

# PPD Mini-Capsule Filters

*Pleated Polypropylene Depth Media*



**Protect critical membrane filters downstream**

**Wide range of high efficiency retention ratings**

**High capacity for long life**

**Prefiltration of active ingredients, bulk chemicals, water, parenterals, buffers, solvents**

## PPD Mini-Capsule Filters - Dimensions\*

Diameter	Length	Filtration Area*
75 mm (2.95")	Body Length = 2.85" (72.4mm) Overall Length = 3.75" to 5.19" (Varies with Choice of Inlet/Outlet)	500 cm <sup>2</sup> (0.5 ft <sup>2</sup> ) (nominal)

\*Average – Filtration area varies with media thickness and porosity.

## Flow Rates

The following table represents typical water flow at a one psi (69 mbar) pressure differential through a mini-capsule filter with 500 cm<sup>2</sup> (0.5 ft<sup>2</sup>) of media and 1/4" hose barb inlet and outlet ports. The test fluid is water at ambient temperature. Higher pressure drops are acceptable, but as flows increase the pressure drop of the housing becomes more apparent.

Pore Size	0.10 μm	0.22 μm	0.45 μm	0.65 μm	1 μm	3 μm	5 μm	10 μm	20 μm	30 μm	40 μm	60 μm	100 μm
<b>GPM</b>	0.04	0.13	0.21	0.26	0.32	0.37	0.42	0.48	0.53	0.58	0.63	1.00	1.03
<b>LPM</b>	0.15	0.50	0.80	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	3.8	3.9

## Construction Materials

<b>Housing</b>	Polypropylene
<b>Filtration Media</b>	Pleated Polypropylene Depth Media
<b>Media Support</b>	Polypropylene
<b>End Caps</b>	Polypropylene
<b>Center Core</b>	Polypropylene
<b>Outer Support Cage</b>	Polypropylene
<b>Sealing Method</b>	Thermal Bonding

## Applications

- ◆ Active Pharmaceutical Ingredients
- ◆ Buffers and Other Media
- ◆ Parenterals
- ◆ Diagnostics
- ◆ Biologicals
- ◆ Ophthalmics
- ◆ Water

PPD mini-capsules are made with pleated polypropylene depth media. The filters remove large amounts of particulate and other contaminants. PPD mini-capsules are used as pre-filters to protect critical membrane filters downstream.

Specific small-scale and laboratory applications for PPD mini-capsule filters include pre-filtration of active ingredients, water, buffers, solvents, alcohols and other liquids.

Polypropylene exhibits broad chemical compatibility, so it is particularly suited for the filtration of chemicals and solvents used in drug making processes. PPD mini-capsule elements are integrity tested during manufacture and flushed to assure cleanliness in critical process applications.

## Sanitization/Sterilization

**Autoclave** ..... 250° F (121° C), 30 min, 5+ cycles

**Chemical Sanitization** ..... Industry standard concentrations of hydrogen peroxide, peracetic acid, sodium hypochlorite and other selected chemicals.

**Note** ..... PPD mini-capsules are not suitable for inline steam sterilization.

## Maximum Operating Parameters

<b>Liquid Operational Pressure</b>	80 psi (5.5 bar) at 20 °C (68 °F)
<b>Gases Operational Pressure</b>	60 psi (4.1 bar) at 20 °C (68 °F)
<b>Operating Temperature</b>	43 °C (110 °F) at 30 psi (2.1 bar) in water
<b>Forward Differential Pressure</b>	50 psid (3.4 bard) at 20 °C (68 °F)
<b>Reverse Differential Pressure</b>	40 psid (2.7 bard) at 20 °C (68 °F)
<b>Recommended Changeout Pressure</b>	35 psid (2.4 bard)

## Integrity Test Information

All PPD mini-capsule elements are factory tested for integrity before shipment. Field duplication of these tests is not practical because of the absence of commercial portable testing equipment.

