

Membranes

Membranes enable a very convenient, fast and economical separation. Often they are also used as a neutral sample support for further analysis.

Overview of available membrane filters

Material and properties	Type	Pore sizes [µm]	Page
Cellulose acetate (CA) • Suitable for aqueous and many alcoholic media • Low protein binding capacity • Thermally stable up to 180 °C	PORAFIL® CA	0.2 · 0.45 · 0.8 · 1.2	29
Cellulose mixed esters • Suitable for aqueous solutions • Also available sterile and/or with grid • Recommended for gravimetric analysis • Autoclaving possible at 121 °C • Economical	CHROMAFIL® CA PORAFIL® CM	0.2 · 0.45 0.2 · 0.45	36 28
Cellulose mixed esters, fabric-reinforced • Suitable for aqueous solutions • Higher mechanical stability than PORAFIL® CM	CHROMAFIL® MV PORAFIL® MV	0.2 · 0.45 0.2 · 0.45 · 0.8	36 29
Cellulose nitrate (NC) • Thermally stable up to 125 °C • Autoclaving possible at 121 °C	PORAFIL® NC	0.2 · 0.45	29
Glass fibre (GF) • Inert filter, optional prefilter • For highly contaminated samples	CHROMAFIL® GF	1.0	37
Hydrophilized polytetrafluoroethylene (H-PTFE) • Hydrophobic membrane with additional hydrophilic properties • For polar and nonpolar sample solutions • Resistant towards all kinds of solvents as well as acids and bases	CHROMAFIL H-PTFE	0.2 · 0.45	35
Polyamide (PA) • For aqueous and organic solvents • Thermally stable up to 135 °C	CHROMAFIL® PA	0.2 · 0.45	38
Polycarbonate (PC) • Very low halogen blank values • Suitable for quantitative AOX determination • Thermally stable up to 140 °C	PORAFIL® PC	0.4	30
Polyester • Chemically very resistant membrane (not as stable as PTFE) • Suitable for TOC/DOC determination • Thermally stable up to 150 °C	PORAFIL® PE CHROMAFIL® PET CHROMAFIL® GF/PET	0.2 · 0.4 · 1.0 · 5.0 0.2 · 0.45 · 1.20 1.0/0.2 · 1.0/0.45	30 34 33
Polyethersulfon (PES) • For aqueous and slightly organic solvents • Suitable for organic acids	CHROMAFIL® PES	0.2 · 0.45 · 5.00	37
Polytetrafluoroethylene (PTFE) • Hydrophobic membrane, suitable for almost all solvents, chemical resistance towards acids and bases • For filtration of aggressive media • Thermally stable up to 145 °C	PORAFIL® TE CHROMAFIL® PTFE	0.2 · 0.45 · 1.0 · 3.0 0.2 · 0.45	30 35
Polyvinylidene difluoride (PVDF) • Hydrophobic membrane, suitable for filtration of polar and nonpolar solutions • Chemically inert towards many solvents, similar stability to PTFE	CHROMAFIL® PVDF CHROMAFIL® GF/PVDF	0.2 · 0.45 1.0/0.45	38 33
Regenerated cellulose (RC) • Suitable for all media except strong acids and bases • Thermally stable up to 180 °C	PORAFIL® RC CHROMAFIL® RC CHROMAFIL® GF/RC	0.2 · 0.45 0.2 · 0.45 1.0/0.2 · 1.0/0.45	30 34 33

