmetric membrane increases flow and reduces pressure drop to reduce defects and increase throughput.
10 nm–0.2 $\mu\text{m}$ with special cleaning*	More sophisticated resists require cleaner materials; Entegris' proprietary cleaning technology insures the lowest levels of organic and metal extractables to eliminate the potential for the filter to be a source of contamination to your process.
Superior wettability	Eliminates prewetting, reducing chemical usage while reducing system downtime during filter changeouts. Provides more consistent filtration.
Large filtration area	Provides maximum flow rate in a compact design.
High retention efficiency ( $\geq 99.9\%$ )	Low particle counts in chemical delivery systems and bulk chemical production.
All-polyethylene construction	Reduces particle contamination with superior downstream cleanliness. The filter's all-polyethylene construction lowers metallic/ionic contamination that can leach from filters constructed from other materials.

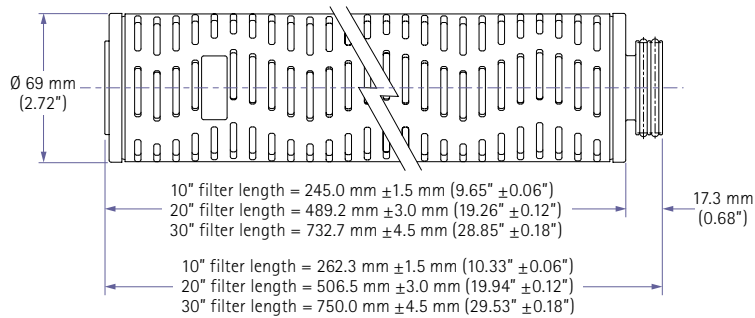
\*Special cleans are standard on 3 nm, 5 nm, 10 nm and 20 nm pore sizes, and an option for 0.03–0.2  $\mu\text{m}$  pore size ratings.

## Specifications

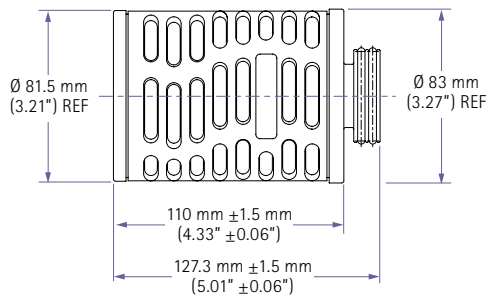
Materials:	Membrane	Asymmetric and symmetric hydrophobic ultra-high-molecular-weight polyethylene (UPE)	
	Supports, core, sleeve	High-density polyethylene (HDPE)	
	O-rings	EPDM and Teflon® fluoropolymer encapsulated Viton® fluoroelastomer (TEV)	
Membrane area:	4" UPX	10 nm	9,200 cm <sup>2</sup> (9.9 ft <sup>2</sup> )
		Others	8,000 cm <sup>2</sup> (8.6 ft <sup>2</sup> )
	10"	10 nm	3,200 cm <sup>2</sup> (14.21 ft <sup>2</sup> )
		20 nm	12,000 cm <sup>2</sup> (12.9 ft <sup>2</sup> )
		Others	10,000 cm <sup>2</sup> (10.7 ft <sup>2</sup> )
	20"	20 nm	24,000 cm <sup>2</sup> (25.8 ft <sup>2</sup> )
		Others	20,000 cm <sup>2</sup> (21.5 ft <sup>2</sup> )
	30"	30,000 cm <sup>2</sup> (32.3 ft <sup>2</sup> )	
10" asymmetric	13,000 cm <sup>2</sup> (14.0 ft <sup>2</sup> )		
20" asymmetric	26,000 cm <sup>2</sup> (28.0 ft <sup>2</sup> )		
Maximum operating conditions:	Maximum forward differential pressure	3.4 bar (50 psid, 3.5 kg/cm <sup>2</sup> ) @ 20°C (68°F)	
	Maximum temperature	60°C (140°F)	

