



Adsorption
(γ -Globulin, approx. 125 $\mu\text{g}/\text{cm}^2$)

Cellulose Nitrate Membrane (Ester) Filters, Type 113, for Sample Pretreatment, Particle Testing and Chemotaxis

Cellulose nitrate is a standard material for membrane filters and offers a wide range of pore sizes from 8 μm to 0.45 μm . The larger pore sizes (8 μm , 5 μm , 3 μm) find use for chemotaxis and cell retention, the 0.45 μm pore size for particle collection.

The high non-specific adsorption of the cellulose nitrate membrane is very advantageous for diagnostic kits. The adsorption decreases with increasing pore size, as shown in the diagram.

Typical performance for cellulose nitrate (ester) membrane filters

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|------------------------------------|--|
| Adsorption | See diagram |
| Bubble point acc. DIN 58355 | Wetted with water, minimum values: 0.3 bar (30 kPa, 4.35 psi) for 8 μm pore size, 11301 0.5 bar (50 kPa, 7.25 psi) for 5 μm pore size, 11342 0.6 bar (60 kPa, 8.7 psi) for 3 μm pore size, 11302 1.0 bar (100 kPa, 14.5 psi) for 1.2 μm pore size, 11303 1.4 bar (140 kPa, 20.3 psi) for 0.8 μm pore size, 11304 2.0 bar (200 kPa, 29 psi) for 0.65 μm pore size, 11305 2.4 bar (240 kPa, 34.8 psi) for 0.45 μm pore size, 11306 |
| Chemical compatibility | Resistant to aqueous solutions in the pH-range 4-8 to hydrocarbons and to some solvents. |
| Extractables with water | Less than 1% |
| Flow rate for water acc. DIN 58355 | Average values per cm^2 area at $\Delta p = 1$ bar (100 kPa, 14.5 psi): 750 ml/min for 8 μm pore size, 11301 570 ml/min for 5 μm pore size, 11342 430 ml/min for 3 μm pore size, 11302 320 ml/min for 1.2 μm pore size, 11303 200 ml/min for 0.8 μm pore size, 11304 130 ml/min for 0.65 μm pore size, 11305 69 ml/min for 0.45 μm pore size, 11306 |
| Material | Cellulose nitrate |
| Sterilization | By autoclaving at 121°C, gamma radiation (25 kGy) or with ethylene oxide. |
| Thermal stability | Max. temperature 130°C |
| Thickness acc. DIN 53105 | 130 μm |

Order numbers for cellulose nitrate membrane filters, type 113

| | | |
|----------------|-------------|----------------------------------|
| 13 mm diameter | 11301-013 N | 8 μm , pack of 100 |
| | 11342-013 N | 5 μm , pack of 100 |
| | 11302-013 N | 3 μm , pack of 100 |
| | 11304-013 N | 0.8 μm , pack of 100 |
| | 11306-013 N | 0.45 μm , pack of 100 |
| 20 mm diameter | 11304-020 N | 0.8 μm , pack of 100 |
| | 11306-020 N | 0.45 μm , pack of 100 |
| 25 mm diameter | 11301-025 N | 8 μm , pack of 100 |
| | 11342-025 N | 5 μm , pack of 100 |
| | 11302-025 N | 3 μm , pack of 100 |
| | 11303-025 N | 1.2 μm , pack of 100 |
| | 11304-025 N | 0.8 μm , pack of 100 |
| | 11305-025 N | 0.65 μm , pack of 100 |
| | 11306-025 N | 0.45 μm , pack of 100 |
| 30 mm diameter | 11306-030 N | 0.45 μm , pack of 100 |
| 37 mm diameter | 11301-037 N | 8 μm , pack of 100 |
| | 11304-037 N | 0.8 μm , pack of 100 |
| | 11306-037 N | 0.45 μm , pack of 100 |

Order numbers for cellulose nitrate membrane filters, type 113

| | | |
|-----------------|---------------|---|
| 47 mm diameter | 11301-047 N | 8 µm, pack of 100 |
| | 11342-047 N | 5 µm, pack of 100 |
| | 11302-047 N | 3 µm, pack of 100 |
| | 11303-047 N | 1.2 µm, pack of 100 |
| | 11304-047 N | 0.8 µm, pack of 100 |
| | 11305-047 N | 0.65 µm, pack of 100 |
| | 11306-047 N | 0.45 µm, pack of 100 |
| 50 mm diameter | 11301-050 N | 8 µm, pack of 100 |
| | 11342-050 N | 5 µm, pack of 100 |
| | 11302-050 N | 3 µm, pack of 100 |
| | 11303-050 N | 1.2 µm, pack of 100 |
| | 11304-050 N | 0.8 µm, pack of 100 |
| | 11305-050 N | 0.65 µm, pack of 100 |
| | 11306-050 N | 0.45 µm, pack of 100 |
| 80 mm diameter | 11301-080 ALN | 8 µm, pack of 100 sterile, non-individually packed |
| 85 mm diameter | 11306-085 N | 0.45 µm, pack of 100 |
| 90 mm diameter | 11342-090 G | 5 µm, pack of 25 |
| | 11303-090 G | 1.2 µm, pack of 25 |
| | 11304-090 G | 0.8 µm, pack of 25 |
| | 11306-090 G | 0.45 µm, pack of 25 |
| | 11306-090 N | 0.45 µm, pack of 100 |
| 142 mm diameter | 11301-142 G | 8 µm, pack of 25 |
| | 11302-142 G | 3 µm, pack of 25 |
| | 11303-142 G | 1.2 µm, pack of 25 |
| | 11304-142 G | 0.8 µm, pack of 25 |
| | 11304-142 N | 0.8 µm, pack of 100 |
| | 11305-142 G | 0.65 µm, pack of 25 |
| | 11306-142 G | 0.45 µm, pack of 25 |
| | 11306-142 N | 0.45 µm, pack of 100 |
| | 11342-142 G | 5 µm, pack of 25 |
| | 11342-142 N | 5 µm, pack of 100 |
| 293 mm diameter | 11301-293 G | 8 µm, pack of 25 |
| | 11303-293 G | 1.2 µm, pack of 25 |
| | 11304-293 G | 0.8 µm, pack of 25 |
| | 11304-293 N | 0.8 µm, pack of 100 |
| | 11306-293 G | 0.45 µm, pack of 25 |
| | 11306-293 N | 0.45 µm, pack of 100 |
| | 11342-293 G | 5 µm, pack of 25 |

47 mm and 50 mm filters are, in some pore sizes, sterile, individually packed, available in packs of 100.

Order numbers

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|----------------|---------------|---------|
| 47 mm diameter | 11301-047 ACN | 8 µm |
| | 11302-047 ACN | 3 µm |
| | 11303-047 ACN | 1.2 µm |
| | 11304-047 ACN | 0.8 µm |
| | 11305-047 ACN | 0.65 µm |
| | 11306-047 ACN | 0.45 µm |
| 50 mm diameter | 11301-050 ACN | 8 µm |
| | 11302-050 ACN | 3 µm |
| | 11303-050 ACN | 1.2 µm |
| | 11304-050 ACN | 0.8 µm |
| | 11305-050 ACN | 0.65 µm |
| | 11306-050 ACN | 0.45 µm |