

# 13мм СТЕРИЛЬНЫЕ ШПРИЦЕВЫЕ ФИЛЬТРЫ MILEX



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# Millex® (13 mm) Sterile Syringe Filter

Single Use Only. For Research Use Only.

## Introduction

The 13 millimeter (mm) Millex®-GV and HV are syringe-operated filters for the sterilization or clarification of aqueous solutions (column eluates, tissue culture additives, protein pharmaceuticals, etc.) in volumes of 0.5 to 10 milliliters (mL). These solvent resistant, single-use filters incorporate the low-protein binding Durapore® polyvinylidene fluoride membrane.

## How to Use the Millex® Filter

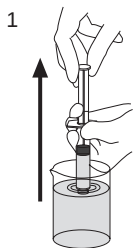
### WARNINGS:

- 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.

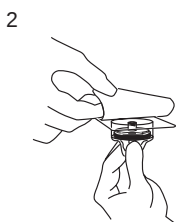
### CAUTIONS:

- Do not resterilize or reuse the Millex® filter, as we cannot assure the sterility, integrity, and performance beyond a single use.
- Do not use the Millex® filter at temperatures above 45 °C (113 °F).
- Do not use the same Millex® filter to filter solutions in both directions.
- Do not use the Millex® filter to filter emulsions or suspensions.
- Do not use the Millex® filter to filter 5 mg or less of active materials unless binding studies have been performed.

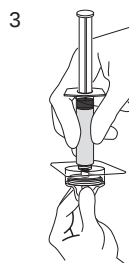
## Instructions for use



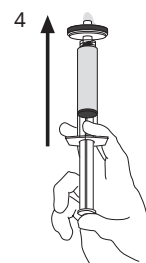
1 Fill syringe with solution to be filtered.



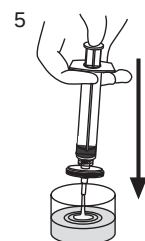
2 Aseptically remove cover from package.



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.



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

## Specifications

### Materials

|          |                                                                                                                               |
|----------|-------------------------------------------------------------------------------------------------------------------------------|
| Membrane | Low binding hydrophilic polyvinylidene fluoride (PVDF)<br>Pore size: Millex®-GV filter: 0.22 µm<br>Millex®-HV filter: 0.45 µm |
|----------|-------------------------------------------------------------------------------------------------------------------------------|

|         |                                  |
|---------|----------------------------------|
| Housing | High density polyethylene (HDPE) |
|---------|----------------------------------|

### Dimensions

|                 |                                              |
|-----------------|----------------------------------------------|
| Inlet to outlet | 21.1 mm (0.83 in.)                           |
| Diameter        | 14.7 mm (0.58 in.)                           |
| Filtration area | 0.65 cm <sup>2</sup> (0.10 in <sup>2</sup> ) |

|                             |                                               |
|-----------------------------|-----------------------------------------------|
| Temperature limit           | 45 °C (113 °F) maximum                        |
| Housing Pressure at 21 °C   | 5.2 bar (75 psi) inlet and differential       |
| Filtration volume           | 0.5–10 mL                                     |
| Hold-up volume              | ≤ 50 µL after air purge                       |
| Sterilization method        | Ethylene oxide gas                            |
| Connections                 | Female Luer-Lok™ inlet; male Luer-slip outlet |
| Millex®-GV Filter Flow Rate | ≥ 7 mL/min at 2.1 bar, 21 °C (30 psi, 70 °F)  |
| Millex®-HV Filter Flow Rate | ≥ 12 mL/min 0.7 bar, 21 °C (10 psi, 70 °F)    |

## Chemical Compatibility

Millex® filters with Durapore® membrane are 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 table 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. Agents that are not listed should be tested with the Millex® filters prior to use.

### Chemicals

|                          |                           |                      |
|--------------------------|---------------------------|----------------------|
| Acetic acid (5%)         | Ethylene glycol           | Isopropyl alcohol    |
| Acetic acid, glacial     | Formaldehyde              | Kerosene             |
| Acetonitrile             | Freon® solvent, TF or PCA | Methyl alcohol       |
| Ammonium hydroxide (6 N) | Gasoline                  | Mineral spirits      |
| Amyl alcohol             | Glycerine (glycerol)      | Pentane              |
| Benzyl alcohol (1%)      | Helium                    | Petroleum based oils |
| Boric acid               | Hexane                    | Phenol (0.5%)        |
| Brine (sea water)        | Hydrochloric acid         | Silicone oils        |
| Butyl alcohol            | Hydrofluoric acid         | Sodium hydroxide     |
| Cyclohexanone            | Hydrogen (gas)            | Trichloroacetic acid |
| Developers (photo)       | Hypo (photo)              | Trichloroethane      |
| Ethyl alcohol            | Isobutyl alcohol          |                      |

## Product Ordering

| Description | Pore Size, µm | Membrane     | Cat. No.  | Qty / pk |
|-------------|---------------|--------------|-----------|----------|
| Millex®-GV  | 0.22          | PES membrane | SLGVR13SL | 100      |
| Millex®-HV  | 0.45          | PES membrane | SLHVR13SL | 100      |

## Notice

We provide information and advice to our customers on application technologies and regulatory matters to the best of our knowledge and ability, but without obligation or liability. Existing laws and regulations are to be observed in all cases by our customers. This also applies in respect to any rights of third parties. Our information and advice do not relieve our customers of their own responsibility for checking the suitability of our products for the envisaged purpose.

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