User Guide

Millex®-GS/HA/AA Filter

with MF-Millipore™ Membrane

REF **SLGSR33SS, SLGSR33SB, SLHAR33SS, SLHAR33SB, SLAAR33SS, SLAAR33SB**

- 33 mm
- Sterile
- Single use only
- Non-pyrogenic
- For research use only

Introduction

This document provides compatibility information, operating steps, and specifications for the MF-Millipore™ mixed cellulose esters family of sterile Millex® filters. The Millex® filter's bidirectional support of the filter membrane enables users to filter aqueous solutions in either direction; forward (from the syringe into the container) or backward (from the container into the syringe). The Millex® filter removes microorganisms, particles, precipitates, and undissolved powders larger than the membrane's rated pore size. These single-use filters consist of a membrane filter sealed in an acrylic housing. They are non-pyrogenic and non-toxic.

Applications

For research use only. Typical research laboratory applications include the sterile filtration (GS) and/or clarification (GS/HA/AA) of protein solutions, tissue culture media, additives, buffers, and water.

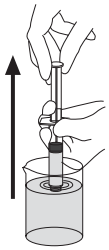
How to Use the Millex® Sterile Filter

WARNINGS

- To ensure sterility, do not use this product if the package is damaged.
- Do not use this product as an in-line filter; it was not designed for long-term continuous use.
- Do not use with syringes smaller than 10 mL because pressures in excess of the maximum pressure rating may be reached, potentially causing damage to the filter and/or personal injury.
- Filter solutions with a temperature limit of 45 °C (113 °F).
- Do not use the Millex® filter to filter emulsions or suspensions because it was not designed for that purpose.
- Do not use the Millex® filter to filter solutions containing 5 milligrams (mg) or less of active materials unless binding studies have been performed.
- Do not use the same Millex® filter to filter solutions in both directions.
- Single use only; do not re-use or resterilize.
- Discard appropriately after single use. See "Disposal" section.

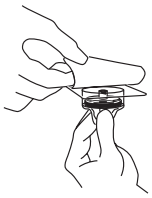
Instructions for Use

1



Fill syringe with solution to be filtered.

2

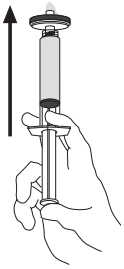


Aseptically remove cover from package.

3

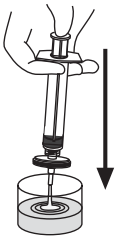
Attach syringe to filter and remove assembly from package. Attach needle to Luer-slip outlet if necessary.

4



Hold syringe with filter (and needle if attached) pointing up and "top off" by pushing a few drops through. Do not contaminate underside of filter with fingers. ⚠ Excess fluid may be hazardous and should be disposed of with care

5



Insert needle (if attached) and push plunger to deliver filtered solution.

Specifications

Materials	
Membrane	MF-Millipore™ mixed cellulose esters (MCE)
Pore size	Millex® -GS filter: 0.22 µm Millex® -HA filter: 0.45 µm Millex® -AA filter: 0.8 µm
Housing	Modified acrylic copolymer (MMA)
Dimensions	
Inlet to outlet	27 mm (1.06 in.)
Diameter	33 mm (1.30 in.)
Filtration area	4.52 cm^2 (0.70 in^2)

Temperature limit	45 °C (113 °F) maximum
Housing Pressure at 21 °C	10.3 bar (150 psi) inlet maximum
Filtration volume	10 mL to 100 mL
Hold-up volume	≤0.1 mL after air purge
Sterilization method	Ethylene oxide gas
Connections	Female Luer-Lok™ inlet; male Luer-slip outlet
Flow rate at 2.1 bar (30 psi), 21 °C	Millex® -GS filter: ≥75 mL/min Millex® -HA filter: ≥180 mL/min Millex® -AA filter: ≥360 mL/min

Chemical Compatibility

The Millex® filter with MF-Millipore™ membrane is compatible with most aqueous solutions. Based on information from technical publications, materials suppliers, and laboratory tests, we believe the agents listed in the following chart are safe to use with Millex® filters. However, because of the effects of variability in temperature, concentrations, duration of exposure, and other factors outside of our control, we do not provide or imply a warranty with respect to this information.

Chemicals

Acetic acid (5%)
Alconox® detergent (1%)*
Aliphatic ethers
Ammonium hydroxide (6 N)*
Benzyl alcohol (1%)
Boric acid (aqueous solution)*
Butyl alcohol*
Formic acid (50%)*
Freon® solvent (TF or PCA)*
Gasoline*
Glycerine (glycerol) (aqueous solution)
Guanidine hydrochloride (6 M)*
Guanidine thiocyanate (5 M)*
Helium (gas)**
Hexane
Hydrochloric acid (1 N)
Hydrogen (gas)**
HYPO (aqueous solution)
Kerosene*
Mineral spirits*
Nitrogen (gas)**
Ozone (gas)**
Pentane
Perchloroethylene
Petroleum based oils*
Petroleum ether*
Silicone oils*
Sodium carbonate
Sodium chloride (2 M)
Sodium dodecyl sulfate*
Tween® 20 surfactant*
Urea (8 M)
Water (brine)
Water (deionized)

* Test before using.

** May leak through membrane, application dependent.

Product Ordering

Purchase products online at SigmaAldrich.com/Products.

Description	Pore Size, µm	Diameter	Membrane	50/pk	250/pk
Millex®-GS	0.22	33 mm	MF-Millipore™ MCE	SLGSR33SS	SLGSR33SB
Millex®-HA	0.45	33 mm	MF-Millipore™ MCE	SLHAR33SS	SLHAR33SB
Millex®-AA	0.8	33 mm	MF-Millipore™ MCE	SLAAR33SS	SLAAR33SB

Disposal

Follow precautions for disposal of items contaminated with potentially infectious or hazardous material according to all applicable international, federal, state, and local regulations.

Notice

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