Chemical resistance of filter membranes

Substances	CA	CM/MV	NC	PC	PE/PET	TE/PTFE	H-PTFE	RC	PA	PES	PVDF	GF
Hydrocarbons												
Aliphatic hydrocarbons	+	+	+	+	+	+	+	+	+	+	+	-
Petroleum ether	+	+	+	+	+	+	+	+	+	+	+	-
Cyclohexane	+	+	-	-	+	+	+	+	+	+	+	-
Aromatic hydrocarbons	+	+	+	+	+	+	+	+	+	+	+	-
Benzene	+	+	+	+	+	+	+	+	+	+	+	+
Chloroform	-	+	+	-	+	+	+	+	+	-	+	-
Methylene chloride	-	+	-	-	+	+	+	+	+	-	+	-
Trichloroethylene	+	+	+	-	+	+	+	+	+	+	+	+
Tetrachloromethane	+	+	+	+	+	+	+	+	+	+	+	+
Chlorobenzene, freon	+	+	+	+	+	+	+	+	-	-	-	-
Gasoline	+	+	+	+	+	+	+	+	+	+	+	-
Acetonitrile	-	-	-	-	+	+	+	+	+	+	+	+
Alcohols												
Methanol, 98 %	+	-	-	-	+	+	+	+	+	+	+	-
Butanol	+	+	+	+	+	+	+	+	+	+	+	+
Ethanol, 98 %	+	-	+	+	+	+	+	+	+	+	+	+
Ethanol, 70 %	+	+	+	+	+	+	+	+	+	+	+	+
Isopropanol	+	+	+	+	+	+	+	+	+	+	+	-
n-Propanol	+	+	+	+	+	+	+	+	+	+	+	+
Amyl alcohol	+	+	+	+	+	+	+	+	-	-	-	-
Benzyl alcohol	+	+	+	+	+	+	+	+	-	-	-	-
Ethylene glycol	+	+	+	+	+	+	+	+	+	+	+	+
Glycerine	+	+	+	+	+	+	+	+	-	-	-	-
Cyclohexanol	-	-	+	-	+	+	+	+	-	-	-	-
Polyethylene glycol 400	+	+	+	+	+	+	+	+	-	-	-	-
Aldehydes, ketones												
Acetaldehyde	-	-	-	-	+	+	+	+	+	-	-	+
Acetone	-	-	-	-	+	+	+	+	+	+	+	+
Cyclohexanone	-	-	-	-	+	+	+	+	-	-	-	-
Methyl ethyl ketone	+	-	-	-	+	+	+	+	-	-	-	-
Methyl isobutyl ketone	+	+	-	-	+	+	+	+	-	-	-	-
Esters												
Methyl acetate	-	-	-	-	+	+	+	+	-	-	-	-
Ethyl acetate	-	-	-	-	+	+	+	+	+	+	+	+
Amyl, propyl, butyl acetate	+	-	-	-	+	+	+	+	-	-	-	-
Methyl glycol acetate	+	-	+	+	+	+	+	+	-	-	-	-
Benzyl benzoate	+	+	+	-	+	+	+	+	-	-	-	-
i-Propyl myristate	+	+	+	+	+	+	+	-	-	-	-	-
Tricresyl phosphate	+	+	+	+	+	+	+	-	-	-	-	-
Ethers and sulfoxides												
Diethyl ether	+	+	-	+	+	+	+	+	+	+	+	+
Dioxan	-	-	-	-	+	+	+	+	+	+	+	+
Tetrahydrofuran	-	-	-	-	+	+	+	+	+	+	+	+
Dimethylsulfoxide	-	-	-	-	+	+	+	+	-	-	-	-

Substances	CA	CM/MV	NC	PC	PE/PET	TE/PTFE	H-PTFE	RC	PA	PES	PVDF	GF
Solvents containing nitrogen												
Dimethylformamide	-	-	-	-	+	+	+	+	+	-	+	+
Dimethylacetamide	-	-	-	+	+	+	+	+	-	-	-	-
Triethanolamine	+	+	+	+	+	+	+	+	-	-	-	-
Aniline	-	+	+	-	+	+	+	+	-	-	-	-
Pyridine	-	-	-	-	+	+	+	+	-	-	-	-
Acids												
Hydrochloric acid 30 %	-	-	-	-	+	+	+	+	-	-	+	+
Hydrochloric acid 25 %	-	-	+	-	+	+	+	+	-	-	-	+
Nitric acid 65 %	-	-	+	-	+	+	+	+	-	-	+	+
Nitric acid 1 mol/L	+	+	+	-	+	+	+	+	-	-	-	+
Sulfuric acid 96 %	-	-	-	-	+	+	+	+	-	-	-	-
Phosphoric acid 80 %	-	-	-	-	+	+	+	+	+	-	+	+
Phosphoric acid 25 %	+	+	+	+	+	+	+	+	-	-	-	+
Formic acid 100 %	-	+	-	+	+	+	+	+	+	+	+	+
Formic acid 25 %	+	-	+	+	+	+	+	+	-	-	-	+
Acetic acid 96 %	-	-	-	+	+	+	+	+	-	-	+	+
Acetic acid 25 %	+	+	-	+	+	+	+	+	-	-	-	+
Oxalic acid 10 % aq.	-	+	-	-	+	+	+	+	+	+	+	-
Trichloroacetic acid 10 %	+	-	+	+	+	+	+	+	-	-	-	-
Bases												
Ammonia 25 %	+	-	+	-	+	+	+	+	+	+	+	+
Ammonia 1 mol/L	+	+	+	-	+	+	+	+	-	-	-	-
Sodium hydroxide 1 mol/L	-	-	-	-	+	+	+	+	+	+	-	-
Potassium hydroxide 1 mol/L	-	-	-	-	+	+	+	+	+	+	-	-
Miscellaneous												
Aqueous phenol solution	-	+	-	-	+	+	+	+	-	-	-	-
Formalin 30 %	+	+	+	+	+	+	+	+	-	-	-	-
Turpentine oil	+	+	+	+	+	+	+	+	-	-	-	-
Castor oil	+	+	+	+	+	+	+	+	-	-	-	-
Cremophor 2 %	+	+	+	+	+	+	+	+	-	-	-	-
Hydrogen peroxide 30 %	+	+	+	+	+	+	+	+	-	-	-	-
Photoresist	-	-	+	+	+	+	+	+	-	-	-	-
Nail varnish remover	-	-	+	+	+	+	+	+	-	-	-	-

⊕ : resistant ⊕ : partly resistant ⊖ : not resistant
 - : no information

PORAFIL® membrane filters

Cellulose mixed ester membranes · PORAFIL® CM

Membranes of cellulose mixed esters are ideal for gravimetric analysis. They are particularly suited for aqueous solutions. The hydrophilic membrane is thermally stable to 125 °C and can be autoclaved at 121 °C. This membrane is often used for contamination tests.

