

Filter Papers

for the Laboratory and Industry

Simplifying Progress

SARTORIUS



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Filter Papers – An Introduction

High-grade filter papers are indispensable for routine work in laboratory and industrial applications. Sartorius supplies you with a broad range of filter papers for myriad filtration tasks and supports you in solving all your filtration challenges.

With this catalog, we invite you to familiarize yourself with our broad product range. Here, you will find typical examples intended to help you quickly select the filter paper that is right for your application.

Our Product range covers:

- Quantitative, qualitative filter papers
- Technical papers and boards
- Blotting and chromatography papers
- Glass and quartz microfiber filters
- And many other paper grades for special applications

Quality Assurance and Quality Control

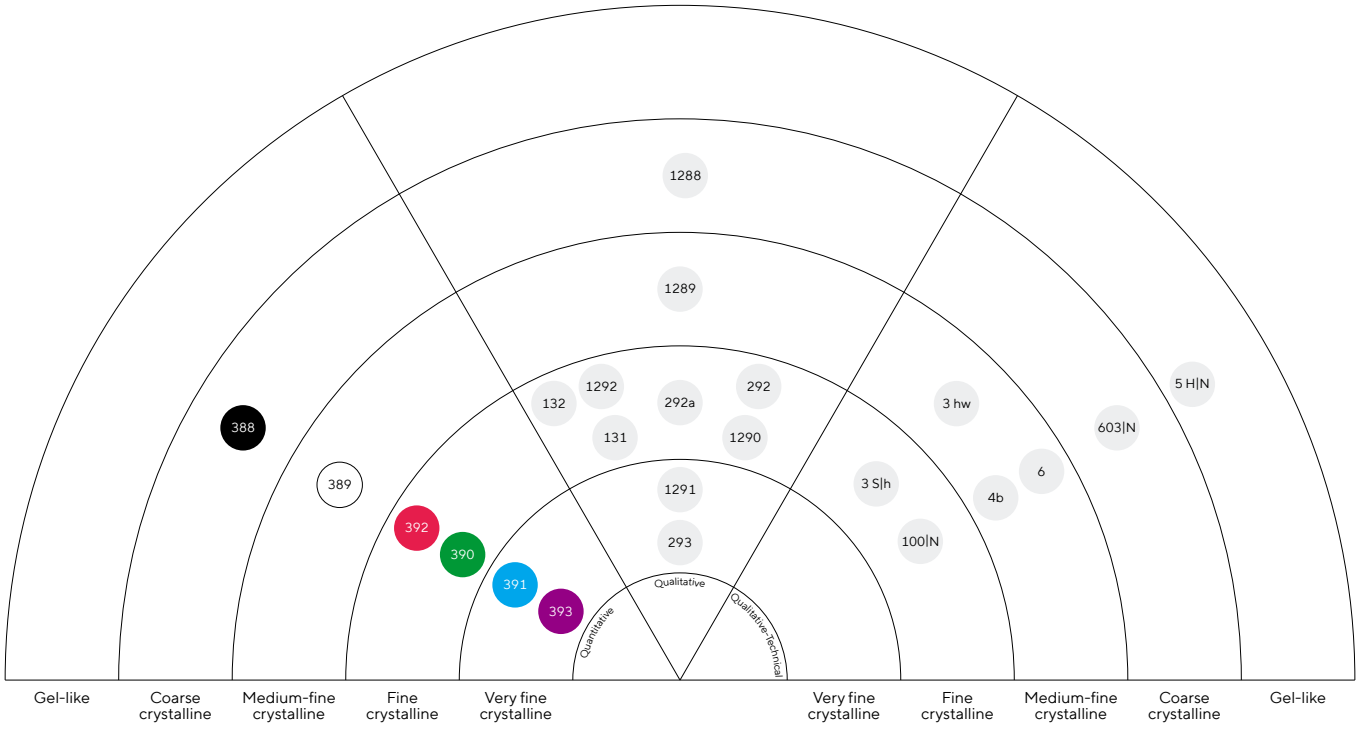
Sartorius pays particular attention to continuous in-process quality control; additionally, regular checks and exact analyses of raw material and of each individual finished product assure constant high quality and product uniformity.

The paper mill meets the requirements set by the ISO 9001 quality management system and the ISO 14001 environmental management system.

How Do Filter Papers Work?

Filter papers are actually depth filters. Various parameters influence their effectiveness: Mechanical particulate retention, absorption, pH, surface properties, thickness and strength of the filter paper as well as the shape, density and quantity of particles to be retained. The precipitates deposited on the filter form a "cake layer", which – depending on its density – increasingly affects the progress of a filtration run and decisively affects the retention capability. For this reason, it is essential to select the right filter paper to ensure effective filtration. This choice also depends on the filtration method to be used, among other factors. In addition, the amount and properties of the medium to be filtered, the size of the particulate solids to be removed and the required de-
gree of clarification are all decisive in making the right choice.

Product Overview



Quantitative Filter Papers

388 **Black dot**
Fast filtering, wide-pore, loose structure,
ash-free, wet-strengthened

389 **White dot**
Medium fast filtering, medium- to wide-pore,
low-fat content, ash-free, wet-strengthened

392 **Red dot**
Medium fast filtering, medium density
ash-free, wet-strengthened

390 **Green dot**
Slow filtering, narrow-pore, dense,
ash-free, wet-strengthened

391 **Blue dot**
Very slow filtering, fine-pore, very dense,
ash-free, wet-strengthened

393 **Purple dot**
Very slow filtering, very fine-pore,
very dense, ash-free, wet-strengthened

Ash-free Filter Papers for Quantitative and Gravimetric Analyses

These filter papers are used for quantitative and gravimetric analyses as well as for pressure or vacuum filtration. They are made out of 100 % cotton linters with an α-cellulose content of > 98 % and are acid-washed to make the papers ashless and achieve high purity.

In gravimetric applications, the cake layer is calcined and the residue quantified. For quantitative analysis of the filtrate, the filter paper must not give off any foreign substances. This guarantees that no test results are falsified. That is why it is important that the filters are ash-free.

For some quantitative analyses, the cake layer has to be mechanically removed from the filter (for example, with a water jet or a spatula). The filter must be wet-strengthened so that it doesn't break when the cake layer is removed.

Application Examples

Application	Grade
Determination of ash content	388
Gravimetric analysis of metals	388
Analysis of alkaline earth carbonates	389
Determining the fat content in natural raw materials	389
Gravimetric analyses in power plants	392
Filtration of fine precipitates	390
Filtration of fine-grained precipitates	391, 393
Blaine Test for cement (EN 196-6:2010)	392, 391, 390, 389

- Made of 100 % cotton linters
- Ash-free (Ash content ≤ 0.01 % according to DIN 54370)
- Wet-strengthened
- Color-coded box for easy selection
- Supplied in rolls, sheets, discs and folded filters



Technical Specifications

Grade	Weight (g/m²)*	Thickness (mm)*	Particle retention (µm)	Filtration (s)*	Precipitates	Properties
■ 388	84	0.21	12 – 15	10	Coarse crystalline	Wide-pore, loose structure, fast filtering
□ 389	84	0.19	8 – 12	20	Medium-fine crystalline	Medium- to wide-pore, medium fast filtering
■ 392	84	0.17	5 – 8	50	Fine crystalline	Medium dense, medium fast filtering
■ 390	84	0.16	3 – 5	100	Fine crystalline	Narrow-pore, dense, slow filtering
■ 391	84	0.15	2 – 3	180	Very fine crystalline	Fine-pore, dense, very slow filtering
■ 393	100	0.18	1 – 2	300	Very fine crystalline	Very fine-pore, very dense, very slow filtering