## Dimensions

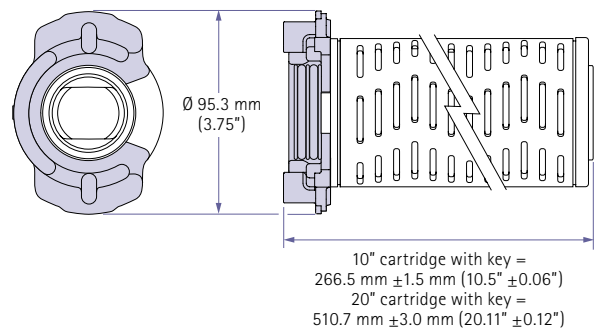
### Code 0



### Code 0 4" UPX

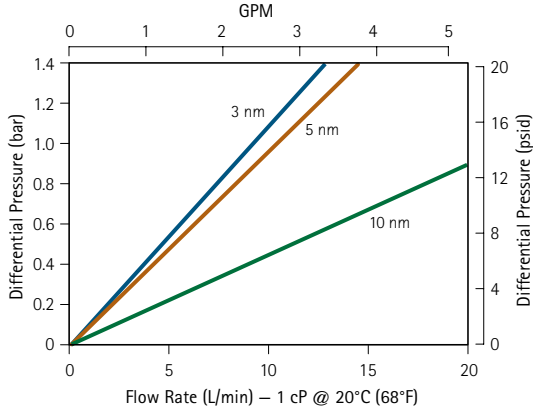


### End View Chemlock® Key on Cartridge

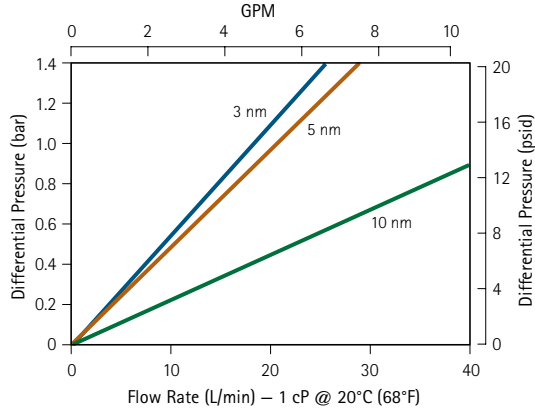


# Performance Data

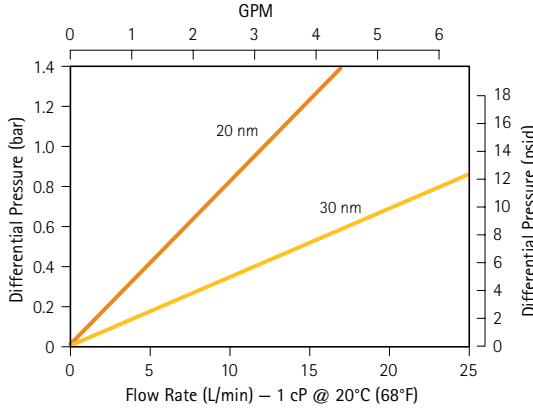
**Microgard Plus LE 10" Asymmetric UPE Filters**



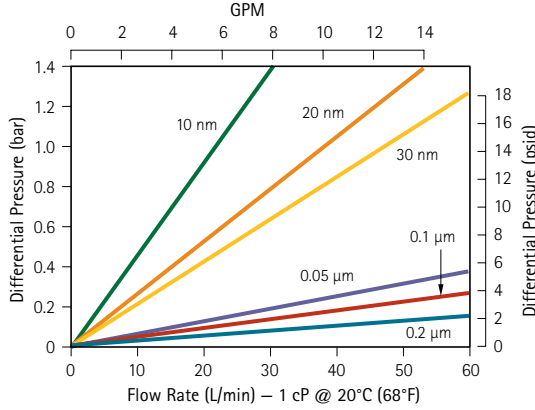
**Microgard Plus LE 20" Asymmetric UPE Filters**