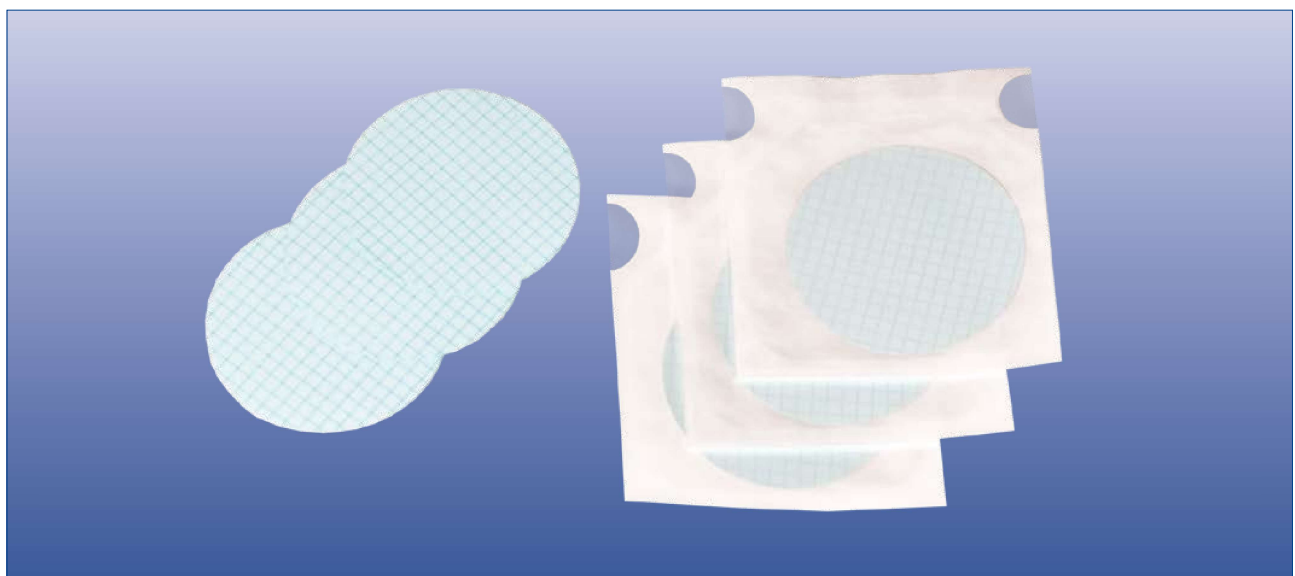
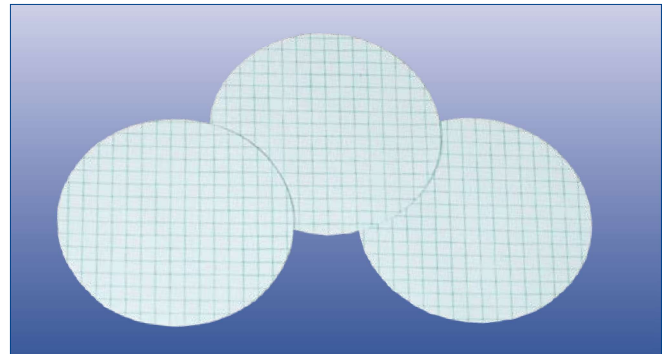
Ordering information

PORAFIL® CM sterile/not sterile

Ø	Color	Sterile	Grid	Pack of	REF
Pore size 0.45 µm					
47 mm	white	✓	black	100	653 000 45 047
50 mm	white	✓	black	100	653 000 45 050
50 mm	black	✓	white	100	653 100 45 050
50 mm	green	✓	black	100	653 200 45 050
47 mm	white	–	black	100	656 000 45 047
47 mm	black	–	white	100	656 100 45 047
47 mm	green	–	black	100	656 200 45 047
50 mm	white	–	black	100	656 000 45 050
50 mm	black	–	white	100	656 100 45 050
50 mm	green	–	black	100	656 200 45 050

PORAFIL® CM white, not sterile, no grid

Ø	Pack of	REF
Pore size 0.20 µm		
13 mm	100	651 000 20 013
47 mm	100	651 000 20 047
50 mm	100	651 000 20 050
142 mm	25	651 000 20 142
Pore size 0.45 µm		
13 mm	100	651 000 45 013
25 mm	100	651 000 45 025
47 mm	100	651 000 45 047
50 mm	100	651 000 45 050
100 mm	25	651 000 45 100
142 mm	25	651 000 45 142
220 mm	25	651 000 45 220



Cellulose mixed ester membranes, fabric-reinforced · PORAFIL® MV

These cellulose mixed ester membranes are reinforced with a polyester fabric. Their filtration properties are very similar to membranes PORAFIL® CM, however, they are mechanically much more stable.