* See test methods, page 31

Ordering Information



Filter Discs, 100 pieces

Ø in mm	Grade 388	Grade 389	Grade 390	Grade 391	Grade 392	Grade 393
55	FT-3-101-055	FT-3-102-055	FT-3-103-055	FT-3-104-055	FT-3-105-055	FT-3-127-055
70	FT-3-101-070	FT-3-102-070	FT-3-103-070	FT-3-104-070	FT-3-105-070	FT-3-127-070
90	FT-3-101-090	FT-3-102-090	FT-3-103-090	FT-3-104-090	FT-3-105-090	FT-3-127-090
110	FT-3-101-110	FT-3-102-110	FT-3-103-110	FT-3-104-110	FT-3-105-110	FT-3-127-110
125	FT-3-101-125	FT-3-102-125	FT-3-103-125	FT-3-104-125	FT-3-105-125	FT-3-127-125
150	FT-3-101-150	FT-3-102-150	FT-3-103-150	FT-3-104-150	FT-3-105-150	FT-3-127-150
185	FT-3-101-185	FT-3-102-185	FT-3-103-185	FT-3-104-185	FT-3-105-185	FT-3-127-185
240	FT-3-101-240	FT-3-102-240	FT-3-103-240	FT-3-104-240	FT-3-105-240	FT-3-127-240



Folded Filters, 100 pieces

Ø in mm	Grade 388	Grade 389	Grade 390	Grade 391	Grade 392
110	FT-4-101-110	FT-4-102-110	FT-4-103-110	FT-4-104-110	FT-4-105-110
125	FT-4-101-125	FT-4-102-125	FT-4-103-125	FT-4-104-125	FT-4-105-125
150	FT-4-101-150	FT-4-102-150	FT-4-103-150	FT-4-104-150	FT-4-105-150
185	FT-4-101-185	FT-4-102-185	FT-4-103-185	FT-4-104-185	FT-4-105-185
240	FT-4-101-240	FT-4-102-240		FT-4-104-240	



Sheets in 580 × 580 mm, 100 pieces

Grade 388	Grade 389	Grade 390	Grade 391	Grade 392	Grade 393
FT-2-101-580580	FT-2-102-580580	FT-2-103-580580	FT-2-104-580580	FT-2-105-580580	FT-2-127-580580

Other dimensions are available on request

Wet-strengthened Filter Papers for Qualitative Analyses

These qualitative filter papers are essentially used for analytical purposes and routine analyses, whenever no gravimetric analyses are required. They are wet-strengthened and can be used for pressure and vacuum filtration. They are made of refined pulp and linters with an > 95 % α-cellulose content, are very pure with an ash content < 0.1 %.

Application Examples

Application	Grade
Must analysis	1288
Routine filtration for malt analysis	1289
Rapid filtration of fine precipitates	1292
Analysis of coffee extracts	1290
Tannin solutions	1291
Clarification of wine	293

- Made of refined pulp and cotton linters with an > 95 % α-cellulose content
- Ash content ≤ 0.1 % according to DIN 54370
- Wet-strengthened
- Supplied in rolls, sheets, discs and folded filters



Technical Specifications

Grade	Weight (g/m²)*	Thickness (mm)*	Particle retention (µm)	Filtration (s)*	Precipitates	Properties
1288	84	0.21	12 – 15	10	Coarse crystalline	Wide-pore, loose structure, fast filtering
1289	84	0.21	8 – 12	20	Medium-fine crystalline	Medium- to wide-pore, medium fast filtering
1292	84	0.17	5 – 8	20	Fine crystalline	Medium dense, medium fast filtering
1290	84	0.15	3 – 5	100	Fine crystalline	Narrow-pore, dense, slow filtering
1291	84	0.15	2 – 3	180	Very fine crystalline	Fine-pore, dense, very slow filtering
293	80	0.15	1 – 2	300	Very fine crystalline	Very fine-pore, very dense, very slow filtering

* See test methods, page 31

Ordering Information



Filter Discs, 100 pieces

Ø in mm	Grade 1288	Grade 1289	Grade 1290	Grade 1291	Grade 1292	Grade 293
55	FT-3-206-055	FT-3-207-055	FT-3-208-055	FT-3-209-055	FT-3-210-055	FT-3-211-055
70	FT-3-206-070	FT-3-207-070	FT-3-208-070	FT-3-209-070	FT-3-210-070	FT-3-211-070
90	FT-3-206-090	FT-3-207-090	FT-3-208-090	FT-3-209-090	FT-3-210-090	FT-3-211-090
110	FT-3-206-110	FT-3-207-110	FT-3-208-110	FT-3-209-110	FT-3-210-110	FT-3-211-110
125	FT-3-206-125	FT-3-207-125	FT-3-208-125	FT-3-209-125	FT-3-210-125	FT-3-211-125
150	FT-3-206-150	FT-3-207-150	FT-3-208-150	FT-3-209-150	FT-3-210-150	FT-3-211-150
185	FT-3-206-185	FT-3-207-185	FT-3-208-185	FT-3-209-185	FT-3-210-185	FT-3-211-185
240	FT-3-206-240	FT-3-207-240	FT-3-208-240	FT-3-209-240	FT-3-210-240	



Folded Filters, 100 pieces

Ø in mm	Grade 1288	Grade 1289	Grade 1290	Grade 1290	Grade 1291	Grade 293
110	FT-4-206-110	FT-4-207-110	FT-4-208-110	FT-4-209-110	FT-4-210-110	
125	FT-4-206-125	FT-4-207-125	FT-4-208-125	FT-4-209-125	FT-4-210-125	FT-4-211-125
150	FT-4-206-150	FT-4-207-150	FT-4-208-150	FT-4-209-150	FT-4-210-150	FT-4-211-150
185	FT-4-206-185	FT-4-207-185	FT-4-208-185	FT-4-209-185	FT-4-210-185	FT-4-211-185
240	FT-4-206-240	FT-4-207-240	FT-4-208-240	FT-4-209-240	FT-4-210-240	FT-4-211-240



Sheets in 580 × 580 mm, 100 pieces

Grade 1288	Grade 1289	Grade 1290	Grade 1291	Grade 1292	Grade 293
FT-2-206-580580	FT-2-207-580580	FT-2-208-580580	FT-2-209-580580	FT-2-210-580580	FT-2-211-580580

Other dimensions are available on request

High-Purity Filter Papers for Qualitative Analyses

These paper grades are used for analytical purposes that require a low ash content. Grades 292 and 292a are especially suitable for soil analyses because they are low in nitrogen. For phosphate or sodium determination, we recommend grades 131 and 132.



