Quantitative filter paper

2. Ashless hardened filter paper for quantitative analysis

Ashless hardened Filter papers are acid hardened which reduce the ash content to an extremely low level.

These filters are produced by a complex elaborate washing process under stringently controlled conditions. Firstly, acid washing is arranged. Then a series of washes in demineralised water come, which increase the strength of the paper, therefore making them particularly suitable for Büchner filter funnels and a wide range of critical analytical filtration operations.

Through this process, a maximum ash content of <0.006% is attained, which means that no contaminants are introduced when filtering. Also, full compliance with international standards on this subject is achieved.

Thanks to the hardened texture, they are often used when the analist must recover the precipitates retained on the filter surface.

DF541 GRADE - Fast filtration

Hardened ashless filter paper with a fast flow rate. Preferably used for the filtration of coarse flocculent and bulky precipitates (as aluminium, chromium or hydroxides of iron, bismuth, cobalt, sulphides of copper, various organic metal precipitates, etc.) and gelatinous precipitates in acid/alkaline solutions during gravimetric analysis.

DF540 GRADE – Medium filtration

Hardened ashless filter paper with medium retention and flow rate.

Extremely strong and pure. With a hard surface, it is recommended for filtering medium-sized precipitates such as most metal sulphides.

High chemical resistance. Used in the gravimetric analysis of metals in acid and slightly alkalinized solutions, pressure filtration.

DF542 GRADE - Slow filtration

Hardened ashless filter paper with high retention and slow flow rate.

High chemical resistance. Often used for filtering very fine precipitates and in gravimetric metal determinations.

Grade	Applications
DF541	Food analysis Fibre detection in pet food Filtration of coarse flocculent and bulky precipitates (as aluminium, chromium or hydroxides of iron, bismuth, cobalt, sulphides of copper, various organic metal precipitates, etc.) Gravimetric analysis of gelatinous precipitates in acid/alkaline solutions
DF540	Filtration of fine crystalline precipitates Gravimetric analysis of metals in acid/alkaline solutions
DF542	Filtration of very fine precipitates Gravimetric metal determinations

Technical Specifications

GVS	Filtration Speed	Weight (g/m^2)	Thickness (µm)	Retention Range (µm)	Ash Content (%)
DF541	Fast	84	170	20-25	<0.006
DF540	Medium	84	160	7-12	<0.006
DF542	Slow	95	150	2-4	<0.006