Ordering information

Ø	Pack of	Pore size 0.2 µm	Pore size 0.45 µm	Pore size 0.8 µm
13 mm	50	650 000 20 013	650 000 45 013	650 000 80 013
25 mm	50	650 000 20 025	650 000 45 025	650 000 80 025
47 mm	50	650 000 20 047	650 000 45 047	650 000 80 047
50 mm	50	650 000 20 050	650 000 45 050	650 000 80 050
90 mm	25	650 000 20 090	650 000 45 090	650 000 80 090
100 mm	25	650 000 20 100	650 000 45 100	650 000 80 100
142 mm	25	650 000 20 142	650 000 45 142	650 000 80 142
220 mm	25	650 000 20 220	650 000 45 220	650 000 80 220

Cellulose acetate membranes · PORAFIL® CA

These membranes of cellulose acetate have a low protein binding capacity and are suited for aqueous and alcoholic media. The membranes are hydrophilic and can be used for hot gases up to 180 °C. They can be sterilised.

Ordering information

Ø	Pack of	Pore size 0.2 µm	Pore size 0.45 µm	Pore size 0.8 µm	Pore size 1.2 µm
13 mm	100	680 000 20 013	680 000 45 013	680 000 80 013	680 00 120 013
25 mm	100	680 000 20 025	680 000 45 025	680 000 80 025	680 00 120 025
47 mm	100	680 000 20 047	680 000 45 047	680 000 80 047	680 00 120 047
50 mm	100	680 000 20 050	680 000 45 050	680 000 80 050	680 00 120 050
90 mm	50	680 000 20 090	680 000 45 090	680 000 80 090	680 00 120 090
100 mm	25	680 000 20 100	680 000 45 100	680 000 80 100	680 00 120 100
142 mm	25	680 000 20 142	680 000 45 142	680 000 80 142	680 00 120 142
220 mm	25	680 000 20 220	680 000 45 220	680 000 80 220	680 00 120 220

Nitrocellulose membranes · PORAFIL® NC

PORAFIL® NC membranes are made from cellulose nitrate. They are easily wettable and suited for filtration of aqueous solutions. In dry atmosphere these membranes are thermally stable to 125 °C and can be autoclaved at 121 °C.

Ordering information

Ø	Pack of	Pore size 0.2 µm	Pore size 0.45 µm
13 mm	50	657 002 00 13	657 004 50 13
25 mm	50	657 002 00 25	657 004 50 25
47 mm	50	657 002 00 47	657 004 50 47
50 mm	50	657 002 00 50	657 004 50 50
90 mm	50	657 002 00 90	657 004 50 90
100 mm	25	657 002 01 00	657 004 51 00
142 mm	25	657 002 01 42	657 004 51 42
220 mm	25	657 002 02 20	657 004 52 20



Polytetrafluoroethylene membranes · PORAFIL® TE

Membranes of polytetrafluoroethylene (PTFE) are particularly suited for aggressive media, since they are chemically inert towards aqueous and organic solutions as well as towards concentrated acids and bases. These membranes are hydrophobic, thus the pressure for filtration of aqueous solutions has to be higher than the breakthrough pressure. PORAFIL® TE membranes can be used at temperatures up to 145 °C.

Ordering information

Ø	Pack of	Pore size 0.2 µm	Pore size 0.45 µm	Pore size 1.0 µm	Pore size 3.0 µm
13 mm	50	670 020 013	670 045 013	670 100 013	670 300 013
25 mm	50	670 020 025	670 045 025	670 100 025	670 300 025
47 mm	50	670 020 047	670 045 047	670 100 047	670 300 047
50 mm	50	670 020 050	670 045 050	670 100 050	670 300 050
90 mm	25	670 020 090	670 045 090	670 100 090	670 300 090
100 mm	25	670 020 100	670 045 100	670 100 100	670 300 100
142 mm	10	670 020 142	670 045 142	670 100 142	670 300 142
220 mm	10	670 020 220	670 045 220	670 100 220	670 300 220

Polyester membranes · PORAFIL® PE

Polyester membranes are hydrophilic and particularly suited for fine filtration, dust analysis, aerosol analysis and ultra-purification of solvents.

Ordering information

Ø	Pack of	Pore size 0.2 µm	Pore size 0.4 µm	Pore size 1.0 µm	Pore size 5.0 µm
13 mm	100	671 020 013	671 040 013	671 100 013	671 500 013
25 mm	100	671 020 025	671 040 025	671 100 025	671 500 025
37 mm	100	671 020 037	671 040 037	671 100 037	671 500 037
47 mm	100	671 020 047	671 040 047	671 100 047	671 500 047
50 mm	100	671 020 050	671 040 050	671 100 050	671 500 050

Regenerated cellulose membranes · PORAFIL® RC

Membranes of regenerated cellulose are resistant towards most organic solvents. They are e.g. used for filtration of solvent mixtures and ultrapurification and degassing of HPLC eluents.

Ordering information

Ø	Pack of	Pore size 0.2 µm	Pore size 0.45 µm
13 mm	100	659 020 013	659 045 013
25 mm	100	659 020 025	659 045 025
47 mm	100	659 020 047	659 045 047
50 mm	100	659 020 050	659 045 050
100 mm	25	659 020 100	659 045 100
142 mm	25	659 020 142	659 045 142

Polycarbonate membranes · PORAFIL® PC

Polycarbonate membranes are mainly used for the determination of AOX.