Application Examples

Application	Grade
Malt filtration according to EBC standards	292
Determination of nitrogen content in soils	292, 292a
Determination of phosphate and sodium content in soils	131, 132

- Pure cotton linters or cotton linters with refined pulp
- No additives, such as wet-strengthening agents
- Supplied in rolls, sheets, discs and folded filters

Technical Specifications

Grade	Weight (g/m^2)*	Thickness (mm)*	Particle retention (µm)	Filtration (s)*	Material
292	87	0.18	5 – 8	45	Cotton linters, low-nitrogen and nitrates, ash content ≤ 0.06 % according to DIN 54370
292a	97	0.19	4 – 7	60	Cotton linters, low-nitrogen and nitrates, ash content ≤ 0.06 % according to DIN 54370
132	80	0.17	5 – 8	55	Cotton linters and refined pulp, low-phosphate and low-potassium, ash content < 0.02 % according to DIN 54370
131	80	0.16	3 – 5	100	Cotton linters and refined pulp, low-phosphate and low-potassium, ash content < 0.02 % according to DIN 54370

* See test methods, page 31

Ordering Information



Filter Discs, 100 pieces

Ø in mm	Grade 131	Grade 132	Grade 292	Grade 292a
55		FT-3-329-055	FT-3-205-055	FT-3-215-055
70		FT-3-329-070	FT-3-205-070	FT-3-215-070
90		FT-3-329-090	FT-3-205-090	FT-3-215-090
110		FT-3-329-110	FT-3-205-110	FT-3-215-110
125	FT-3-351-125	FT-3-329-125	FT-3-205-125	FT-3-215-125
150		FT-3-329-150	FT-3-205-150	FT-3-215-150
185		FT-3-329-185	FT-3-205-185	FT-3-215-185
240		FT-3-329-240	FT-3-205-240	FT-3-215-240



Folded Filters, 100 pieces

Ø in mm	Grade 131	Grade 132	Grade 292	Grade 292a
110	FT-4-351-110	FT-4-329-110	FT-4-205-110	FT-4-215-110
125	FT-4-351-125	FT-4-329-125	FT-4-205-125	FT-4-215-125
150	FT-4-351-150	FT-4-329-150	FT-4-205-150	FT-4-215-150
185	FT-4-351-185	FT-4-329-185	FT-4-205-185	FT-4-215-185
240		FT-4-329-240	FT-4-205-240	FT-4-215-240



Sheets in 580 × 580 mm, 100 pieces

Grade 292	Grade 292a
FT-2-205-580580	FT-2-215-580580

Other dimensions are available on request

Smooth Filter Papers for Qualitative & Technical Analyses

These filter papers are used for routine analyses like clarification, determination of substances, but also as discs with a center hole for technical applications. Grades with a wet burst resistance > 30 kPa are referred to as wet-strengthened and are therefore suitable for pressure or vacuum filtration. White and bright particles can be easily detected with the black paper grade 918, due to the color contrast for example for the detection of fluorine or silicon in water or the detection of mycelium in mildews.



Application Examples

Application	Grade
Routine work in the lab	3 hw
Degassing beer before analysis	6
Determination of the sugar content	100/N
Clarification of clear or dyed liquids	3 m/N
Water Absorption test for mortar according to EN 1015-18	3 S/h
Durum wheat flour and semolina – Determination of yellow pigment content (ISO 11052:1994)	918

- Made of refined pulp and cotton linters with an > 95 % α-cellulose content
- Ash content between 0.1 – 0.15 % (grade 100/N < 0.1 %)
- Wet-strengthened
- Supplied in rolls, sheets, discs and folded filters as well as customer-specific cuts

Technical Specifications

Grade	Weight (g/m²)*	Thickness (mm)*	Filtration (s)*	Particle Retention (µm)	Wet burst resistance (kPa)*	Properties
6	80	0.17	15	10 – 13	≥ 30	Fast filtering
3 w	65	0.14	15	9 – 13	≥ 15	Medium fast filtering
3 hw	65	0.14	20	8 – 12	≥ 15	Medium fast filtering
C 140	140	0.30	20	7 – 11	> 50	Medium fast filtering
4 b	75	0.15	22	8 – 12	≥ 30	Medium fast filtering
3 m/N	65	0.14	30	7 – 10	≥ 30	Medium fast filtering
100/N	85	0.18	30	6 – 8	≥ 80	Medium fast filtering, low ammonium, potassium & sodium content
918	85	0.17	45	8 – 10		Medium fast to slow filtering, black paper
3 S/h	200	0.36	55	5 – 7	≥ 15	Medium fast to slow filtering, narrow-pore

* See test methods, page 31

Ordering Information



Filter Discs

Ø in mm	Grade 100/N (100 pieces)	Grade 3 hw (100 pieces)	Grade 3 m/N (100 pieces)	Grade 3 S/h (50 pieces)
55	FT-3-328-055	FT-3-303-055	FT-3-305-055	FT-3-307-055
70	FT-3-328-070	FT-3-303-070	FT-3-305-070	FT-3-307-070
90	FT-3-328-090	FT-3-303-090	FT-3-305-090	FT-3-307-090
110	FT-3-328-110	FT-3-303-110	FT-3-305-110	FT-3-307-110
125	FT-3-328-125	FT-3-303-125	FT-3-305-125	FT-3-307-125
150	FT-3-328-150	FT-3-303-150	FT-3-305-150	FT-3-307-150
185	FT-3-328-185	FT-3-303-185	FT-3-305-185	FT-3-307-185
240	FT-3-328-240	FT-3-303-240	FT-3-305-240	FT-3-307-240

Ø in mm	Grade 3 w (100 pieces)	Grade 4 b (100 pieces)	Grade 6 (100 pieces)	Grade 918 (100 pieces)	Grade C 140 (50 pieces)
55	FT-3-308-055	FT-3-309-055	FT-3-312-055	FT-3-607-055	
70	FT-3-308-070	FT-3-309-070	FT-3-312-070		
90	FT-3-308-090	FT-3-309-090	FT-3-312-090	FT-3-607-090	FT-3-356-090
110	FT-3-308-110	FT-3-309-110	FT-3-312-110		
125	FT-3-308-125	FT-3-309-125	FT-3-312-125		
150	FT-3-308-150	FT-3-309-150	FT-3-312-150		
185	FT-3-308-185	FT-3-309-185	FT-3-312-185		FT-3-356-185
240	FT-3-308-240	FT-3-309-240	FT-3-312-240		



Folded Filters, 100 pieces

Ø in mm	Grade 100/N	Grade 3 hw	Grade 3 m/N
110		FT-4-303-110	FT-4-305-110
125		FT-4-303-125	FT-4-305-125
150	FT-4-328-150	FT-4-303-150	FT-4-305-150
185		FT-4-303-185	FT-4-305-185
240	FT-4-328-240	FT-4-303-240	FT-4-305-240
270	FT-4-328-270	FT-4-303-270	FT-4-305-270
320	FT-4-328-320	FT-4-303-320	FT-4-305-320
385		FT-4-303-385	FT-4-305-385

Ø in mm	Grade 3 S/h	Grade 3 w	Grade 4 b	Grade 6	Grade C 140
110		FT-4-308-110	FT-4-309-110	FT-4-312-110	FT-4-356-110
125		FT-4-308-125	FT-4-309-125	FT-4-312-125	FT-4-356-125
150		FT-4-308-150	FT-4-309-150	FT-4-312-150	FT-4-356-150
185		FT-4-308-185	FT-4-309-185	FT-4-312-185	FT-4-356-185
240	FT-4-307-240	FT-4-308-240	FT-4-309-240	FT-4-312-240	FT-4-356-240
270	FT-4-307-270	FT-4-308-270	FT-4-309-270	FT-4-312-270	FT-4-356-270
320	FT-4-307-320	FT-4-308-320	FT-4-309-320	FT-4-312-320	FT-4-356-320
385		FT-4-308-385	FT-4-309-385	FT-4-312-385	

Sheets in 580 × 580 mm, 100 pieces

Grade 100/N	Grade 3 hw	Grade 3 m/N
FT-2-328-580580	FT-2-303-580580	FT-2-305-580580

Grade 3 S/h	Grade 3 w	Grade 4 b	Grade 6
FT-2-307-580580	FT-2-308-580580	FT-2-309-580580	FT-2-312-580580

Other dimensions are available on request

Crêped Filter Papers for Qualitative & Technical Analyses

Crêped filter papers are mostly used for the rapid filtration of relatively coarse precipitates; because of their crêped structure they provide a larger filtration area than smooth filter papers. Grades with a wet burst resistance > 30 kPa are referred to as wet-strengthened and are therefore suitable for pressure or vacuum filtration. Below you will find an overview of the most commonly used grades.