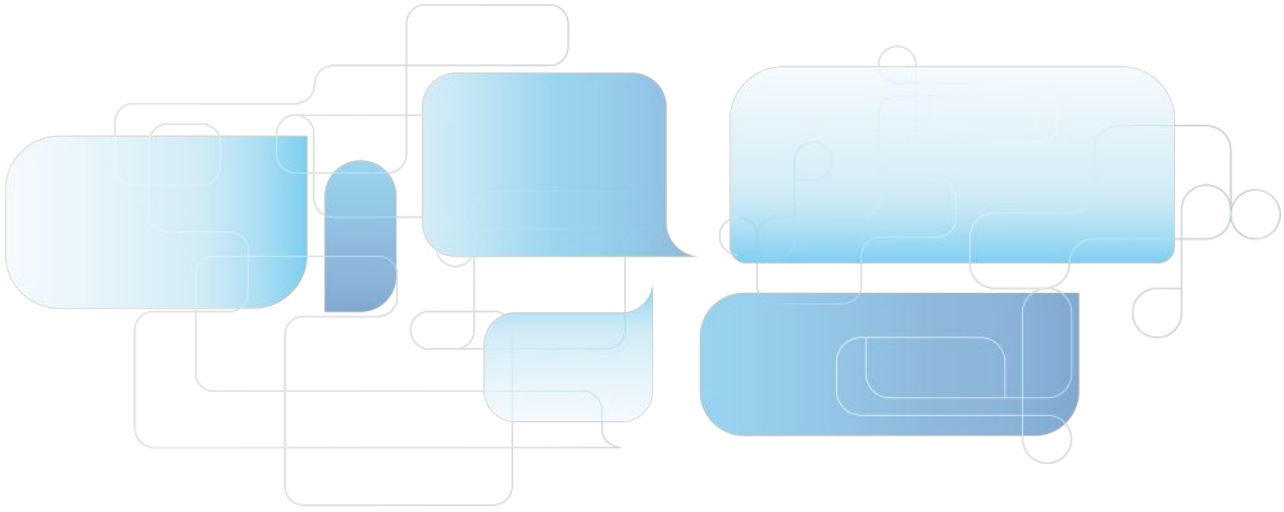
Disc and Sheet Membranes

Ordering information

Diameter (mm)	DF541	DF540	DF542
	1000 Circles/Box		
25	FP025DF541QANC01	FP025DF540QANC01	FP025DF542QANC01
	100 Circles/Box		
40.5	FP040DF541QANC01	FP040DF540QANC01	FP040DF542QANC01
42.5	FP042DF541QANC01	FP042DF540QANC01	FP042DF542QANC01
47	FP047DF541QANC01	FP047DF540QANC01	FP047DF542QANC01
55	FP055DF541QANC01	FP055DF540QANC01	FP055DF542QANC01
70	FP070DF541QANC01	FP070DF540QANC01	FP070DF542QANC01
90	FP090DF541QANC01	FP090DF540QANC01	FP090DF542QANC01
110	FP110DF541QANC01	FP110DF540QANC01	FP110DF542QANC01
125	FP125DF541QANC01	FP125DF540QANC01	FP125DF542QANC01
150	FP150DF541QANC01	FP150DF540QANC01	FP150DF542QANC01
185	FP185DF541QANC01	FP185DF540QANC01	FP185DF542QANC01
240	FP240DF541QANC01	FP240DF540QANC01	FP240DF542QANC01
320	FP320DF541QANC01	FP320DF540QANC01	FP320DF542QANC01

Equivalence Table

GVS	Filtration Speed	Equivalent 1	Equivalent 2	Equivalent 3	Equivalent 4
DF541	Fast	541	1505	1640w	1388
DF540	Medium	540	1506	1640m	1392
DF542	Slow	542	1507	1640de	1391



Qualitative filter paper

1. Ashless hardened filter paper for qualitative analysis

These filter papers are used for qualitative analysis. Qualitative filters are made of refined pulp and pure cotton linters with an alpha-cellulose content of nearly 100%, which gives them a number of diverse filtration properties.

The ash content of less than 0.06% is not reduced by post-treatment. Qualitative filter papers are available in sheets, discs and folded filters.

DXF04 GRADE - Very fast filtration

Very high rate of filtration with excellent retention of coarse precipitates such as metal hydroxides and sulphides or gelatinous substances.

Preferably used as rapid filter for various organic metal precipitates, routine cleanup of biological fluids, food industry analysis, air pollution monitoring (high rates and the fine particles collection is not critical).

DME07 GRADE - Fast filtration

A standard grade filter used for a wide variety of analytical routine applications in different industries These cellulose filters are used in qualitative analytical techniques to determine and identify materials. Pre-pleated qualitative filters are also available, which give improved flow rate and increased loading capacity compared to equivalent flat filters.

DME01 GRADE - Medium filtration

The most widely used filter paper in the GVS range.

Medium retention and flow rate. This grade covers a wide range of laboratory applications and is frequently used for clarifying liquids. Traditionally this grade is used in qualitative analytical separations for routine laboratory work as well as rapid filtration of fine precipitates such as lead sulphate, calcium oxalate (hot) and calcium carbonate.

In agriculture, it is used for soil analysis and seed testing procedures.

In the food industry, Grade DME01 is used for numerous routine techniques to separate solid foodstuffs from associated liquid or extracting liquid.

It is widely used in education for teaching simple qualitative analytical separations.

In air pollution monitoring, using circles or rolls, atmospheric dust is collected from airflow and the stain-intensity measured photometrically.

For gas detection, the paper is impregnated with a chromogenic reagent and color formation quantified by optical reflectance.

DMS02 GRADE - Medium-slow filtration

Slightly more retentive and absorbent than Grade DME01 and therefore with a moderate to slow filtration speed.

In addition to general filtration this grade DMS02 is used for monitoring specific contaminants in the atmosphere, filtration of fine precipitates, soil testing, it is often used as a folded filter in an analytical funnel.

DMS03 GRADE - Medium-slow filtration (thick)

Medium to low rate of filtration with double the thickness comparing with GVS Grade DME01 .

Fine particle retention and excellent loading capacity.

The extra thickness gives increased wet strength and allows a higher solute loading.

Preferably used for liquids hard to clarify, essences, oils, tinctures.

DNS06 GRADE - Slow filtration

Similar particle retention as Grade DXS05 with higher filtration speed.

Often used for boiler water analysis.

DXS05 GRADE - Very slow filtration

Lowest rate of filtration in the GVS qualitative range and maximum degree of fine particle filtration or retention.

Preferably used as a clarifying filter for cloudy suspensions and water and soil analysis. Particularly used in difficult filtration conditions and extra fine-grained precipitates such as barium sulphate, cupreous oxide, often specified for clarification of wine.