Ordering information

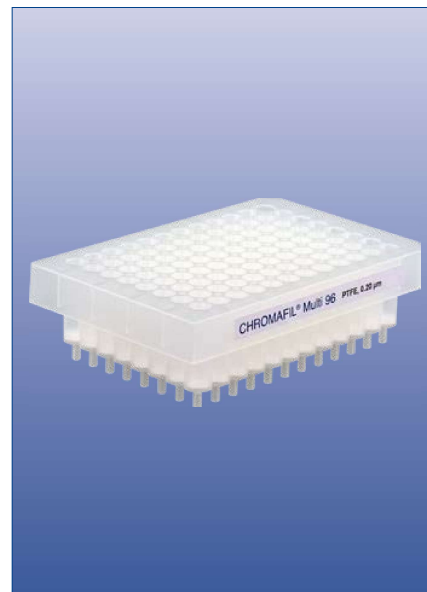
Ø	Pack of	Pore size 0.40 µm
25 mm	100	676 040 025
47 mm	100	676 040 047
50 mm	100	676 040 050

CHROMAFIL® MULTI 96 filters

CHROMAFIL® MULTI 96 filter plates are very well suited for efficient filtration in 96-well microtiter plate format.

Ordering information

Material of the filter elements	Pore size	Plates per pack	REF
MV (cellulose mixed esters)	0.20 µm	1	738770.M
MV (cellulose mixed esters)	0.45 µm	1	738771.M
RC (regenerated cellulose)	0.20 µm	1	738656.M
RC (regenerated cellulose)	0.45 µm	1	738657.M
PTFE (polytetrafluoroethylene)	0.20 µm	1	738660.M
PTFE (polytetrafluoroethylene)	0.45 µm	1	738661.M
PTFE (polytetrafluoroethylene)	1.00 µm	1	738662.M
PTFE (polytetrafluoroethylene)	3.00 µm	1	738663.M
PE (polyethylene)	20 µm	1	738655.M
PE (polyethylene)	50 µm	1	738659.M
Glass fibre nominal	1 µm	1	738655.2M
Glass fibre nominal	3 µm	1	738658.M
CHROMABOND® MULTI 96 vacuum manifold for monoblocks, with reservoir tank, vacuum gauge and control valve, required for filtration with 96-well filter plates		1	738630.M



CHROMAFIL® filtration cartridges

- Filtration cartridges for sample clarification under vacuum (e.g., using the CHROMABOND® vacuum manifold or SPE automation systems like Gilson Aspec™, Rapidtrace®) or by gravity
- Cartridge sizes 3 mL and 6 mL
- Different membranes (PET, RC, PTFE, PVDF, GF) and pore sizes (0.2, 0.45 and 1.0 µm). Membrane materials correspond to the respective CHROMAFIL® syringe filters.



Ordering information

Description	Pore size	Pack of	Column volume	
			3 mL	6 mL
Filtration cartridges PET (polyester)	0.20 µm	100	730578.320	730578.620
Filtration cartridges PET (polyester)	0.45 µm	100	730578.345	730578.645
Filtration cartridges RC (regenerated cellulose)	0.20 µm	100	730068.320	730068.620
Filtration cartridges RC (regenerated cellulose)	0.45 µm	100	730068.345	730068.645
Filtration cartridges PTFE (polytetrafluoroethylene)	0.20 µm	100	730570.320	730570.620
Filtration cartridges PTFE (polytetrafluoroethylene)	0.45 µm	100	730570.345	730570.645
Filtration cartridges PVDF (polyvinylidene difluoride)	0.20 µm	100	730579.320	730579.620
Filtration cartridges PVDF (polyvinylidene difluoride)	0.45 µm	100	730579.345	730579.645
Filtration cartridges GF (glass fiber)	nom. 1.0	100	730517.3100	730517.6100

CHROMAFIL® syringe filters

Disposable syringe filters CHROMAFIL® are ready-to-use filtration units, which are filter elements incorporated in a polypropylene housing. Because every filter is only used once, contaminations are avoided.

CHROMAFIL® Xtra

- Labeled for method validation and certification
- Imprint for direct identification of the membrane type, diameter and pore size
- Low bleeding PP housing
- Color-free plain polypropylene

CHROMAFIL® BIG-BOX

- 400 (25 mm) or 800 (15 mm) color-coded quality syringe filters
- 400 labeled Xtra syringe filters
- Food safe PE box with screw cap
- Economical prices

CHROMAFIL® Combi filters

Combi syringe filters with a coarse glass fiber prefilter and a small-pore membrane as main filter

User benefits:

- For solutions with a high load of particulate matter: lower back pressure, easy filtration
- For high yields of filtrate: more mL of pure filtrate per filter

The technology:

The glass fiber membrane (1.0 µm) removes coarse particles, before they can block the fine main membrane. This results in a better filtration efficiency, especially for highly contaminated samples.