Application Examples

Application	Grade
Cooking oils	39/N
Vinegar filtration	39/N
Galvanic baths	34/N
Prefilters for transformer oil	6 S/N
Filtration of sugar solutions	603/N
Filtration of essential oils	5 H/N
Juice filtration	67/N

- Made of refined pulp and cotton linters with an > 95 % α-cellulose content
- Ash content between 0.1 – 0.15 %
- Wet-strengthened
- Supplied in rolls, sheets, discs and folded filters as well as customer-specific cuts

Technical Specifications

Grade	Weight (g/m^2)*	Thickness (mm)*	Filtration (s)*	Wet burst resistance (kPa)*	Air resistance (mbar)*	Properties
5 H/N	85	0.28	3	≥ 40		Very fast filtering, wide-pore
34/N	60	0.20	4	≥ 50	2.0	Very fast filtering
37/N	135	0.50	4	≥ 70	1.9	Very fast filtering, wide-pore
1602/N	70	0.23	5	≥ 30		Very fast filtering
39/N	180	0.65	5	≥ 90	2.5	Very fast filtering, wide-pore
39/N	300	0.95	5	120	2.5	Very fast filtering, wide-pore
603/N	75	0.25	8	≥ 50		Fast filtering
6 S/N	145	0.55	12	≥ 90		Medium fast filtering
601/N	65	0.19	13	≥ 30		Medium fast filtering
67/N	160	0.65	13	≥ 60	5.5	Medium fast filtering

* See test methods, page 31

Ordering Information



Filter Discs

Ø in mm	Grade 5 H/N (100 pieces)	Grade 6 S/N (50 pieces)	Grade 601/N (100 pieces)	Grade 603/N (100 pieces)	Grade 37/N (50 pieces)	Grade 39/N, 180 g/m² (50 pieces)
47	FT-3-423-047				FT-3-480-047	
70		FT-3-314-070			FT-3-480-070	
90	FT-3-423-090	FT-3-314-090		FT-3-335-090	FT-3-480-090	
110	FT-3-423-110	FT-3-314-110	FT-3-354-110	FT-3-335-110	FT-3-480-110	FT-3-483-110
125	FT-3-423-125	FT-3-314-125	FT-3-354-125	FT-3-335-125	FT-3-480-125	
150	FT-3-423-150	FT-3-314-150	FT-3-354-150	FT-3-335-150	FT-3-480-150	
185	FT-3-423-185	FT-3-314-185	FT-3-354-185	FT-3-335-185	FT-3-480-185	FT-3-483-185
240	FT-3-423-240	FT-3-314-240	FT-3-354-240	FT-3-335-240	FT-3-480-240	
320			FT-3-354-320	FT-3-335-320		



Folded Filters, 100 pieces

Ø in mm	Grade 5 H/N	Grade 6 S/N	Grade 603/N	Grade 34/N	Grade 37/N	Grade 39/N, 180 g/m²
125	FT-4-423-125	FT-4-314-125	FT-4-335-125	FT-4-478-125	FT-4-480-125	
150	FT-4-423-150	FT-4-314-150	FT-4-335-150		FT-4-480-150	FT-4-483-150
185	FT-4-423-185	FT-4-314-185	FT-4-335-185		FT-4-480-185	FT-4-483-185
240	FT-4-423-240	FT-4-314-240	FT-4-335-240		FT-4-480-240	FT-4-483-240
270	FT-4-423-270	FT-4-314-270	FT-4-335-270			
320	FT-4-423-320	FT-4-314-320	FT-4-335-320	FT-4-478-320	FT-4-480-320	
385	FT-4-423-385					FT-4-483-385
500	FT-4-423-500	FT-4-314-500			FT-4-480-500	FT-4-483-500



Sheets in 580 × 580 mm, 100 pieces

Grade 5 H/N	Grade 6 S/N	Grade 601/N	Grade 603/N
FT-2-423-580580	FT-2-314-580580	FT-2-354-580580	FT-2-335-580580

Grade 37/N	Grade 39/N, 180 g/m²	Grade 39/N, 300 g/m²
FT-2-480-580580	FT-2-483-580580	FT-2-487-580580

Other dimensions are available on request

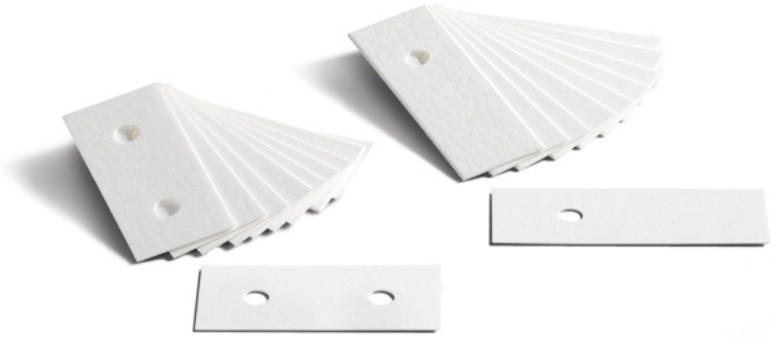
Paper Boards for the Filtration and Absorption of Liquids

Among other applications, these boards are used for the filtration of cooking and transformer oils, galvanic baths and as base paper for further impregnation with certain reagents. Grades with a wet burst resistance > 30 kPa are referred to as wet-strengthened and are therefore suitable for pressure or vacuum filtration.

Application Examples

Application	Grade
Cytocards	151
Paper air fresheners	157
Fragrance test cards	C 160

- Made of refined pulp or cotton linters
- Smooth
- Supplied in sheets, discs and as well as customer-specific cuts





Technical Specifications

Grade	Weight (g/m²)*	Thickness (mm)*	Filtration (s)*	Air resistance (mbar)*	Capillary rise (mm/10 min)*	Dry burst resistance (kPa)*	Wet burst resistance (kPa)*	Water capacity (%)
C 160	160	0.30	40	25	80		≥ 50	
1339	315	0.63		42	≥ 60	≥ 500	≥ 230	
C 350L	360	0.75		30	80		≥ 200	
151	460	1.00		19	120	≥ 400		
1220	475	1.00	200		120			
157	700	1.80		8	150			
SEK 770	800	1.00						400

* See test methods, page 31

Ordering Information

Sheets in 580 × 580 mm, 100 pieces

Grade C 160
FT-2-343-580580

Seed Testing Papers

These papers satisfy the requirements for the determination of germination capability according to ISTA (International Seed Testing Association) and are ideal for ensuring optimal moisture content for the most diverse types of seeds and germination forms. Their pH ranges between 6.0 and 7.5, they are wet-strengthened and their special structure prevents fine seed roots from growing through the paper. The colored papers are produced with dyes that do not influence the growth of roots. These papers are mainly used to count more easily very fine and white roots.