Disc and Sheet Membranes

Grade	Applications
DXF04	Coarse and gelatinous precipitates such as iron hydroxide, aluminium hydroxide and chromium hydroxide Silica determination in steel and iron analysis Food analysis Monitoring of air pollution when the collection of fine particles is not critical Routine clean-up of biological fluids or organic extracts
DME07	Filtration of a wide range of routine laboratory applications Food analysis. Determination of fat content Beverage analysis. Removal of carbon dioxide and turbidity from beer and other beverages
DME01	Filtration of a wide range of routine laboratory applications for medium retention Filtration of fine precipitates such as lead sulphate, calcium oxalate, calcium carbonate and other metal sulphates Soil analysis and seed testing Food analysis Education Used in the beer and malt control quality production according to EBC.
DMS02	Monitoring specific contaminants in the atmosphere Filtration of fine precipitates such as lead dioxide, calcium fluoride, nickel sulphide and zinc sulphide Soil analysis
DMS03	Particularly useful for use in Büchner funnels Preferably used for liquids hard to clarify, essences, oils and tinctures
DNS06	Filtration of very fine crystalline precipitates Beverage analysis. Sample preparation and removal of carbon dioxide for beverages Monitoring specific contaminants in the atmosphere Soil analysis
DXS05	Filtration in very difficult conditions Filtration for extra fine-grained precipitates such as barium sulphate, cupreous oxide often specified usedfor clarification of wine

Technical Specifications

GVS	Filtration Speed	Weight (g/m^2)	Thickness (µm)	Retention Range (µm)	Ash Content (%)
DXF04	Very fast	84	190-230	12-15	<0.06
DME07	Fast	84	190-230	8-12	<0.06
DME01	Medium	84	160-190	7-11	<0.06
DMS02	Medium-Slow	97	190	5-8	<0.06
DMS03	Medium-Slow/Thick	200	320	5-7	<0.06
DXS05	Very Slow	80	170	1-2	<0.06

Ordering information

Diameter (mm)	DXF04	DME07	DME01	DMS02	DMS03	DNS06	DXS05
			100 Circles/Box				
37	FP037DXF04QALC00	FP037DME07QALC01	FP037DME01QALC01	-	FP037DMS03QLTC01	-	-
42.5	FP042DXF04QALC01	FP042DME07QALC01	FP042DME01QALC01	FP042DMS02QALC01	FP042DMS03QLTC01	-	FP042DXS05QALC01
47	FP047DXF04QALC01	FP047DME07QALC01	FP047DME01QALC01	FP047DMS02QALC01	FP047DMS03QLTC01	-	FP047DXS05QALC01
55	FP055DXF04QALC01	FP055DME07QALC01	FP055DME01QALC01	FP055DMS02QALC01	FP055DMS03QLTC01	-	FP055DXS05QALC01
70	FP070DXF04QALC01	FP070DME07QALC01	FP070DME01QALC01	FP070DMS02QALC01	FP070DMS03QLTC01	-	FP070DXS05QALC01
90	FP090DXF04QALC01	FP090DME07QALC01	FP090DME01QALC01	FP090DMS02QALC01	FP090DMS03QLTC01	-	FP090DXS05QALC01
110	FP110DXF04QALC01	FP110DME07QALC01	FP110DME01QALC01	FP110DMS02QALC01	FP110DMS03QLTC01	-	FP110DXS05QALC01
125	FP125DXF04QALC01	FP125DME07QALC01	FP125DME01QALC01	FP125DMS02QALC01	FP125DMS03QLTC01	-	FP125DXS05QALC01
150	FP150DXF04QALC01	FP150DME07QALC01	FP150DME01QALC01	FP150DMS02QALC01	FP150DMS03QLTC01	-	FP150DXS05QALC01
185	FP185DXF04QALC01	FP185DME07QALC01	FP185DME01QALC01	FP185DMS02QALC01	FP185DMS03QLTC01	FP185DNS06QALC0F	FP185DXS05QALC01
240	FP240DXF04QALC01	FP240DME07QALC01	FP240DME01QALC01	FP240DMS02QALC01	FP240DMS03QLTC01	-	FP240DXS05QALC01
320	FP320DXF04QALC01	FP320DME07QALC01	FP320DME01QALC01	FP320DMS02QALC01	FP320DMS03QLTC01	-	FP320DXS05QALC01

Note: for folded format or other sizes packaging, please contact local representatives.

Equivalence Table

GVS	Filtration Speed	Equivalent 1	Equivalent 2	Equivalent 3	Equivalent 4
DXF04	Very fast	4	604	1670/617	288
DME07	Fast	-	597	-	289
DME01	Medium	1	593/595	616/615	292
DMS02	Medium-slow	2	-	616md	292a
DMS03	Medium/thick	3	591	618	3 S/h
DXS05	Very slow	5	602eh	619de	293