

User Guide

Millex®-GP/HP Filter

with Millipore Express® PES Membrane

REF SLGPR33RS, SLGPR33RB, SLHPR33RS, SLHPR33RB

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

Introduction

This document provides compatibility information, operating steps, and specifications for the Millipore Express® PES family of sterile 33 mm Millex® filters. 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 a modified acrylic copolymer (MMA) housing. They are non-pyrogenic and non-toxic.

Applications

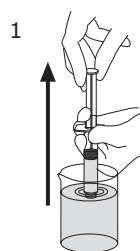
For research use only. Typical research laboratory applications include the sterile filtration (GP) and/or clarification (GP/HP) of protein solutions, tissue culture media, additives, buffers, and water.

How to Use the Millex® Sterile Filter

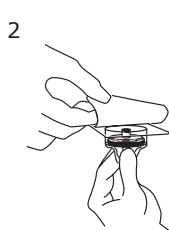
WARNINGS

- 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.
- Do not use the filter to filter fluids at temperatures above 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.
- Single use only; do not re-use or re-sterilize.
- Do not use the same syringe filter to filter solutions in both directions. This membrane is not bi-directional.
- Discard appropriately after single use. See "Disposal" section.

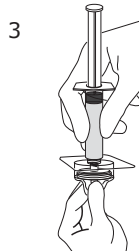
Instructions for Use



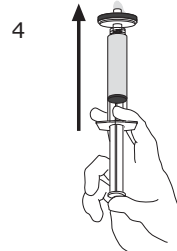
1 Fill syringe with solution to be filtered.



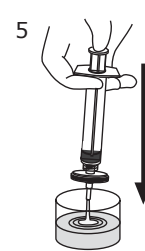
2 Aseptically remove cover from package.



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	Hydrophilic Millipore Express® polyethersulfone (PES)
Pore size	Millex®-GP filter: 0.22 µm Millex®-HP filter: 0.45 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 200 mL
Hold-up volume	≤ 0.1 mL after air purge
Sterilization Method	Gamma irradiation
Connections	Female Luer-Lok™ inlet; male Luer-slip outlet
Flow rate at 2.1 bar (30 psi), 21 °C	Millex®-GP filter: ≥ 150 mL/min Millex®-HP filter: ≥ 300 mL/min

Chemical Compatibility

The Millex® filter with Millipore Express® PES membrane is compatible with most aqueous solutions. Based on information from technical publications, materials suppliers, and laboratory tests, we believe that 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

Alconox® detergent (1%)	Guanidine hydrochloride (6 M)	Pentane
Boric acid (aqueous solution)***	Guanidine thiocyanate (5 M)	Sodium carbonate (aqueous solution)
CHAPS (aqueous solution)	Helium (gas)*	Sodium chloride (2 M)
Diethyl pyrocarbonate (0.2%)	Hexane	Sodium hydroxide (concentrated)***
Ethyl alcohol*	Hydrochloric acid (1 N)	Tween® 20 surfactant***
Ethylene glycol***	Hydrogen (gas)*	Urea (8 M)
Formaldehyde	Hydrogen peroxide (3%)*	Water (brine)
Formic acid (50%)*	HYPO (dilute solution)	Water (deionized)
Freon® solvent (TF or PCA)	Nitric acid (6 N)**	
Glycerine (glycerol)	Nitrogen (gas)*	

* May leak through membrane, application dependent.

** Extractables (may be higher).

*** Test before use.

Product Ordering

Purchase products online at [SigmaAldrich.com](https://www.sigmaaldrich.com).

Description	Pore Size, µm	Diameter	Membrane	50/pk	250/pk
Millex®-GP	0.22	33 mm	PES membrane	SLGPR33RS	SLGPR33RB
Millex®-HP	0.45	33 mm	PES membrane	SLHPR33RS	SLHPR33RB

Disposal

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

Notice

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