PP ("Pleated Paper") Method
The pleated paper is placed in a box; the seeds are distributed among the folds of the pleated paper and covered with a wrapping strip to keep the seeds moist. The pleated papers have 50 double folds that are 20 mm in depth; usually, 2 seeds are placed in each fold. Both white and grey papers are available. Colored paper makes it easier to count white seed species.

Application Examples

Made of refined pulp or cotton linters This method is mainly applied with corn, sugar beets, wheat, barley and various grasses, but can also be used for all other seed types.

Technical Specifications & Ordering Information

Grade	Properties	Weight (g/m²)*	Thickness (mm)*	Size (mm)	Qty per box	Order No.
20	Pleated strips, white	110	0.22	2,000 × 110	1,008**	FT-2003532000110
20, grey	Pleated strips, grey	110	0.22	2,000 × 110	1,008**	FT-2003662000110
4 b	Wrapping strips	75	0.15	110 × 580	100	FT-2-309-110580
6	Wrapping strips	80	0.17	110 × 580	500	FT-2-312-110580

* See test methods, page 31
** 112 rods à 9 pleated strips

Other dimensions are available on request

BP ("Between Paper") Method
One wetted paper sheet is laid on top of a second, the seeds are placed on the double sheet which is then rolled up.

Application Examples

The method is used for peas and oats, among others.

Technical Specifications & Ordering Information

Grade	Properties	Weight (g/m²)*	Thickness (mm)*	Size (mm)	Qty per box	Order No.
39/N	Crêped white paper	180	0.65	580 × 580	100	FT-2-483-580580

* See test methods, page 31

TP ("Top of Paper") Method
The seeds are placed on the paper (discs or sheets) and then transferred either to petri dishes or plastic boxes. By supplying the filter with water, wick papers are used for constant moistening during the Jacobsen method. They are also supplied as blue and yellow papers to make it easier to count white seed species.



Application Examples

The method is applied to small seeds like clover species, for example.

Technical Specifications & Ordering Information

Grade	Properties	Weight (g/m²)*	Thickness (mm)*	Size (mm)	Qty per box	Order No.
C 140	Smooth white paper	140	0.30	240 × 400	100	FT-2-356-240400
6 S/N	Crêped white paper	145	0.55	150 × 580	100	FT-2-314-150580
193	Smooth, yellow paper sheets	160	0.32	120 × 300	100	FT-2-381-120300
193	Smooth, yellow paper sheets	160	0.32	110 × 170	1000	FT-2-381-110170
191	Smooth, blue paper	700	1.35	140 × 200	100	FT-2-379-140200

* See test methods, page 31

Filter Papers for the Sugar Industry

In the sugar industry, filter papers are used in laboratories to assay sugar beet or cane sugar. The sugar beets are mashed and further analyzed according to the aluminum sulfate method. Potassium, nitrogen, sodium and saccharose content are measured using a spectrophotometer or the likes. These papers are wet-strengthened and either smooth or crêped. They are made of cellulose or a mixture of cellulose and diatomaceous earth.

Grade 100/N is not only supplied as discs or folded filters, but also on rolls for VENEMA systems.

Technical Specifications

Grade	Properties	Weight (g/m^2)*	Thickness (mm)*	Filtration (s)*	Wet burst resistance (kPa)*	Order No.
603/N	Crêped paper, very fast filtering	75	0.25	8	≥ 50	See page 15
6 S/N	Crêped paper, very fast filtering	145	0.55	12	≥ 90	See page 15
601/N	Crêped paper, fast filtering	65	0.19	13	≥ 30	See page 15
3 hw	Smooth paper, medium fast filtering	65	0.14	20	≥ 15	See page 13
470	Diatomaceous earth filter paper, slow filtering	140	0.32	80	30	See page 20
100/N	Smooth paper, medium fast filtering, low phosphate and low sodium	85	0.18	30	≥ 80	See below on rolls or page 13 as sheets, discs or folded filters

* See test methods, page 31



Ordering Information

Venema Rolls, Grade 100/N

Width	Length	Qty per box	Order No.
150 mm	1,000 m	1 roll	FT-1-328-1501000
240 mm	1,000 m	1 roll	FT-1-328-2401000

Other dimensions are available on request

Diatomaceous Earth Filter Paper



Grade 470 papers are made of cellulose and diatomaceous earth and offer a much better separating capability than pure cellulose papers at the same rate of filtration. This grade quickly retains the finest particles at high flow rates.

Application Examples

- Clarification of beer, wine, urine during spectophotometric or refractometric tests
- Filtration of the finest, semi-colloidal precipitates, e.g. those consisting of proteins, clay or cold-precipitated barium

Technical Specifications

Grade	Weight (g/m²)*	Thickness (mm)*	Filtration (s)*
470	140	0.32	80

* See test methods, page 31

Ordering Information

Filter Discs, 100 pieces

Ø in mm	Order No.
90	FT-3-606-090
110	FT-3-606-110
125	FT-3-606-125
150	FT-3-606-150
185	FT-3-606-185

Folded Filters, 100 pieces

Ø in mm	Order No.
125	FT-4-606-125
150	FT-4-606-150
185	FT-4-606-185
240	FT-4-606-240
320	FT-4-606-320

Phase Separating Paper



Grade 480 is impregnated with stabilized silicon, thus rendering it hydrophobic: It retains water, but allows solvents to flow through. The flow stops automatically when the entire solvent has passed through. In many applications, this phase separator paper eliminates the need to use separating funnels.

Application Examples

- These nonwoven grades are made of rayon or polyester and are available in different weights. They can be used for the filtration or prefiltration of viscous solutions containing particles visible with the naked eye.
- Filtration of extracting solvents in clinical or medical labs
- Separation of emulsions that are formed during the extraction of aqueous plant or drug solutions

Technical Specifications

Grade	Weight (g/m²)*	Thickness (mm)*
480	85	0.19

* See test methods, page 31

Ordering Information

Filter Discs, 100 pieces

Ø in mm	Order No.
70	FT-3-602-070
90	FT-3-602-090
110	FT-3-602-110
125	FT-3-602-125
150	FT-3-602-150
185	FT-3-602-185

Folded Filters, 100 pieces

Ø in mm	Order No.
90	FT-4-602-090
125	FT-4-602-125
150	FT-4-602-150
185	FT-4-602-185
270	FT-4-602-270

Other dimensions are available on request

Surface Protection Paper

LabSorb is a highly absorptive grade of paper coated on one side with polyethylene. Used with the cellulose side up, the paper absorbs liquids, which are stopped by the polyethylene layer and thus prevented from soaking through. Used with the polyethylene side up, the paper is highly useful for recovery of valuable or toxic liquids.



