

FlexiPor

Nanoporous Alumina FactSheet

General description

FlexiPor is available in 3 nominal pore sizes:

0.02 µm, 0.1 µm and 0.2 µm; and in 3 diameters: 13 mm, 25 mm and 47 mm.



FEATURES AND BENEFITS

High pore density

- Narrow pore size distribution
- Extensive solvent compatibility
- Minimal extractables and no sample contamination due to no additives in the manufacturing process
- Extremely low protein binding minimizes sample loss
- Virtually transparent in wet medium
- Ideal for microscopy studies

The porous aluminum oxide FlexiPor is a ceramic formed by an anodization process of pure aluminum that enables the controllable assembly of exceptionally dense and regular nanopores in a planar membrane.

As a consequence, the FlexiPor membrane has a high porosity, nanopores with high aspect ratio, biocompatibility and the potential for high sensitivity imaging and diverse surface modifications. These properties have made this unusual material attractive to a disparate set of laboratory applications.

The precise, non-deformable pore structure with no lateral crossovers between individual pores enables the use as filter material with an exact stated cut-off and delegates the flow through the membrane of particles of defined sized.

Applications

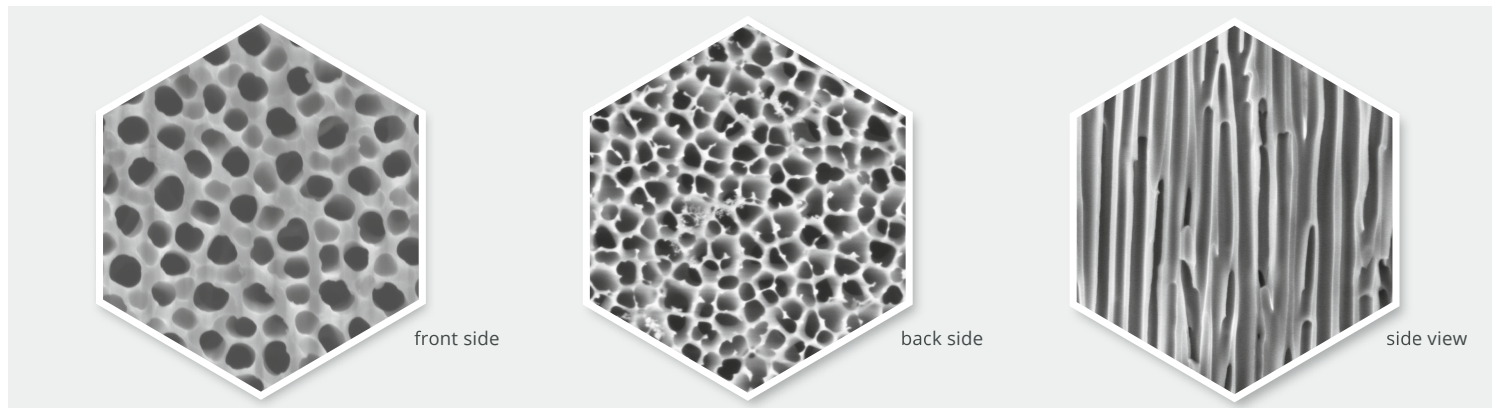
- Microplastics filtration & analysis
- HPLC mobile phase filtration and degassing
- Ultra cleaning of solvents
- Gravimetric analysis
- Liposome extrusion
- Scanning electron microscopy studies
- Bacterial analysis by epifluorescence light microscopy
- Micrometer and nanometer filtration
- Metal, polymer nanorods/nanotubes formation

The material has also minimal auto fluorescence, is nontoxic, supports cellular growth and exhibits low protein binding. The precise pore structure and narrow pore size distribution of the FlexiPor membrane ensures a high level of particle removal efficiency. The membrane is virtually transparent in wet medium, which allows a direct microscopic analysis of microorganisms and retained particulate material. No transfer to another surface is needed.

The surface of the membrane is hydrophilic and compatible with most solvents and aqueous material. No additives were needed in the production process, which prevents sample contamination and ensures minimal extractables.

The FlexiPor membrane is supplied in the form of non-supported circular membrane filters. We suggest using vacuum and/or flat tweezers for a suitable handling.

APPEARANCE AND DIMENSIONS



	FlexiPorM0.02	FlexiPorM0.1	FlexiPorM0.2
Mean pore diameter	0.02 µm	0.1 µm	0.2 µm
Thickness	60 µm	60 µm	60 µm
Autoclavable	Yes	Yes	Yes
Hydrophilic	✓	✓	✓
Material	Aluminum oxide	Aluminum oxide	Aluminum oxide
Membrane Type	13 / 25 / 47 mm	13 / 25 / 47 mm	13 / 25 / 47 mm
Operating Temp. Max.	400 °C	400 °C	400 °C
Porosity Max.	40 %	50 %	65 %
Porosity Min.	25 %	35 %	40 %
Protein Adsorption	low	low	low
Refractive Index	1.6	1.6	1.6
Solvent Resistance	very good	very good	very good
Packaging size	10 psc / 50 psc / 100 psc	10 psc / 50 psc	10 psc / 50 psc
Sterile	No	No	No