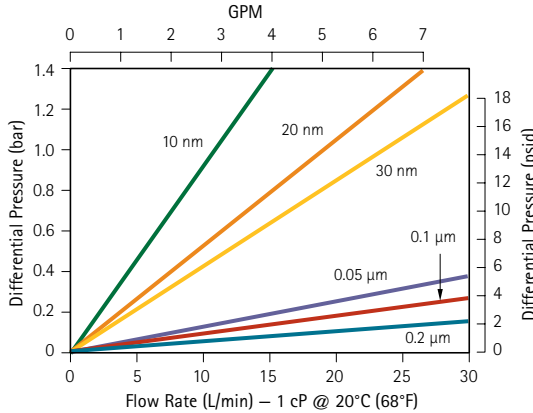
**Microgard Plus 4" Filters**



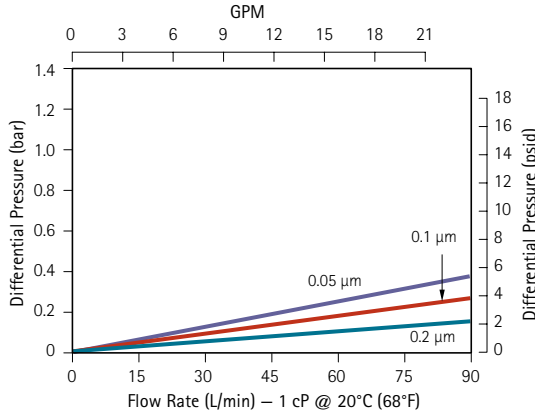
**Microgard Plus 20" Filters**



**Microgard Plus 10" Filters**



**Microgard Plus 30" Filters**



## Ordering Information

### Microgard Plus Filters

Code 0 TEV o-rings	Code 0 TEV o-rings w/Chemlock Key	Code 0 EPDM o-rings	Size	Retention Rating
CWAT0SM01	—	—	4"	10 nm
CWAX0SP01	—	—	4"	20 nm
CWAY0SP01	—	—	4"	30 nm
CWAT01MLT	—	—	10"	10 nm
CWAX01PLT	CWAX01PLTK	—	10"	20 nm
CWAY01PLT	CWAY01PLTK	CWAY01PLE	10"	30 nm
CWAZ01PLT	CWAZ01PLTK	CWAZ01PLE	10"	0.05 µm
CWAV01PLT	CWAV01PLTK	—	10"	0.10 µm
CWAG01PLT	CWAG01PLTK	—	10"	0.20 µm
CWAT02MLT	—	—	20"	10 nm
CWAX02PLT	CWAX02PLTK	—	20"	20 nm
CWAY02PLT	—	CWAY02PLE	20"	30 nm
CWAZ02PLT	CWAZ02PLTK	CWAZ02PLE	20"	0.05 µm
CWAV02PLT	CWAV02PLTK	CWAV02PLE	20"	0.10 µm
CWAV03PLT	—	CWAV03PLE	30"	0.10 µm
CWAG03PLT	—	CWAG03PLE	30"	0.20 µm

### Microgard Plus LE Filters

Code 0 TEV o-rings	Size	Retention Rating
CWSF01MST	10"	5 nm
CWST01MST	10"	10 nm
CWSF02MST	20"	5 nm
CWST02MST	20"	10 nm

### Special Cleans for Ultra-low Extractables

Size		Removal Rate
10"	20"	
CWAY 01H CT	CWAY 02H CT	0.03 µm
CWAZ 01H CT	CWAZ 02H CT	0.05 µm
CWAV 01H CT	CWAV 02H CT	0.10 µm
CWAG 01H CT	CWAG 02H CT	0.20 µm

Note: Available as standard in all sub-30 nm filters, 0.03–0.2 µm cartridges in 10" and 20" configurations are available with special cleaning to provide ultra-low extractable levels. These products are identified with a special HCT designated part number. Please consult your local Entegris account representative for ordering information/support.

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