Housing: Solvent-resistant, ultra low bleed polypropylene

Inlet: Luer lock

Exit: Luer

Pore diameter: 1.0/0.20 µm or 1.0/0.45 µm

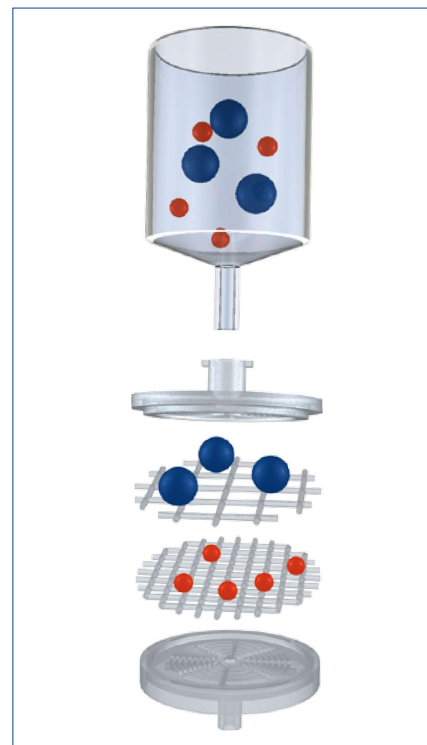
Filter diameter: 25 mm

Void volume: < 80 µL

Packing unit: 100 filters; BIG-BOX with 400 filters

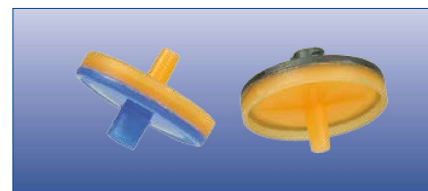
Recommended filter sizes for different volumes

sample volume	recommended filter Ø	dead volumns	filtration area
≤ 1 mL	3 mm	5 µL	0.07 cm ²
1–5 mL	13 mm	30 µL	1.33 cm ²
1–5 mL	15 mm	35 µL	1.77 cm ²
5–100 mL	25 mm	80µL	4.91 cm ²



CHROMAFIL® GF/PET (polyester with glass fiber prefilter)

- Hydrophilic multipurpose membrane for polar as well as nonpolar solvents
- The HPLC filter with glass fiber prefilter, especially suited for mixtures of water and organic solvents
- Recommended for solutions with a high load of particulate matter or for highly viscous solutions



Ordering information

Type	Pore size	Membrane Ø	Color code		Standard pack		BIG-BOX		
			top	bottom	pack of	REF	pack of	REF	
CHROMAFIL®									
GF/PET-20/25	1.0/0.20 µm	25 mm	blue	orange	100	729032	400	729032.400	
GF/PET-45/25	1.0/0.45 µm	25 mm	black	orange	100	729033	400	729033.400	

CHROMAFIL® GF/RC (regenerated cellulose with glass fiber prefilter)

- Hydrophilic membrane for aqueous and organic-aqueous liquids, i. e. polar and medium polar sample solutions
- Recommended for solutions with a high load of particulate matter or for highly viscous aqueous solutions



Ordering information

Type	Pore size	Membrane Ø	Color code		Standard pack		BIG-BOX		
			top	bottom	pack of	REF	pack of	REF	
CHROMAFIL®									
GF/RC-20/25	1.0/0.20 µm	25 mm	blue	blue	100	729050	400	729050.400	
GF/RC-45/25	1.0/0.45 µm	25 mm	black	blue	100	729051	400	729051.400	

CHROMAFIL® GF/PVDF (polyvinylidene difluoride with glass fiber prefilter)

- Hydrophilic membrane
- Recommended for filtration of biological samples with high particle loads. This filter features a high binding capacity for proteins.
- Suited for filtration of aqueous solutions



Ordering information

Type	Pore size	Membrane Ø	Color code		Standard pack		BIG-BOX		
			top	bottom	pack of	REF	pack of	REF	
CHROMAFIL®									
GF/P-45/25	1.0/0.45 µm	25 mm	black	white	100	729039	400	729039.400	

CHROMAFIL® PET (polyester)

- Hydrophilic multipurpose membrane
- For polar as well as nonpolar solvents
- **The HPLC filter**, especially suited for mixtures of water and organic solvents
- For TOC/DOC determination
- Not cytotoxic, does not inhibit the growth of microorganisms and higher cells



Ordering information

Type	Pore size	Membrane Ø	Color code		Standard pack		BIG-BOX	
			top	bottom	pack of	REF	pack of	REF
CHROMAFIL® Xtra								
PET-20/13	0.20 µm	13 mm	labeled		100	729222	–	–
PET-45/13	0.45 µm	13 mm	labeled		100	729223	–	–
PET-20/25	0.20 µm	25 mm	labeled		100	729221	400	729221.400
PET-45/25	0.45 µm	25 mm	labeled		100	729220	400	729220.400
PET-120/25	1.2 µm	25 mm	labeled		100	729229	400	729229.400
CHROMAFIL®								
PET-20/15 MS	0.20 µm	15 mm	yellow	orange	100	729022	800	729022.800
PET-45/15 MS	0.45 µm	15 mm	colorless	orange	100	729023	800	729023.800
PET-20/25	0.20 µm	25 mm	yellow	orange	100	729021	400	729021.400
PET-45/25	0.45 µm	25 mm	colorless	orange	100	729020	400	729020.400

MS = minispikes on filter exit

CHROMAFIL® RC (regenerated cellulose)

