

FILCON LABORATORY FILTRATION

Over 50 years experience providing clear filtration solutions

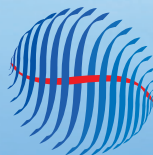


FILCON FILTERS

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LABFIL MEMBRANE FILTERS

Membrane Specifications

PES = Polyethersulphone, PTFE = Polytetrafluoroethylene, CA = Cellulose Acetate

Catalog No	PES02**	PES04**	PES08**	PES12**	PTFE10**	CA08**	CA50**
Material	PES	PES	PES	PES	PTFE	CA	CA
Pore Size µm	0.2	0.4	0.8	1.2	1	0.8	5
Tensile Strength cN/15mm	80	80	80	80			
Burst Pressure bar differential	1	1	1	1			
Autoclavable °C@1Bar	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Thickness µm	110	110	110	110	150	115	135
Bubble Point Bar	4.3	3	1.25	1.05	0.54 (IPA)	1.4	0.5
Transmembrane Flow Rate							
Water in ml/min/cm ² /bar	35	60	50	260		200	570
Air in STD l/min/cm ² /bar					15		

Note: **Denotes membrane size e.g PES0447 is Labfil Polyethersulphone 0.4 µm Pore Size 47mm diameter pack

Labfil Membrane Filters

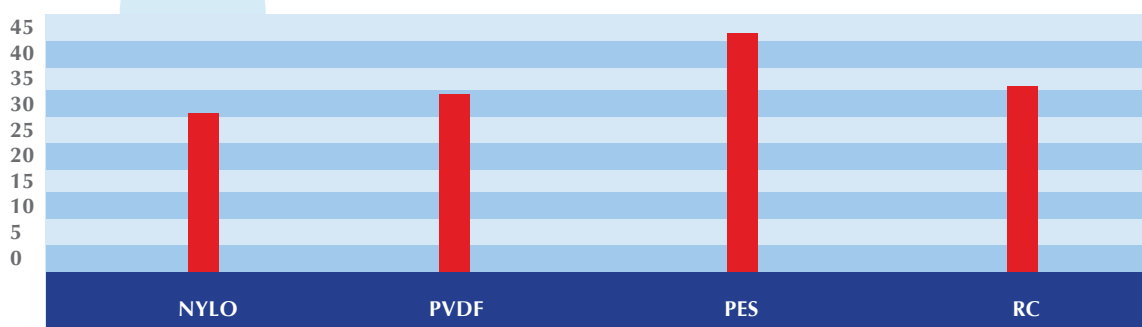
Labfil membrane filters are available in PES (polyethersulfone), PTFE (Polytetrafluoroethylene) and CA (Cellulose Acetate). PES is an extra high performance membrane formulated and optimised for critical fluid applications. They have an asymmetric pore structure resulting in graded particle retention and therefore have excellent throughput. The flow rate is very fast and the membranes are bubble point tested for quality assurance.

When they are used for biological fluid filtration they display low protein binding and absorption characteristics and are autoclavable at 121°C, 1 bar. For analytical purposes such as sample analysis/preparation or HPLC mobile phase filtration the membranes exhibit low extractables and contain no external wetting agents thus ensuring no other external factors in the analysis. This membrane works fine with common HPLC solvents like Methanol and Acetonitrile. The PES membrane also shows extremely good resistance to acids and works well in PGM analysis or other mining applications.

Hydrophobic membranes are available for venting and aggressive fluid filtration. They are also very good for gas sensor protection. These show very good air flow rates resulting in fast response times. The thick non static membranes are easy to handle and seal well between gaskets. This good sealing together with the very high water resistance protects the valuable electronic components underneath, even under the most strict SABS water tests. The thick membranes also have very high mechanical strength, which prevents rupture when used in instruments under harsh conditions such as mine monitors. The PTFE membranes are also not packaged with silicone impregnated spacers in between, thus the silicone free manufacture and packaging provides assurance of no silicone interference with the circuitry.

Five micron Cellulose Acetate membranes are available for condition monitoring and oil analysis. Also available are 0.8 micron Cellulose Acetate membranes which are commonly used for occupational hygiene and nuisance dust monitoring.

Membrane Flow Rate Comparison



Labfil Mesh

Nylon mesh filters with pore size ranging from 1 µm to 500 µm are good for applications such as collection of algae or their cells and particle analysis. They are sold in packs of 100 in a wide variety of diameters.

