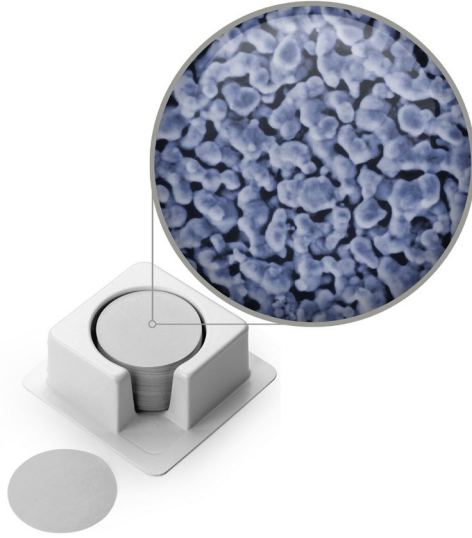


SILVER MEMBRANE FILTERS

Silver metal membrane filters are used in a variety of filtration applications. Their ability to withstand extreme chemical and thermal stress makes them ideal in processes involving aggressive fluids and high temperatures.



FEATURES

Silver Membrane Filters are constructed with pure metallic silver (99.97%). They are hydrophilic, inorganic, and feature a smooth surface topography.

Due to very low background noise and distinct diffraction peaks, silver membranes are ideal as collection media and x-ray diffraction substrate in the quantification of unknown minerals and compounds.

These filters are referenced in the National Institute for Occupational Safety and Health (NIOSH) standard for the analysis of crystalline and amorphous silica, lead sulfide, and other compounds. They can also be used in a variety of industrial hygiene, environmental testing, and general laboratory applications.

APPLICATIONS

- X-ray diffraction (XRD)
- Scanning electron microscopy (SEM)
- HPLC sample preparation
- Clarification, polishing, and sterilization of liquid samples
- USGS organic carbon, inorganic, and suspended sediment water analysis
- OSHA testing for hazardous workplace chemicals
- Chlorine monitoring
- Removal of air-borne contaminants according to NIOSH standard methods:
 - N6011 (Bromine and Chlorine)
 - N7500 (Silica, Crystalline)
 - N7501 (Silica, Amorphous)
 - N7504 (Vanadium Oxide)
 - N7505 (Lead Sulfide)
 - N7506 (Boron Carbide)
 - N9000 (Asbestos, Crysotile)

SPECIFICATIONS

GENERAL	
Sterilization	EtO, Autoclave, Gamma
Nominal Thickness	50 µm
Max. Operating Temp.¹	400 °F (204 °C)
Coefficient of Thermal Expansion	18.8 x 10 ⁶ per °C
Resistivity	1.59 x 10 ⁻⁸ Ωm at 68 °F (20 °C)
Specific Heat	0.448 cal/g at 68 °F (20 °C)

¹Silver membranes provide excellent filtration performance at temperatures up to 427°C (800°F)

PERFORMANCE BY PORE SIZE			
Pore Size (µm)	H ₂ O Flow Rate ²	Air Flow Rate ³	Bubble Point ⁴
0.22	17	0.35	13
0.45	40	0.67	9
0.80	340	1.4	7
1.20	460	2.0	5
3.00	690	2.9	3
5.00	870	5.2	2

² Units in mL/min/cm². Tested using pre-filtered H₂O at ΔP of 10 psid (0.7 bar); pre-wetted with methanol.

³ Units in L/min/cm². Initial flow rates w/ prefiltered air at 10 psi (0.7 kg/cm²).

⁴ Units in psi. Measured using methanol.