- Hydrophilic membrane with very low adsorption
- For aqueous and organic/aqueous liquids, i. e. polar and medium polar sample solutions
- Binding capacity for proteins 84 µg/per 25 mm filter



Ordering information

Type	Pore size	Membrane Ø	Color code		Standard pack		BIG-BOX	
			top	bottom	pack of	REF	pack of	REF
CHROMAFIL® Xtra								
RC-20/13	0.20 µm	13 mm	labeled		100	729236	–	–
RC-45/13	0.45 µm	13 mm	labeled		100	729237	–	–
RC-20/25	0.20 µm	25 mm	labeled		100	729230	400	729230.400
RC-45/25	0.45 µm	25 mm	labeled		100	729231	400	729231.400
CHROMAFIL®								
RC-20/15 MS	0.20 µm	15 mm	yellow	blue	100	729036	800	729036.800
RC-45/15 MS	0.45 µm	15 mm	colorless	blue	100	729037	800	729037.800
RC-20/25	0.20 µm	25 mm	yellow	blue	100	729030	400	729030.400
RC-45/25	0.45 µm	25 mm	colorless	blue	100	729031	400	729031.400

MS = minispikes on filter exit

CHROMAFIL® PTFE (polytetrafluoroethylene)

- Hydrophobic membrane
- For nonpolar liquids and gases
- Very resistant towards all kinds of solvents as well as acids and bases
- Flushing with alcohol, followed by water, makes the originally hydrophobic membrane more hydrophilic



Ordering information

Type	Pore size	Membrane Ø	Color code		Standard pack		BIG-BOX	
			top	bottom	pack of	REF	pack of	REF
CHROMAFIL® Xtra								
PTFE-20/13	0.20 µm	13 mm	labeled		100	729208	–	–
PTFE-45/13	0.45 µm	13 mm	labeled		100	729209	–	–
PTFE-20/25	0.20 µm	25 mm	labeled		100	729207	400	729207.400
PTFE-45/25	0.45 µm	25 mm	labeled		100	729205	400	729205.400
PTFE-100/25	1.0 µm	25 mm	labeled		100	729247	400	729247.400
CHROMAFIL®								
O-20/3	0.20 µm	3 mm	colorless	colorless	100	729014		
O-45/3	0.45 µm	3 mm	colorless	colorless	100	729015		
O-20/15 MS	0.20 µm	15 mm	yellow	colorless	100	729008	800	729008.800
O-45/15 MS	0.45 µm	15 mm	colorless	colorless	100	729009	800	729009.800
O-20/25	0.20 µm	25 mm	yellow	colorless	100	729007	400	729007.400

MS = minispikes on filter exit

CHROMAFIL® H-PTFE (hydrophilized polytetrafluoroethylene)

- Hydrophobic membrane with additional hydrophilic properties
- For polar and nonpolar sample solutions
- Resistant towards all kinds of solvents as well as acids and bases



Ordering information

Type	Pore size	Membrane Ø	Color code		Standard pack		BIG-BOX	
			top	bottom	pack of	REF	pack of	REF
CHROMAFIL® Xtra								
H-PTFE-20/13	0.20 µm	13 mm	labeled		100	729256	–	–
H-PTFE-45/13	0.45 µm	13 mm	labeled		100	729257	–	–
H-PTFE-20/25	0.20 µm	25 mm	labeled		100	729245	400	729245.400
H-PTFE-45/25	0.45 µm	25 mm	labeled		100	729246	400	729246.400

CHROMAFIL® CA (cellulose acetate)

- Hydrophilic membrane
- For filtration of water-soluble oligomers and polymers, especially suited for biological macromolecules
- Very high shape stability in aqueous solutions
- Extremely low binding capacity for proteins (21 µg/per 25 filter)
- Also available in a sterile package (S) for filtration under sterile conditions (each filter individually sealed)



Ordering information

Type	Pore size	Membrane Ø	Color code		Standard pack		BIG-BOX	
			top	bottom	pack of	REF	pack of	REF
CHROMAFIL® Xtra								
CA-20/13	0.20 µm	13 mm	labeled		100	729254	–	–
CA-45/13	0.45 µm	13 mm	labeled		100	729255	–	–
CA-20/25	0.20 µm	25 mm	labeled		100	729226	400	729226.400
CA-45/25	0.45 µm	25 mm	labeled		100	729227	400	729227.400
CHROMAFIL®								
CA-20/15 MS	0.20 µm	15 mm	yellow	red	100	729054	800	729054.800
CA-45/15 MS	0.40 µm	15 mm	colorless	red	100	729055	800	729055.800
CA-20/25	0.20 µm	25 mm	yellow	red	100	729026	400	729026.400
CA-45/25	0.45 µm	25 mm	colorless	red	100	729027	400	729027.400
CHROMAFIL® Sterile filters								
CA-20/15 MS (S)	0.20 µm	15 mm	yellow	red	50	729052		
CA-45/15 MS (S)	0.45 µm	15 mm	colorless	red	50	729053		
CA-20/25 S	0.20 µm	25 mm	yellow	red	50	729024		
CA-45/25 S	0.45 µm	25 mm	colorless	red	50	729025		

MS = minispikes on filter exit

CHROMAFIL® MV (cellulose mixed esters)