Application Examples

- Preventing radioactive contamination of work surfaces in radiochemical laboratories
- Recovering spilled solutions containing expensive reagents
- Protecting laboratory bench surfaces from spillage or splashes of liquids by preventing absorption and seepage of these liquids into work surfaces
- Lining animal cages for protection and hygiene
- Reducing the risk of objects breaking after falling on hard surfaces

Technical Specifications

Weight (g/m²)	Water capacity
140	150 %



Ordering Information

Grade	Format	Size	Qty per box	Order No.
LabSorb	Roll	400 mm × 50 m	1	FT-1-601-400050
LabSorb	Roll	400 mm × 100 m	1	FT-1-601-400100
LabSorb	Roll	460 mm × 50 m	1	FT-1-601-460050
LabSorb	Roll	600 mm × 50 m	1	FT-1-601-600050
LabSorb	Roll	600 mm × 100 m	1	FT-1-601-600100
LabSorb	Sheets	460 × 570 mm	50	FT-2-601-460570K
LabSorb	Sheets	480 × 600 mm	50	FT-2-601-480600K

Chromatography Papers

Chromatography papers are made of 100 % cotton linters. These highly pure papers are not only ideal for blotting & chromatography, but also for a wide range of absorption applications like those common in the life sciences and diagnostics.



Technical Specifications

Grade	Weight (g/m^2)*	Thickness (mm)*	Capillary rise (mm/30 min)*
FN 3	90	0.19	95
FN 4	125	0.24	95
FN 7	150	0.32	145
FN 30	320	0.90	240
FN 100	195	0.35	115

* See test methods, page 31

Application Examples

Application	Grade
The most commonly used chromatography paper	FN 100
Analytical paper for routine and repetitive separations	FN 3
Routine analysis of proteins in serum (e.g. human albumin)	FN 3
Antibiotic test strips	FN 30

Ordering Information

Sheets

Grade	Size (in mm)	Qty per box	Order No.
FN 3	300×580	100	FT-2-503-300580N
FN 3	460×570	100	FT-2-503-460570N
FN 3	580×600	100	FT-2-503-580600N
FN 4	580×600	100	FT-2-504-580600N
FN 7	460×570	50	FT-2-507-460570K
FN 7	580×600	50	FT-2-507-580600K
FN 30	254×305	100	FT-2-526-254305N
FN 30	580×600	25	FT-2-526-580600G
FN 100	76×102	100	FT-2-527-076102N
FN 100	200×200	100	FT-2-527-200200N
FN 100	260×410	100	FT-2-527-260410N
FN 100	460×570	50	FT-2-527-460570K
FN 100	460×570	100	FT-2-520-460570N
FN 100	580×600	50	FT-2-527-580600K
FN 100	580×680	50	FT-2-527-580680K

Other dimensions are available on request

Blotting Papers

These blotting papers are made from the purest raw materials with the maximum degree of absorptiveness and cellulose content. They are available in a choice of different weights and thicknesses as well as in different formats to cover the majority of blotting applications. Furthermore, they are the ideal complement to the Sartorius nitrocellulose blotting membranes available in two pore sizes, 0.22 µm and 0.45 µm.

- Made of high-purity cotton linters for uniform buffer flow and resulting blots
- No additives to avoid any interference during the transfer
- Supplied in sheets, rolls as well as in customized sizes to save time and avoid any waste

Application Examples

Application	Grade
For gel wicking and drying, capillary blotting using Western, Southern or semidry techniques	BF 2
To increase and maintain the transport of liquid from the buffer and as buffer reservoir in capillary and semidry blotting methods	BF 3
To transfer DNA or RNA according to the Southern technique or semidry blotting of proteins	BF 4

Technical Specifications

Grade	Weight (g/m²)*	Thickness (mm)*	Capillary rise (mm/10 min)*	Capillary rise (mm/30 min)*
BF 2	195	0.35	70	115
BF 3	330	0.76	130	
BF 4	550	1.30	160	

* See test methods, page 31

Ordering Information

Grade	Size (in mm)	Qty per box	Order No.
BF 2	80 × 90	100	FT-2-519-080090N
BF 2	130 × 210	100	FT-2-519-130210N
BF 2	200 × 200	100	FT-2-519-200200N
BF 2	460 × 570	100	FT-2-519-460570N
BF 2	580 × 600	100	FT-2-519-580600N
BF 3	135 × 155	100	FT-2-520-135155N
BF 3	200 × 200	100	FT-2-520-200200N
BF 3	460 × 570	50	FT-2-520-460570K
BF 3	580 × 600	50	FT-2-520-580600K
BF 4	110 × 170	25	FT-2-521-110170G
BF 4	150 × 150	25	FT-2-521-150150G
BF 4	580 × 580	25	FT-2-521-580580G
BF 4	580 × 600	25	FT-2-521-580600G



Blotting Membranes

Sartorius blotting membranes are ideal as a complement to the blotting papers for western blotting, DNA blotting as well as dot or slot blots. They have been optimized for all protein blotting systems, such as electrotransfer, semi-dry or simple capillary blotting.

- High membrane surface area for high binding capacity & no sample loss
- Exceptionally low background allowing longer exposure times & better results
- High membrane stability for easy handling



Technical Specifications

Description	11327	11306
Material	Cellulose Nitrate	Cellulose Nitrate
Pore size (µm)	0.22	0.45
Thickness (µm)	120	130
Water flow rate (mL/[min. cm² bar])	27	70
Bubble point with water (bar)	4.4	2.4
Extractables in water (%)	< 1	< 1
Burst pressure (bar)	0.8	0.2
Binding capacity for IgG (µg/cm²)	200	200

Ordering Information

Rolls

Grade	Roll Size	Order No.
11327	30 cm × 3 m	11327------41BL
11306	30 cm × 3 m	11306------41BL

Other dimensions are available on request

Glass Microfiber Filters With Binder



These filters are mostly used either for monitoring air and gas or as prefilter. They are manufactured with synthetic binding agents to ensure that the filter has a defined strength. They are mechanically and chemically stable, have a temperature resistance up to 180 °C and – depending on the binding agent used – are either hydrophobic or hydrophilic.

Application Examples

Application	Grade
Prefiltration	13400, MG 1387/1
Gas monitoring	MG 1387/1
Air pump protection	MG 227/1/60

- Mechanically and chemically stable
- Temperature resistant up to 180 °C
- Supplied as discs or sheets



Technical Specifications

Grade	Weight (g/m²)*	Thickness (mm)*	Penetration 0.3 µm (%)	Pressure drop 5.3 cm/s (Pa)	Binding agent
MG 227/1/60	60	0.32	<0.5	260	Hydrophobic
13430	220	1.25	0.02	360	Hydrophilic
13400	73	0.39	0.015	363	Hydrophilic
MG 400 XA	75	0.35	<0.001	425	Hydrophobic
MG 1387/1	90	0.38	≤0.003	400	Hydrophilic

* See test methods, page 31

Ordering Information

Filter Discs

Ø in mm	MG 227/1/60 (100 pieces)	13430**	13400**	MG 1387/1 (50 pieces)
13			13400--13------S	
16			13400--16------S	
20			13400--20------S	
25			13400--25------Q	
42			13400--42------Q	
44			13400--44------Q	
45			13400--45------Q	FT-3-01125-045
47		13430--47------S	13400--47------Q	FT-3-01125-047
50			13400--50------Q	FT-3-01125-050
55				FT-3-01125-055
80			13400--80------N	
100		13430-100------K	13400-100------K	
110			13400-110------K	FT-3-01125-110
120			13400-120------K	
124			13400-124------K	
125				FT-3-01125-125
127		13430-127------K	13400-127------K	
130		13430-130------K	13400-130------K	FT-3-01125-130
142		13430-142------K	13400-142------K	
150	FT-3-01124-150		13400-150------K	
257		13430-257------K	13400-257------K	
260			13400-260------K	
279		13430-279------K	13400-279------K	
293		13430-293------K	13400-293------K	

** K = 50 pieces,
N = 100 pieces,
Q = 500 pieces,
S = 200 pieces

Other dimensions are available on request

Glass Microfiber Filters Without Binder

Binder-free glass microfiber filters are recommended for analytical and gravimetric analyses and also as prefilters. These filters combine fast flow rates with high load capacity and the retention of very fine particles; they are biologically inert, are resistant to most chemicals and withstand temperatures up to 500 °C (grade 550-HA up to 550 °C).



