

Cellulose Acetate (CA) Membrane Filters

Cellulose Acetate Membrane Filters; are composed of pure cellulose acetate modified to offer researchers the lowest binding filters available. Due to the extremely low binding characteristics, these filters provide higher throughputs than competitive offerings and reduce filter changes when filtering protein solutions. Because of their unique strength and extremely low binding characteristics, CA (Cellulose Acetate) membrane filters are ideal for protein and enzyme filtration, tissue culture media sterilization, cold sterilization, biological fluid filtration, and other filtration applications where maximum recovery of proteins is critical.

CA (Cellulose Acetate) membranes are manufactured using a unique impregnation process that is internally supported by an inert polyester web that eliminates cracking, tearing, breaking, and distortion when handled or creased. Each filter has unequalled dimensional stability after autoclaving or steam sterilizing and is completely unaffected by temperatures up to 135°C (275°F). The exclusive impregnation process results in an acetate filter that has a burst strength of 130 psi, uniform pore size, and consistent flow rates for reliable performance.

Applications

- Protein and enzyme filtration, sterilization
- Biological fluid filtration sterilization
- Tissue culture media sterilization
- Diagnostic cytology
- Receptor binding studies
- Enhanced recovery of fastidious gram-positive organisms

Specification

| Pore Size (µm) | Thickness (µm) | Bubble Point (Bar) | Water Flow Rate Δp:0.9 Bar (mL/min/cm ²) | Air Flow Rate Δp:3 mBar (mL/min/cm ²) |
|-------------------|-------------------|-----------------------|---|--|
| 0.22 | 115 | 4 | 18.5 | - |
| 0.45 | 115 | 3.1 | 40 | 25 |
| 0.8 | 140 | 1.5 | 150 | 50 |
| 3 | 140 | 0.5 | 500 | 180 |
| 5 | 140 | 0.4 | 900 | 280 |

Order Information

| Part Number# | Description |
|--------------|--|
| MF-CA-02213 | : Cellulose Acetate Membrane Filter CA (0.22 µm)13 mm (100/pk) |
| MF-CA-02225 | : Cellulose Acetate Membrane Filter CA (0.22 µm)25 mm (100/pk) |
| MF-CA-02247 | : Cellulose Acetate Membrane Filter CA (0.22 µm)47 mm (100/pk) |
| MF-CA-02290 | : Cellulose Acetate Membrane Filter CA (0.22 µm)90 mm (100/pk) |
| MF-CA-04513 | : Cellulose Acetate Membrane Filter CA (0.45 µm)13 mm (100/pk) |
| MF-CA-04525 | : Cellulose Acetate Membrane Filter CA (0.45 µm)25 mm (100/pk) |
| MF-CA-04547 | : Cellulose Acetate Membrane Filter CA (0.45 µm)47 mm (100/pk) |
| MF-CA-04590 | : Cellulose Acetate Membrane Filter CA (0.45 µm)90 mm (100/pk) |
| MF-CA-08013 | : Cellulose Acetate Membrane Filter CA (0.80 µm)13 mm (100/pk) |
| MF-CA-08025 | : Cellulose Acetate Membrane Filter CA (0.80 µm)25 mm (100/pk) |
| MF-CA-08047 | : Cellulose Acetate Membrane Filter CA (0.80 µm)47 mm (100/pk) |
| MF-CA-08090 | : Cellulose Acetate Membrane Filter CA (0.80 µm)90 mm (100/pk) |
| MF-CA-30013 | : Cellulose Acetate Membrane Filter CA (3 µm)13 mm (100/pk) |
| MF-CA-30025 | : Cellulose Acetate Membrane Filter CA (3 µm)25 mm (100/pk) |
| MF-CA-30047 | : Cellulose Acetate Membrane Filter CA (3 µm)47 mm (100/pk) |
| MF-CA-30090 | : Cellulose Acetate Membrane Filter CA (3 µm)90 mm (100/pk) |
| MF-CA-50013 | : Cellulose Acetate Membrane Filter CA (5 µm)13 mm (100/pk) |
| MF-CA-50025 | : Cellulose Acetate Membrane Filter CA (5 µm)25 mm (100/pk) |
| MF-CA-50047 | : Cellulose Acetate Membrane Filter CA (5 µm)47 mm (100/pk) |
| MF-CA-50090 | : Cellulose Acetate Membrane Filter CA (5 µm)90 mm (100/pk) |

Please contact us for other diameters.

Mixed Cellulose Ester (MCE) Membrane Filters

Mixed Cellulose Ester Membrane Filters are polymer films with specific pore ratings. These Filters retain particles and microorganisms that exceed their pore ratings. By acting as a physical barrier its captures particles on the surface of the membrane.

These Filters (Membranes) are available in a variety of polymers, pore sizes, diameters, and surface types. Most membranes can be sterilized by autoclaving.

MCE (Mixed Cellulose Ester) gridded membranes are designed for the recovery and retention of bacteria in microbiological analysis applications. White gridded discs are designed for the recovery and retention of E.Coli bacteria in water/wastewater analysis as well as other microbiological tests. The filters are certified to meet specifications listed in APHA Standard Methods.

MCE membrane filters are composed of cellulose acetate and cellulose nitrate. Because the MCE membrane is biologically inert, it's widely used in analytical and research applications. This filter is characterized by a smoother and more uniform surface than a pure nitrocellulose filter. Also, the color contrast provided by the filter surface facilitates particle detection and minimizes eye fatigue.

Many microbiological techniques include colony counting after incubation as the standard method of quantification. Gridded filters have clearly defined grid lines spaced at 3.1 mm intervals. The special ink used is non-toxic and completely free from bacterial growth inhibitors.

White gridded discs are designed for the recovery and retention of E.Coli bacteria in water/wastewater analysis as well as other microbiological tests.

Black mixed cellulose esters (MCE) are available plain for automatic colony counting applications, as well as gridded to assist in manual counting procedures. Black MCE membranes provide contrast between residue or cell colors and the filter without having to counter-stain the membrane.

Features

- High porosity
- High protein binding can be blocked by pre-treatment or utilized in the application
- High purity: Triton-free
- Sterile options available for critical applications
- Biologically inert with good thermal stability
- The high degree of internal surface area for greater adsorption of product

Applications

| Applications | Pore Size (µm) |
|---|----------------|
| Sterilizing filtration, bioassays | 0.22 |
| Clarification of aqueous solutions, particle removal, and analysis, microbiology analysis | 0.45 |
| Air monitoring, particle monitoring, particle removal, bioassays | 0.8 |
| Clarification of aqueous solutions | 1 |
| QC of fluid holding tanks, fluid monitoring, air monitoring, particle collection and analysis | 3 |
| QC of fluid holding tanks, fluid monitoring, particle collection and analysis | 5 |
| QC of fluid holding tanks, fluid monitoring, air monitoring, particle collection and analysis | 8 |

Specification

| Pore Size (µm) | Color | Bubble Point (Bar) | Water Flow Rate (mL/min/cm ²) | Air Flow Rate (L/min/cm ²) | Porosity |
|----------------|-------|--------------------|---|--|----------|
| 0.22 | White | 3.62 | 19 | 2 | 75 |
| 0.45 | White | 2.23 | 60 | 5 | 79 |
| 0.8 | White | 0.95 | 180 | 15 | 82 |
| 1 | White | 0.77 | 270 | 20 | 82 |
| 3 | White | 0.69 | 320 | 28 | 83 |
| 5 | White | 0.56 | 560 | 30 | 84 |
| 8 | White | 0.40 | 600 | 63 | 84 |