

# The Murdock Company, Inc.



## MicroExact™

### MA SERIES

Polyethersulfone, Polypropylene, and Nylon  
Membrane Filter Elements

Murdock's new MicroExact™ pleated membrane cartridges are designed to meet the standards of a wide spectrum of industries. From our general grade pleated membranes designed for high purity applications at an economical cost to our integrity testable pharmaceutical grade membranes, these cartridges are manufactured to the most stringent production standards making them the new benchmark of the industry. Materials of construction are specifically chosen to match each application independently. The Murdock MicroExact™ cartridge should be your choice when absolute retention is essential to the process.

## Features

- The MicroExact™ Membrane Series is available in 0.03, 0.1, 0.22, 0.45, 0.65 and 1.2 pore sizes.
- Each cartridge is rinsed with 17 megohm water to flush away any remaining manufacturing debris and wash away any extractables that may effect performance
- Pharmaceutical grade elements are designed to be used as sterilizing grade cartridges
- All materials of construction meet requirements of the FDA Title 21 of The Code of Federal Regulations
- Cartridges are designed for maximum throughput and particle retention at the lowest pressure drop
- Polyethersulfone, Nylon, and Polypropylene construction offers a wide range of compatibility
- Compatible with Chemical Sanitation, Autoclave, and In-Line Sterilization methods
- Each cartridge is individually tested for integrity and is absolute at the rated pore size
- Each assembly is validated to pass USP Class 6 Toxicology extractable tests for plastics

## Application

- Bottled Water
- Wine
- Beer
- Biological Filtration
- Pharmaceuticals
- Electronics
- DI Final Filtration
- Processed Water
- Cosmetics
- Ultra Pure water
- Specialty Chemicals

# Product Specifications

## Pore Size Retention Ratings

0.03, 0.1, 0.22, 0.45, 0.65, 1.2 Microns

Polypropylene available in 0.1 and 0.22 pore sizes only

## Materials of Construction

Filtration Media:	Polyethersulfone	Nylon	Polypropylene
Filtration Media Support:	Polypropylene	Polypropylene	Polypropylene
End Caps:	Polypropylene	Polypropylene	Polypropylene
Center Core:	Polypropylene	Polypropylene	Polypropylene
Outer Support Cage:	Polypropylene	Polypropylene	Polypropylene
Method of Construction:	Thermally Bonded	Thermally Bonded	Thermally Bonded
Gaskets and O-Rings	Buna, Viton, Silicone, Ethylene Propylene, Teflon Encapsulated Silicone		

## Sterilization:

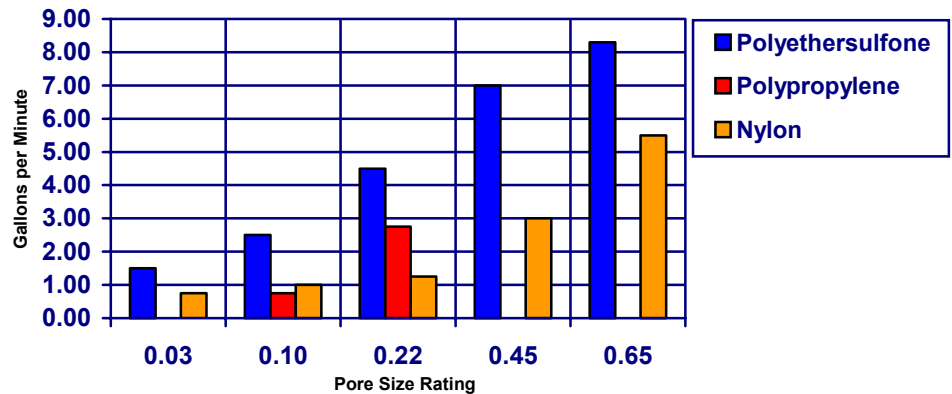
Filtered Hot Water	90°C
Autoclave:	127°C, 30 min, multiple cycles
In-Line Steam:	135°C, 30 min, multiple cycles

Chemical Sanitation protocols designed to extend the useful life of the cartridge are available from the factory.

## Integrity Testing:

Pore Size	Air Diffusion Rate
0.03µm	≤ 30 cc/min @ 60 PSI
0.1µm	≤ 30 cc/min @ 48 PSI
0.22µm	≤ 30 cc/min @ 35 PSI
0.45µm	≤ 30 cc/min @ 20 PSI
0.65µm	≤ 30 cc/min @ 15 PSI

Per 10" Length - Water Wetted Membrane



This chart represents typical water flow @ 1 PSID per 10" cartridge length. The test fluid is water at ambient temperature. Extrapolation for multiple elements tends to be linear, but as flows increase the ΔP of the housing becomes more apparent.

## Ordering Guide

MA	S	0.1 - 10		S4	S
PRODUCT CODE	MEDIA	MICRON	LENGTH	END CAP CONFIGURATION	GASKET/O-RING
MA	N – Nylon	0.03	478	S1 = DOE w/Flat Gaskets	B = Buna
	P – Polypropylene	0.1	10	S3 = 222 w/Fin End	E = Ethylene Propylene
	S – Polyethersulfone	0.22	20	S4 = 222 w/Flat End	S = Silicone
		0.45	30	S5 = 226 w/Fin End	V = Viton
		0.65	40	S6 = 226 w/Flat End	T = Teflon Encapsulated Silicone
		1.2		S7 = Internal O-Ring w/Recessed Plug	

Add a **P** to the end of the Part Number for Pharmaceutical Grade Cartridge

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