Application Examples

Application	Grade
Prefiltration	13440, MGB, MGD
Analysis of suspended solids in wastewater according to EN 872	MGC
Analysis of suspended solids in wastewater according to 2540D	MG 550-HA
Clarification of buffer & reagent solutions	MGA
Clarification of protein solutions	MGF
Air Monitoring, PM10	MG 160
TCLP Test	MGF

- Manufactured from 100 % borosilicate glass
- 100 % binder free
- pH stable
- Withstand temperatures up to 500 °C (Grade MG 550-HA up to 550 °C)
- Supplied as discs or sheets

Technical Specifications

Grade	Weight (g/m²)*	Thickness (mm)*	Penetration 0.3 µm (%)**	Particle retention in liquids (µm)	Filtration speed (mL/min)*	Fulfills the requirements in EN 872:2005 (weigh loss)
MGA	54	0.23	<0.001	1.6	510	yes
MGB	143	0.70	<0.001	1.0	210	
MGC	54	0.24	<0.001	1.2	335	yes
MGD	120	0.47	<0.1	2.7	920	
MGF	75	0.38	<0.001	0.7	110	
MGG	65	0.27	≤0.001	1.5	600	
13440	88	0.44		0.7	120	yes
MG 160	75	0.35	<0.002	1.2	400	
MG 550-HA	65	0.27		1.5	500	

* See test methods, page 31
** Measurement according to EN 143 (0.3 µm, 5.3 cm/s, paraffin oil)

Ordering Information



Filter Discs

Ø in mm	MGA (100 pieces)	MG 160 (50 pieces)	MGB (50 pieces)	MGC (100 pieces)	MGD (50 pieces)
13					FT-3-1104-013
20	FT-3-1101-020				
21			FT-3-1102-021	FT-3-1103-021	
25	FT-3-1101-025		FT-3-1102-025	FT-3-1103-025	FT-3-1104-025
37	FT-3-1101-037	FT-3-01110-037			
47	FT-3-1101-047	FT-3-01110-047	FT-3-1102-047	FT-3-1103-047	FT-3-1104-047
50	FT-3-1101-050	FT-3-01110-050	FT-3-1102-050	FT-3-1103-050	FT-3-1104-050
55	FT-3-1101-055		FT-3-1102-055	FT-3-1103-055	
70	FT-3-1101-070	FT-3-01110-070	FT-3-1102-070	FT-3-1103-070	FT-3-1104-070
80	FT-3-1101-080				
90	FT-3-1101-090	FT-3-01110-090	FT-3-1102-090	FT-3-1103-090	FT-3-1104-090
100	FT-3-1101-100	FT-3-01110-100	FT-3-1102-100	FT-3-1103-100	FT-3-1104-100
110	FT-3-1101-110	FT-3-01110-110	FT-3-1102-110	FT-3-1103-110	FT-3-1104-110
125	FT-3-1101-125		FT-3-1102-125	FT-3-1103-125	FT-3-1104-125
150	FT-3-1101-150		FT-3-1102-150	FT-3-1103-150	FT-3-1104-150
185	FT-3-1101-185			FT-3-1103-185	
240	FT-3-1101-240		FT-3-1102-240		FT-3-1104-240
293					FT-3-1104-293

Ø in mm	MGF (100 pieces)	MGG (100 pieces)	MG 550-HA (100 pieces)	13440**
20		FT-3-1106-020		
24			FT-3-01147-024	
25	FT-3-1105-025	FT-3-1106-025		
37		FT-3-1106-037		
42				13440--42------Q
44				13440--44------Q
47	FT-3-1105-047	FT-3-1106-047	FT-3-01147-047	13440--47------Q
50	FT-3-1105-050	FT-3-1106-050	FT-3-01147-050	13440--50------Q
55	FT-3-1105-055	FT-3-1106-055	FT-3-01147-055	
60		FT-3-1106-060		
70	FT-3-1105-070	FT-3-1106-070	FT-3-01147-070	
90	FT-3-1105-090	FT-3-1106-090	FT-3-01147-090	
100				13440-100------K
110	FT-3-1105-110	FT-3-1106-110	FT-3-01147-110	
125	FT-3-1105-125	FT-3-1106-125	FT-3-01147-125	
130				13440-130------K
142	FT-3-1105-142			
150	FT-3-1105-150	FT-3-1106-150		
240	FT-3-1105-240			
293				13440-293------K

** Q = 500 pieces, K = 50 pieces,

Other dimensions are available on request

Quartz Microfiber Filters



These quartz microfiber filters are made of high-purity quartz microfibers without any addition of glass microfibers and binding agents. They are especially suited for emission monitoring at temperatures of up to 900 °C and wherever filters of the highest purity are needed. In addition, the Q3400 filter grade is tempered to remove all chemically combined water and to give the filters excellent weight and dimensional stability.

- Made of 100 % quartz microfiber silicium dioxide (SiO2)
- High-purity filters with the lowest trace metal values
- Extreme temperature resistance up to 900 °C
- Exceptional chemical resistance
- Excellent weight and dimensional stability
- Biologically inert
- Certificate on trace elements available for every batch of the grade Q3400

Application Examples

- Analysis of dust levels according to EN 13284 1:2001.
- Emission monitoring at high temperatures (air pollution)
- Analysis of hot and acidic gases
- Trace element analyis
- Analytical and gravimetrical analyses
- Stationary source emissions – Determination of PM10/PM2,5 mass concentration in flue gas – Measurement at low concentrations by use of impactors according to ISO 23210:2009 (Grade Q3400)

Technical Specifications

Grade	Weight (g/m²)*	Thickness (mm)*	Penetration (%)**	Pressure drop 5.3 cm/s (Pa)	Dry tensile strength longitudinal (N/m)	Dry tensile strength crosswise (N/m)	Pre-Heated
Q3400	85	0.43	< 0.002	450	200	80	yes
T293	85	0.43	< 0.002	450	150	70	no

* See test methods, page 31
** according to EN 143 (0.3 µm, 15 cm/s, paraffin oil)

Ordering Information

Filter Discs, grade Q3400

Ø in mm	Qty per box	Order No.
20	25	Q3400--20------G
25	25	Q3400--25------G
30	25	Q3400--30------G
37	25	Q3400--37------G
45	25	Q3400--45------G
47	25	Q3400--47------G
50	25	Q3400--50------G
82	100	Q3400--82------N
90	100	Q3400--90------N
142	50	Q3400-142------K
150	50	Q3400-150------K

Filter Discs, grade T293

Ø in mm	Qty per box	Order No.
13	100	FT-3-1109-013
25	50	FT-3-1109-025
37	50	FT-3-1109-037
45	50	FT-3-1109-045
47	50	FT-3-1109-047
50	50	FT-3-1109-050
70	50	FT-3-1109-070
85	50	FT-3-1109-085
90	50	FT-3-1109-090
100	50	FT-3-1109-100
110	50	FT-3-1109-110
125	50	FT-3-1109-125
150	50	FT-3-1109-150
293	25	FT-3-1109-293

Other dimensions are available on request

Quality Control Test Methods

Basis Weight According to DIN EN ISO 536
The basis weight is determined by weighing a paper sheet that is between 500 cm² and 1,000 cm² in size on a calibrated paper scale showing an accuracy of +/– 0.5 %. The basis weight is expressed in grams per square meter (g/m²).

