

# Certificate of Quality

The Polyethersulfone Membrane Cartridge Filters have been manufactured in a **mdi** facility in compliance with **ISO 9001** regulations using **validated production processes**.

## AseptiSure HSPES Membrane Cartridge Filters

Catalog No. : CPHX5401A0SS101  
 Type : CPHS  
 Pore Size : 0.2  $\mu\text{m}$  (0.45  $\mu\text{m}$  + 0.2  $\mu\text{m}$ )  
 Lot Number : CS5534L SI.No. 076  
 Manufacturing Date : 2024 - 12  
 Expiry Date : 2029 - 12

### SPECIFICATION

<b>Length</b>	10"
<b>Filter Media</b>	Polyethersulfone Membrane
<b>Drainage Layers</b>	Polyester
<b>Plastic Components</b>	Polypropylene
<b>Differential Pressure</b>	< 3.5 Kg/cm <sup>2</sup> at 25°C
<b>Maximum operating Temperature</b>	80 °C at < 2 Kg/cm <sup>2</sup>
<b>Reverse Pressure</b>	< 0.7 Kg/cm <sup>2</sup> at 25°C
<b>Sterilization</b>	By Autoclaving or Steam-in-place (SIP)

### LOT RELEASE CRITERIA

#### 100% Integrity Tested

: The cartridge filter has been tested for integrity by Air Diffusion Flow test and Bubble Point test using DI water.

Diffusion flows with DI water were:  $\leq 30$  ml/min @ 2.60 kg/cm<sup>2</sup>

Bubble point value with DI water was:  $\geq 50$  psi (3.44 Bar)

#### Typical Water Flow Rate

: 30 lpm @ 0.70 Kg/cm<sup>2</sup> @ 27 °C

#### Microbial Challenge Test

: Retains  $\geq 10^7$  organisms/cm<sup>2</sup> of *B. diminuta* ATCC 19146 challenge as per ASTM F838 methodology.

### VALIDATED FOR

#### Bubble point (50% IPA)

: The filter is certified/validated for integrity by Bubble point test using 50% IPA/Water solution. Bubble point  $\geq 18$  psi (1.24 Bar)

#### Heat Stability

: Maintains integrity after 25 Steam sterilization cycles at 135 °C for 30 minutes each.

#### Bacterial Endotoxin

: Aqueous extracts exhibit < 0.25 EU/mL as established by Limulus Amebocyte Lysate (LAL) test as per USP <85>.

#### Extractable

: Within limits as specified in USP.

#### Oxidizable matter

: Passes test as per USP.

#### Biosafety

: Passes Biological Reactivity Tests, *In Vivo* for Class VI plastic as described in USP <88>.

#### Cytotoxicity

: Passes Biological Reactivity Tests, *In Vitro* as described in USP <87>.

#### Indirect Food Additives

: Passes as per FDA 21CFR 177.1520(a)1(i).

#### Particle Release

: Passes test as per USP <788>, "Particulate matter in Injections".

#### Fiber Release

: Complies with FDA 21CFR 210.3(b)(6).

#### Total Organic Carbon

: Meets USP <643> limit of 500 ppb for total organic carbon after flushing specified volume of water for injection.

#### Conductivity

: Meets USP <645> limit of 1.3  $\mu\text{S}/\text{cm}$  at 25 °C for water conductivity after flushing specified volume of water for injection.

### CUSTOMER SUPPORT

**mdi** offers its unique interdisciplinary skills to provide solutions to specific problems. Please contact our factory or the local application specialist.

T. No.: COQ/CAR/004-04



Head of Quality Assurance

Issue Date: 17-Dec-24

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