Labfil Syringe Filters

Labfil syringe filters use PES (Polyethersulphone) with very wide chemical compatibility and excellent flow rates. These syringe filters have proved themselves in applications such as sample clarification prior to HPLC, IC or ICP analysis. They come mainly in 0.45 µm pore size, 30 mm diameter, and in packs of 50 and 500. Other diameters and pore sizes available on request

LABFIL FILTER PAPERS

Our filter papers are manufactured in Europe and only the finest raw materials are selected and strictly quality controlled at reception to ensure that only the purest ingredients of cellulose with a high alpha cellulose content are always used. The automated manufacture with on line monitoring, confirmed with laboratory analysis ensures consistency in each tested aspect and that the strict standards are met. The mill produces according to Good Manufacturing Practices and ISO 46002. Each step of the manufacturing process, from incoming materials through to the final material is documented, validated and controlled. All the filter papers exhibit high wet strength and so can be used comfortably in filter presses, Buchner funnels or other vacuum apparatus as well as conventional filtration using gravity. They are all bleached white and have smooth surfaces enabling the scraping or spraying of precipitates off their surfaces. They also offer heat tolerance and can be dried in an oven. They are all available in packs of 100 in flat disks or folded, in many diameters ranging from 10 mm to 500mm. Custom sizes are available on request.

General Purpose Filter Papers (QF, QM, QS)

Used for qualitative or less critical applications.

Ashless Hardened Filter Papers (AHF, AHM, AHS)

Used for quantitative applications. They are excellent for applications where trace level detection or ashing is required. They work well in applications where ashlessness and hardness are required and also where only ashlessness is required. They also work well where strong acidic or alkaline solutions are being filtered.

Industrial Grades (IST, IWS, IHD)

Industrial standard (IST), industrial wet strengthened (IWS) and industrial heavy duty (IHD) filter papers are used for less sensitive but low cost analytical work.

Specialised Papers (PSE, STP, HRT)

The silicone impregnated phase separating papers (PSE) are hydrophobic papers which are ideal for the separating of aqueous solutions from organic solutions. Soil Testing papers (STP) are ideal for routine leaf and soil analysis. Thick high retention papers (HRT) are used for absorption or other specialised applications.

Reinforced Glass Fibre (RGF)

Glass microfibre filters are made with very fine fibres to allow high efficiency and high dirt holding capacity. They are non-hygroscopic and biologically inert and exhibit a wide chemical compatibility. These thick retentive glass fibre filters offer high wet strength and low fibre loss. Their specifications meet the specifications required in SABS method 1049:1990 for the analysis of suspended solids content having the nominal pore size 1.0 µm (+ 0.2 µm) They are offered in 100 packs and in diameters ranging from 10 mm to 320 mm.

Extraction Thimbles (EXT)

These are made from pure cotton fibre (cellulose) and are outstanding for their mechanical resistance and excellent retention capacity. They are commonly used in applications such as fat extraction using Soxhlet apparatus, and other extraction applications. They are available in a range of wall thicknesses and lengths from 60 mm to 250 mm and internal diameters from 10 mm to 75 mm. Glass fiber and quartz fibre extraction thimbles are also available.

LabfilCoat (LC)

This is a filter paper embossed onto a chemically resistant strong polyethylene backing. It is designed for the protection of laboratory benches, shelves and storage cupboards from spills, stains and minor burns. It will not delaminate when wet and is offered in rolls of 500 mm wide and lengths of 25 m, 50 m, and 100 m. Sheets are also available with dimensions 500 mm X 600 mm and 500 mm X 500 mm in packs of 100.

Filter Paper Specifications

Catalog No	QF***	QM***	QS***	AHF***	AHM***	AHS***	RGF***	IST***	IWS***	IHD***	HRT***	STP***
Mean Pore Size µm	>10	6	2	12	7	3	1	25	18	15	7	6
Flow	Fast	Medium	Slow	Fast	Medium	Slow	Slow	VFast	Fast	Fast	Medium	Medium
Wet Strengthened	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Filtration Speed S DIN 53137	10	28	112	9	23	150	4	5	29	29		
Ash Content %	0.1	0.1	0.1	0.007	0.007	0.007				Low		
Grammage g/m ²	90	90	90	85	85	85	90	80	60	135	200	80
Thickness µm	160	160	160	130	130	130	570	100	180	500	400	120
Surface	Smooth	Smooth	Smooth	Smooth	Smooth	Smooth	Smooth	Creped	Creped	Creped	Smooth	Smooth

Note: **Denotes the diameter of the filter paper e.g. QF090 will be labfil qualitative fast flow, 90mm diameter. Where as QF150 will be 150mm

Filter Paper Grade Comparison Table

Labfil Filter Paper	Code	Whatman
Qualitative Wet Strengthened Fast	QF	4 or 54
Qualitative Wet Strengthened Medium	QM	1 or 52
Qualitative Wet Strengthened Slow	QS	5 or 50
Ashless Hardened Fast	AHF	541 or 41
Ashless Hardened Medium	AHM	541 or 40
Ashless Hardened Slow	AHS	542 or 42
Reinforced Glass Fibre	RGF	GFC