

ultrapolyplea® P-PP100

The depth filter for particle removal from aqueous solutions, water and gases with an absolute retention rate.

Product description:

The ultrapolyplea® depth filter is a pleated all-polypropylene prefilter with an absolute retention rate between 0.45 µm and 40 µm.

Features:

All components meet the FDA requirements for the contact with food in accordance with CFR (Code of Federal Regulations) Title 21. ultrapolyplea® has passed the USP XX Class VI tests for plastics. The filter element is manufactured in accordance with the cGMP requirements (current Good Manufacturer Practice), has no migration of filter media, is non-fiber releasing and is thermally welded without the use of binders or other chemical additives. The filter element is pre-rinsed with 18 MΩ cm water. This leads to extremely low extractables.

The ultrapolyplea® P-PP100 –
high efficient absolute
pre- and after filter



SEM of the
ultrapolyplea® depth filter



Applications:

The ultrapolyplea® depth filter is designed and developed for the following applications:

- Particle removal from water
- Chemicals
- Solvents
- Etchants
- Biological liquids
- Pharmaceuticals
- Serums
- Cosmetics
- Food and beverage
- Syrup
- Paints and dyes
- Jet printer inks
- Photolithographical liquids
- Coatings
- Salt- and Seawater
- Coolants
- Isotonic salt solutions
- Inks and pigments
- Magnetic memory media
- Compressed air and other gases

Technical alterations reserved (Date 03/03)

| Features: | Benefits: |
|---|--|
| All-polypropylene construction | Wide chemical durability against numerous gases and liquids |
| Absolute particle removal from 0.45 µm to 40 µm | Precise particle retention at rated level, greater selection of optimum filter media |
| Tapered pore structure | Higher dirt holding capacity, larger throughputs, longer service life |
| Self-bonded filter media | Fixed pore structure, high containment of solid materials, no migration of filter media, non-fiber releasing |
| Contains no binders or adhesives | Wide solvent compatibility, extremely low extractables, immediately rinses to 18 MΩ · cm |
| Maximum effective surface area | Reduced pressure loss, high flow rates |
| Biologically inert and non-toxic | Meets FDA requirements for food contact, passed USP Class VI biological tests for plastics |

| Filtration surface: |
|---|
| 0,5 m ² per 10" element (250 mm) |

| Sterilization: |
|--|
| In-line sterilization with slow speed saturated steam 121°C – 135°C (250°F – 275°F) for 30–60 minutes Autoclave 125°C (260°F) for 30–60 minutes |
| ultrapolyplea® filter elements are capable of repeated sterilization cycles |

| Maximum differential pressure: | | | |
|--------------------------------|------|-----------------------|--------|
| Operating temp. | | Differential pressure | |
| [°C] | [°F] | [bar] | [psid] |
| 35 | 100 | 5,5 | 80 |
| 65 | 150 | 4,0 | 60 |
| 80 | 180 | 2,0 | 30 |

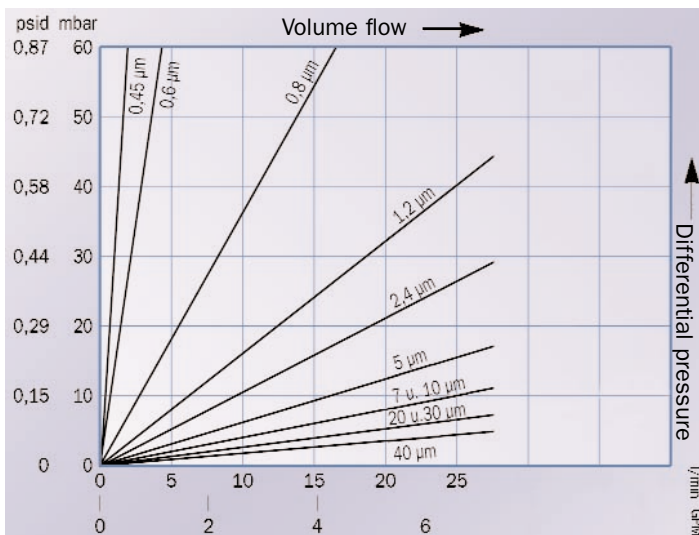
| Materials: | |
|---------------------|---------------------------------|
| Filter media: | Polypropylene |
| Upstream support: | Polypropylene |
| Downstream support: | Polypropylene |
| Outer guard: | Polypropylene |
| Endcaps: | Polypropylene |
| O-Rings: | Silicone, Buna N, EPDM or Viton |

| Particle retention: | | | |
|---------------------|-----------------|-------|--------|
| [µm] | Percent removal | | |
| | 100% | 99% | 90% |
| 0,45 | 0,45 | 0,40 | < 0,30 |
| 0,6 | 0,60 | 0,56 | 0,38 |
| 0,8 | 0,80 | 0,72 | 0,50 |
| 1,2 | 1,20 | 1,10 | 0,70 |
| 2,4 | 2,40 | 2,30 | 2,00 |
| 5 | 5,00 | 4,50 | 3,00 |
| 7 | 7,00 | 6,50 | 5,00 |
| 10 | 10,00 | 9,50 | 7,50 |
| 20 | 20,00 | 19,00 | 12,00 |
| 30 | 30,00 | 26,00 | 16,00 |
| 40 | 40,00 | 35,00 | 28,00 |

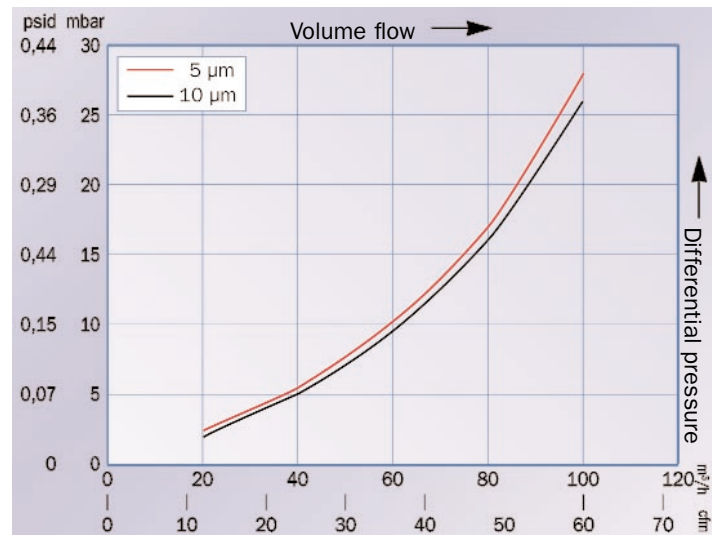
| Dimensions: |
|--|
| Diameter: 70 mm (2¾") |
| Length: 5", 10", 20", 30" or 40"; 125 mm, 250 mm, 500 mm, 750 mm, 1.000 mm (nominal) |

| Absolute retention rates: |
|--|
| 0.45 µm, 0.6 µm, 0.8 µm, 1.2 µm, 2.4 µm, 5 µm, 7 µm, 10 µm, 20 µm, 30 µm, 40 µm |

Flow rate of a 10" P-PP 100 element – water



Flow rate of a 10" P-PP 100 element – air



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