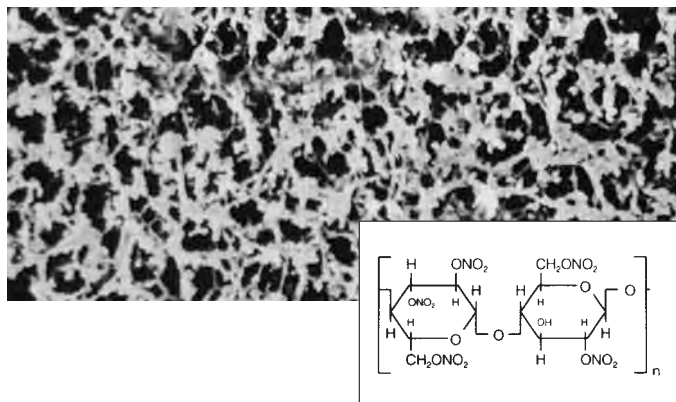


### 3.1 Cellulose Nitrate Membranes

#### Type 11403 | 13903; White, Black or Green Grid, 1.2 µm



#### Description

Gridded cellulose nitrate membranes are the optimal, and most commonly used filters for microbiological testing of water, beverages, foods, pharmaceuticals, cosmetics and many other similar products.

#### Color

11403 white with black grid  
13903 white with green grid

#### Material

Cellulose nitrate (cellulose ester)

#### Reaction to Water

Hydrophilic

#### Pore Size (nominal)

1.2 µm

#### Structure

Symmetric

#### Applications and Features

##### Typical Applications

Microbiological examination of soft drinks, fruit juices and other products that contain particles (like fruit pulp) and are therefore hard to filter.

##### Special Features

- high flow rate
- good growth of yeasts and molds

##### Technical Advantages

- Easier filtration and larger volumes possible for samples that contain particles or have a high viscosity.

#### Typical Performance

##### Adsorption, Non-specific

The non-specific adsorption decreases with increasing pore size, see example for  $\gamma$ -globulin.

##### Bubble Point with Water (DIN 58355)

11403 1.0 bar | ~ 15 psi

13903 1.0 bar | ~ 15 psi

##### Burst Pressure

0.2 bar | ~ 2.9 psi

##### Chemical Compatibility

Compatible with aqueous solutions (pH 4–8), hydrocarbons and several other organic solvents.

##### Extractables with Water

< 1%

##### Flow Rate for Air [L/m<sup>2</sup>/s 200 Pa]

according to\*

11403 7.5 l/min

13903 7.5 l/min

corresponding water flow rate:

approx. 320 ml/min at  $\Delta p = 1 \text{ bar}$  | ~ 14.5 psi

##### Sterilization Methods

Autoclaving at 121°C, ETO sterilization,  $\gamma$ -irradiation (25 kGy)

##### Thermal Resistance

130°C max.

##### Thickness (DIN 53105)

Approx. 130 µm

##### Sterility (AC)

Zero growth

#### Order Numbers

25 mm diameter:

11403-025N, pack of 100

47 mm diameter:

11403-047N, pack of 100

11403-047ACN, pack of 100

individual sterile packed

11403-047R, pack of 1000

11403-047ACR, pack of 1000

individual sterile packed

13903-047ACN, pack of 100

individual sterile packed

50 mm diameter:

11403-050N, pack of 100

11403-050ACN, pack of 100

individual sterile packed

11403-050ACR, pack of 1000

individual sterile packed

\* ASTM D737  
DIN 53'887  
ISO 9'237