Thickness According to DIN EN ISO 20534
The thickness is measured using a thickness meter or gauge readings and is expressed in millimeters.

Filtration Speed (s)
The time required to filter 10 mL of distilled water at 20 °C through a free-hanging, fully-wetted filter disc with a diameter of 110 mm folded in quarters.
The filtration rate is expressed in seconds.

Filtration Speed (mL/min – Herzberg)
The time required to filter distilled water at 20 °C through a filter surface of 10 cm² and at a constant pressure of 5 cm water column.
The filtration rate is expressed in mL/min.

Ash Content According to DIN 54370
The ash content is the residue determined after ignition of 10 g of filter paper at 800 °C in a platinum crucible.
The ash content is expressed in percent.

Tensile Strength According to DIN EN ISO 1924-2
A continually increasing load is applied vertically to a paper strip measuring 15 mm in width and 180 mm in length. The tensile strength is defined as the stretching force necessary to break the piece and measured lengthwise and in the transverse direction.
The tensile strength is expressed in N/15 mm.

Dry Bursting Strength According to DIN ISO 2758
A paper with a surface area of 10 cm² is clamped over and subjected to increasing pressure from a rubber diaphragm. The bursting strength is the pressure reading at the time of rupture.
The bursting strength is expressed in kilopascal (kPa).

Wet Burst Resistance According to DIN ISO 3689
A paper with surface area of 10 cm² is immersed in water and then clamped over a rubber diaphragm. The paper is subjected to evenly increasing pressure from the rubber diaphragm. The bursting strength is the pressure reading at the time of rupture.
The wet bursting strength is expressed in kilopascal (kPa).

Air Resistance
Air resistance is the pressure drop that occurs after filtration of a defined air stream (270 L/h and | or 75 cm/s at 10 cm²) through a filter paper.
The air resistance is expressed in mbar.

Capillary Rise According to DIN ISO 8787 (Klemm Method)
The capillary rise is defined as the height to which a paper strip measuring 15 mm in width and 250 mm in length, whose narrow side is immersed in prefiltered distilled water (20 °C), is wetted after 10 or 30 min. After this test period of 10 and 30 min., the wetted part of the strip is measured in mm.
The capillary rise is expressed in mm per 10 min and | or 30 min.

Index of Grades

Grade	Middler number	Description	Page
100/N	328	Qualitative-technical paper, smooth	12 – 13, 19
1220, 475 g/m²	10389	Paper board	16
1288	206	Qualitative filter paper	8 – 9
1289	207	Qualitative filter paper	8 – 9
1290	208	Qualitative filter paper	8 – 9
1291	209	Qualitative filter paper	8 – 9
1292	210	Qualitative filter paper	8 – 9
131	351	Qualitative filter paper	10 – 11
132	329	Qualitative filter paper	10 – 11
1339	441	Paper board	16
13400	n.a.	Glass microfiber filter, with binder	26 – 27
13430	n.a.	Glass microfiber filter, with binder	26 – 27
13440	n.a.	Glass microfiber filter, binder-free	28 – 29
151	449	Paper board	16
157	437	Paper board	16
1602/N	342	Qualitative-technical paper, crêped	14
191, blue	379	Germination test paper	18
193, yellow	381	Germination test paper	18
20	00353	Germination test paper	17
20 grey	00366	Germination test paper	17
292	205	Qualitative filter paper	10 – 11
292a	215	Qualitative filter paper	10 – 11
293	211	Qualitative filter paper	8 – 9
34/N, 60 g/m²	478	Qualitative-technical paper, crêped	14 – 15
37/N, 135 g/m²	480	Qualitative-technical paper, crêped	14 – 15
39/N, 180 g/m²	483	Qualitative-technical paper, crêped	14 – 15, 18

Grade	Middler number	Description	Page
39/N, 300 g/m²	487	Qualitative-technical paper, crêped	14 – 15
■ 388	101	Quantitative filter paper	6 – 7
□ 389	102	Quantitative filter paper	6 – 7
■ 390	103	Quantitative filter paper	6 – 7
■ 391	104	Quantitative filter paper	6 – 7
■ 392	105	Quantitative filter paper	6 – 7
■ 393	127	Quantitative filter paper	6 – 7
3 hw	303	Qualitative-technical paper, smooth	12 – 13, 19
3 m/N	305	Qualitative-technical paper, smooth	12 – 13
3 S/h	307	Qualitative-technical paper, smooth	12 – 13
3 w	308	Qualitative-technical paper, smooth	12 – 13
470	606	Diatomaceous earth filter	19 – 20
480	602	Phase separating paper	21
4 b	309	Qualitative-technical paper, smooth	12 – 13, 17
5 H/N	423	Qualitative-technical paper, creped	14 – 15
6	312	Qualitative-technical paper, smooth	12 – 13, 17
6 S/N	314	Qualitative-technical paper, creped	14 – 15, 18, 19
601/N	354	Qualitative-technical paper, creped	14 – 15, 19
603/N	335	Qualitative-technical paper, creped	14 – 15, 19
67/N, 160 g/m²	477	Qualitative-technical paper, creped	14 – 15
918	607	Qualitative-technical paper, smooth, black	12 – 13
BF 2	519	Blotting paper	24
BF 3	520	Blotting paper	24

Grade	Middler number	Description	Page
BF 4	521	Blotting paper	24
C 140	356	Qualitative-technical paper, smooth	12 – 13, 18
C 160	343	Filter paper for liquid absorption	16
C 350L	340	Paper board	16
FN 100	527	Chromatography paper	23
FN 3	503	Chromatography paper	23
FN 30	526	Chromatography paper	23
FN 4	504	Chromatography paper	23
FN 7	507	Chromatography paper	23
LabSorb	601	Surface protection paper	22
MG 1387/1	01125	Glass microfiber filter, with binder	26 – 27
MG 160	01110	Glass microfiber filter, binder-free	28 – 29
MG 227/1/60	01124	Glass microfiber filter, with binder	26 – 27
MG 400 XA	01123	Glass microfiber filter, with binder	27
MG 550-HA	01147	Glass microfiber filter, binder-free	28 – 29
MGA	1101	Glass microfiber filter, binder-free	28 – 29
MGB	1102	Glass microfiber filter, binder-free	28 – 29
MGC	1103	Glass microfiber filter, binder-free	28 – 29
MGD	1104	Glass microfiber filter, binder-free	28 – 29
MGF	1105	Glass microfiber filter, binder-free	28 – 29
MGG	1106	Glass microfiber filter, binder-free	28 – 29
Q3400	n.a.	Pre-heated quartz microfiber filter	30
SEK 770	419	Paper board	16
T293	1109	Quartz microfiber filter	30

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