- Hydrophilic membrane with very low adsorption
- For aqueous or polar solutions



Ordering information

Type	Pore size	Membrane Ø	Color code		Standard pack		BIG-BOX	
			top	bottom	pack of	REF	pack of	REF
CHROMAFIL® Xtra								
MV-20/25	0.20 µm	25 mm	labeled		100	729206	400	729206.400
MV-45/25	0.45 µm	25 mm	labeled		100	729204	400	729204.400
CHROMAFIL®								
A-20/25	0.20 µm	25 mm	yellow	yellow	100	729006	400	729006.400
A-45/25	0.45 µm	25 mm	colorless	yellow	100	729004	400	729004.400

CHROMAFIL® PES (polyethersulfone)

- Hydrophilic membrane
- For aqueous liquids and liquids with low organic contents
- Very low adsorption for pharmaceuticals and proteins
- Good stability against acids and bases
- Binding capacity for proteins 29 µg/per 25 mm filter

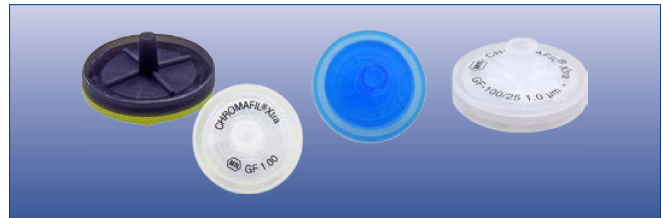


Ordering information

Type	Pore size	Membrane Ø		Standard pack		BIG-BOX	
				pack of	REF	pack of	REF
CHROMAFIL® Xtra							
PES-20/25	0.20 µm	25 mm	labeled	100	729240	400	729240.400
PES-45/25	0.45 µm	25 mm	labeled	100	729241	400	729241.400
PES-500/25	5.0 µm	25 mm	labeled	100	729242	400	729242.400

CHROMAFIL® GF (glass fiber)

- Inert filter, nominal pore size 1 µm, allows higher flow rates than small pore filters
- For solutions with high loads of particulate matter or for highly viscous solutions (e.g. soil samples, fermentation broths)
- As prefilters for other CHROMAFIL® filters, they prevent plugging of the membrane



Ordering information

Type	Pore size	Membrane Ø	Color code		Standard pack		BIG-BOX	
			top	bottom	pack of	REF	pack of	REF
CHROMAFIL® Xtra								
GF-100/13	nom. 1.0 µm	13 mm	labeled		100	729234	–	–
GF-100/25	nom. 1.0 µm	25 mm	labeled		100	729228	400	729228.400
CHROMAFIL®								
GF-100/15 MS	nom. 1.0 µm	15 mm	blue	colorless	100	729034		
GF-100/25	nom. 1.0 µm	25 mm	yellow	black	100	729028	400	729028.400

CHROMAFIL® PA (polyamide, nylon)

- Rather hydrophilic membrane
- For aqueous and organic / aqueous medium polar liquids



Ordering information

Type	Pore size	Membrane Ø	Color code		Standard pack		BIG-BOX	
			top	bottom	pack of	REF	pack of	REF
CHROMAFIL® Xtra								
PA-20/13	0.20 µm	13 mm	labeled		100	729248	–	–
PA-45/13	0.45 µm	13 mm	labeled		100	729249	–	–
PA-20/25	0.20 µm	25 mm	labeled		100	729212	400	729212.400
PA-45/25	0.45 µm	25 mm	labeled		100	729213	400	729213.400
CHROMAFIL®								
AO-20/3	0.20 µm	3 mm	colorless	colorless	100	729010		
AO-45/3	0.45 µm	3 mm	colorless	colorless	100	729011		
AO-20/15 MS	0.20 µm	15 mm	yellow	green	100	729048	800	729048.800
AO-45/15 MS	0.45 µm	15 mm	colorless	green	100	729049	800	729049.800
AO-20/25	0.20 µm	25 mm	yellow	green	100	729012	400	729012.400
AO-45/25	0.45 µm	25 mm	colorless	green	100	729013	400	729013.400

MS = minispikes on filter exit

CHROMAFIL® PVDF (polyvinylidene difluoride)

- Hydrophilic membrane
- For aqueous solutions, water-soluble oligomers and polymers like proteins
- Binding capacity for proteins 82 µg/per 25 mm filter



Ordering information

Type	Pore size	Membrane Ø	Color code		Standard pack		BIG-BOX	
			top	bottom	pack of	REF	pack of	REF
CHROMAFIL® Xtra								
PVDF-20/13	0.20 µm	13 mm	labeled		100	729243	–	–
PVDF-45/13	0.45 µm	13 mm	labeled		100	729244	–	–
PVDF-20/25	0.20 µm	25 mm	labeled		100	729218	400	729218.400
PVDF-45/25	0.45 µm	25 mm	labeled		100	729219	400	729219.400
CHROMAFIL®								
PVDF-20/15 MS	0.20 µm	15 mm	yellow	white	100	729043	800	729043.800
PVDF-45/15 MS	0.45 µm	15 mm	colorless	white	100	729044	800	729044.800

MS = minispikes on filter exit