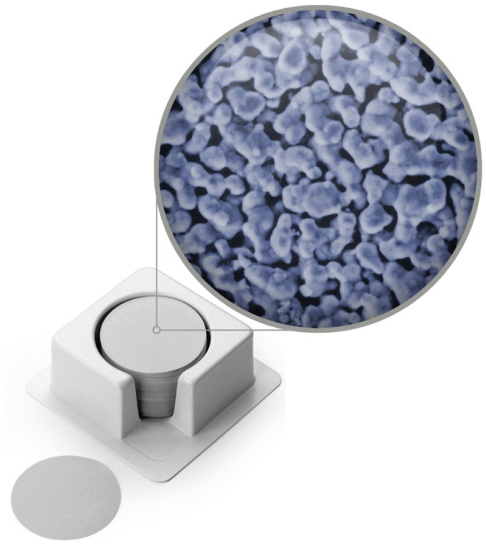
SILVER MEMBRANE FILTERS

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



Silver metal filters are constructed with pure metallic silver (99.97%) and are specified in a National Institute for Occupational Safety and Health (NIOSH) standard for the analysis of crystalline and amorphous silica, lead sulfide, boron carbide, and chrysotile asbestos. Silver metal membranes can be used as the collection media and subsequent x-ray diffraction substrate for quantifying unknown minerals and compounds.

SPECIFICATIONS

GENERAL	
Sterilization	Air, Steam, Autoclave
Nominal Thickness	50 µm
BSA Protein Binding	Not Tested
Coefficient of Thermal Expansion	18.8 x 106 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)

PERFORMANCE BY PORE SIZE				
Pore Size[1]	**H_2O Flow Rate[2]**	**Air Flow Rate[3]**	**Bubble Point[4]**	**Maximum Operating Temperature[5]**
0.20 µm	17	0.35	13	400°F (204°C)
0.45 µm	40	0.67	9	400°F (204°C)
0.80 µm	340	1.4	7	400°F (204°C)
1.20 µm	460	2.0	5	400°F (204°C)
3.00 µm	690	2.9	3	800°F (427°C)
5.00 µm	870	5.2	2	800°F (427°C)

[1] Particle retention verified by bubble point pressure
[2] Using pre-filtered H_2O at ΔP of 10 psid (0.7 bar); pre-wetted w/methanol
[3] Initial flow rates w/pre-filtered air at 10 psi (0.7 kg/cm²)
[4] Measured using methanol
[5] Silver membranes provide excellent filtration performance at temperatures up to 427°C (800°F)

APPLICATIONS

- X-ray diffraction
- Scanning electron microscopy (SEM)
- Removal of air-borne contaminants according to NIOSH industrial hygiene standards
- Respirable combustible dust (RCD) sampling and analysis
- High-temperature venting
- HPLC sample preparation
- Clarification, polishing, and sterilization of liquid samples
- USGS organic carbon, inorganic, and suspended sediment water analysis
- Soil and clay analysis
- Chlorine monitoring
- ERDA fly ash sampling
- Bacteria sampling

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