



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

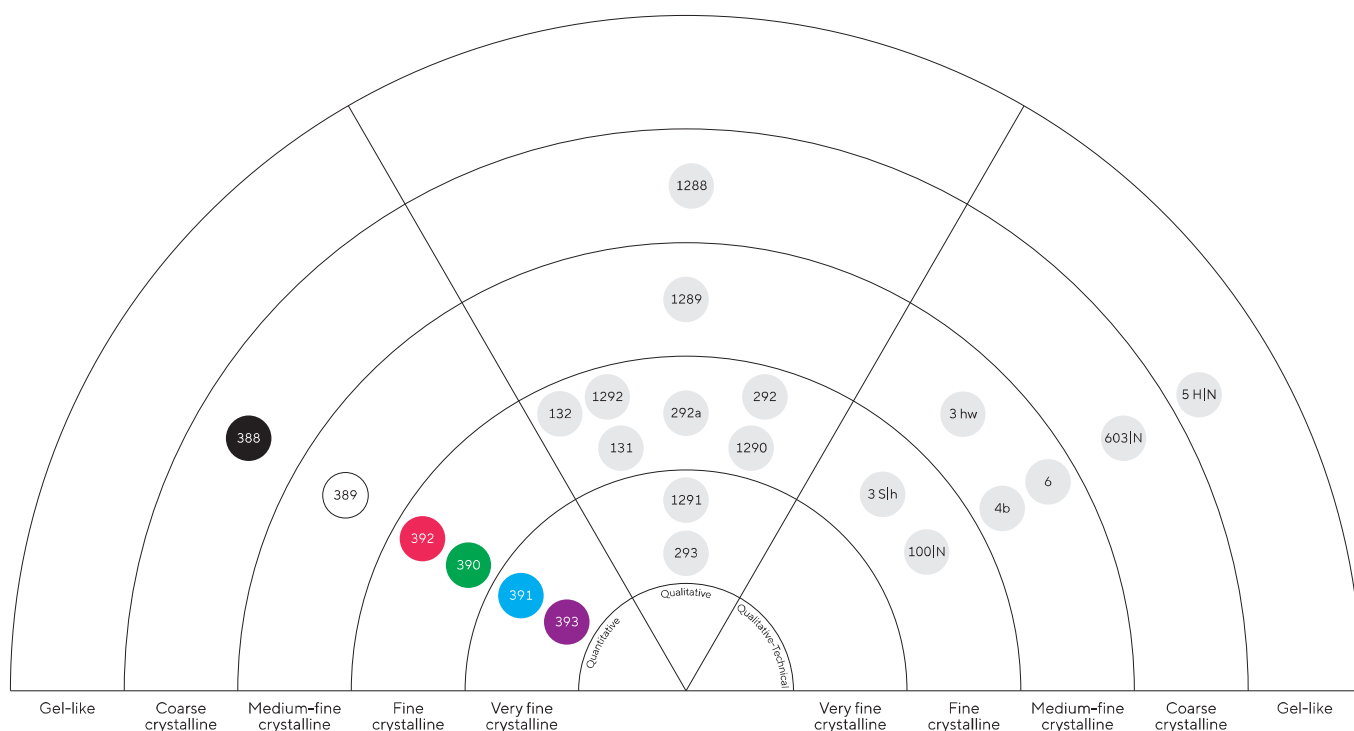
Sartorius pays particular attention to continuous in-process quality control; additionally, regular checks and exact analyses of raw material and of each individual finished product assure constant high quality and product uniformity.

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 degree of clarification are all decisive in making the right choice.

Product Overview



Quantitative Filter Papers

- | | |
|--|--|
| <p>388 Black dot
Fast filtering, wide-pore, loose structure, ash-free, wet-strengthened</p> | <p>390 Green dot
Slow filtering, narrow-pore, dense, ash-free, wet-strengthened</p> |
| <p>389 White dot
Medium fast filtering, medium- to wide-pore, low-fat content, ash-free, wet-strengthened</p> | <p>391 Blue dot
Very slow filtering, fine-pore, very dense, ash-free, wet-strengthened</p> |
| <p>392 Red dot
Medium fast filtering, medium density ash-free, wet-strengthened</p> | <p>393 Purple dot
Very slow filtering, very fine-pore, very dense, ash-free, wet-strengthened</p> |

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 $\leq 0.01\%$ 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/m ²)*	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