## Quality Assurance and Standards

Critical Process Filtration filters are designed for use in cGMP-compliant processes. Our state of the art manufacturing facility and quality management system are certified to meet ISO 9001 standards. Each operation from assembly and test to cleaning, drying, and packaging is done in appropriately rated clean rooms. Each filter is assigned a lot code and serial number to ensure the traceability of manufacturing data and materials. A sophisticated MRP system collects and processes real time data from manufacturing centers and inspection points, allowing quick and easy analysis driving constant improvements in quality.

## Extractables

Pharmaceutical grade filters typically exhibit low levels of non-volatile residues. The levels of bacterial endotoxins in aqueous extracts from pharmaceutical grade filters are below current USP limits as specified for water for injection.

## USP Biosafety and FDA Compliance

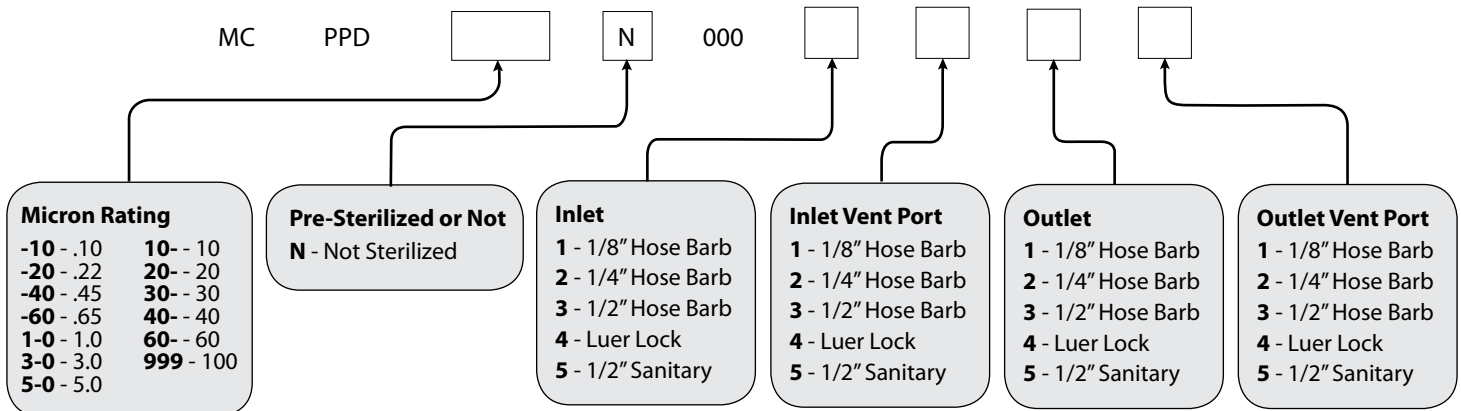
The materials used to construct pharmaceutical grade PPD mini-capsule filters are non-toxic and meet the requirements for the MEM Elution Cytotoxicity Test and the requirements for Biological Reactivity Tests in the current version of the United States Pharmacopeia (USP) for Class VI - 121 °C Plastics. In addition, the materials meet the requirements listed by the FDA as appropriate for use in articles intended for repeated food contact as specified in Title 21 CFR sections 174.5, 177.1500, 177.1520, 177.1630, 177.2440, and 177.2600 as appropriate. PPD mini-capsule filters comply with Title 21 CFR sections 210.3 (b)(6) and 211.72, for non-fiber releasing filters. The levels of bacterial endotoxins in aqueous extracts from pharmaceutical grade capsule filters are below current USP limits as specified for water for injection.

## We Do It Right the First Time

We solve filtration challenges where filters are a critical part of your manufacturing process. Our Technical Team works with you to engineer filtration solutions that fit your needs. Then we manufacture the filters in our ISO 9001 certified facility and deliver them fast, so you have the right filters when you need them.

## Ordering Information

Mini-Capsule order number example: Pharmaceutical Grade Pleated Polypropylene Depth Media, 0.45 Micron Rating, Non-Sterile, 1/2" Hose Barb Inlet, Luer Lock Inlet Vent Port, 1/2" Hose Barb Outlet, Luer Lock Outlet Vent Port = MCPPD-40N0003434.



Request a **QUOTE** from your area representative



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