

Filters & Cassettes



Silver Membrane Filters

Specified for X-ray Diffraction Analysis

SKC silver membrane filters are made of 99.97% pure metallic silver in a controlled environment. The many desirable properties of silver membranes make them suitable for a wide range of applications.

The orientation of a silver membrane filter is important. Each side of the silver membrane filter is different. One side appears shinier than the other side does. Use the shinier side for scanning electron microscopy (SEM) and the duller of the two sides for all other filtration applications and analytical work, including X-ray diffraction. A smooth surface provides for superior collection of particulates with a typical aerosol retention of 99.99% (0.3- μm DOP at 3 L/min through 10 cm²).

- Chemically inert and resistant to high temperatures
 - Sample aggressive contaminants
 - Autoclave repeatedly without loss of performance
- Uniform porosity and thickness
- Ideal for x-ray diffraction and other analyses
 - NIOSH methods for x-ray diffraction analysis of crystalline silica, lead sulfide, boron carbide, and chrysolite asbestos
 - Organic materials by a variety of analytical methods
- Smooth surface for high surface capture of particles and easy observation
- Environmentally friendly — recyclable
 - Can be cleaned and reused

Meetapparatuur voor professionals

Locatie Groningen

Zernikepark 16a
9747 AN Groningen
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Locatie Amsterdam

Olympisch Stadion 24-2
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Silver Membrane Filter Applications

- Collection and analysis of coke oven emissions
- Collection and analysis of polyaromatic hydrocarbons
- Analysis of airborne silica
- Collection and analysis of airborne asbestos fibers by X-ray diffraction
- Collection and analysis of carbon and carbon black
- Collection and analysis of fly ash directly from smoke stacks
- Analysis of biological specimens by scanning electron microscopy, especially when being collected from suspension
- Dimensional preservation of specimens during freeze-drying
- Filtration of alcoholic beverages
- High temperature processing of viscous materials
- Performing mild chemical digestion directly at filter surface
- High temperature stack sampling
- High temperature sterilization procedures
- Filtration involving organic solvents

Chemically resistant to the following categories of chemicals:

- Alcohols
- Fuels
- Hydrocarbons
- Natural and synthetic oils
- Alkalis
- Cryogenics
- Photoresists
- Ether
- Propellants
- Oxidizers
- Halogenated hydrocarbons
- Esters
- Most organics and acids

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Performance Profile

Membrane Material	99.97% pure metallic silver
Characteristics	Conductive, excellent chemical resistance, inert, reusable
Pore Sizes Available	0.2, 0.45, 0.8, 1.2, 3.0, and 5.0 μm
Diameters Available	13, 25, 37, and 47 mm
Thickness	0.002 in/50 μm
Operational Temperature Range	Cryogenic to 1022 F (550 C)
Retention	Absolute from 0.2 μm to 5 μm
Cleaning	Clean immediately after each use; handle carefully to avoid punctures or tears.
Ignition Cleaning	Heat in laboratory muffle furnace for approximately 30 minutes.
Chemical Cleaning	Immerse in strong alkaline solution, solvent, or acid (except nitric acid, sulfuric acid, or cyanide solution).
Combination Cleaning	Combine chemical and ignition cleaning.
Ultrasonic Cleaning	Use low-intensity ultrasonics.
Plasma Etching/Cleaning	Use oxygen plasma etcher/asher.
Shelf Life - Unopened	Indefinite
Shelf Life - Opened	Silver membranes can tarnish if exposed to chemicals in the air. This is cosmetic and will not affect filtration properties. For long-term storage after opening, an inexpensive vacuum desiccator cabinet is recommended.

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Diameter (mm)	Pore Size (µm)	Support Pad Included	Pack Size	Part Number:
25	0.45	No	50	225-1802
25	0.8	No	50	225-1803
37	0.8	No	25	225-1801
47	0.8	No	25	225-1804

Preloaded Coated Silver Membrane Filters

Diameter (mm)	Filter and Cassette Specifications	Pack Size	Part Number:
25	PTFE pre-filter and porous plastic support, specially cleaned silver membrane and porous plastic support loaded into 3-piece cassette for sampling bromine or chlorine using NIOSH Method 6011	5	225-9006

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