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Simplifying Progress

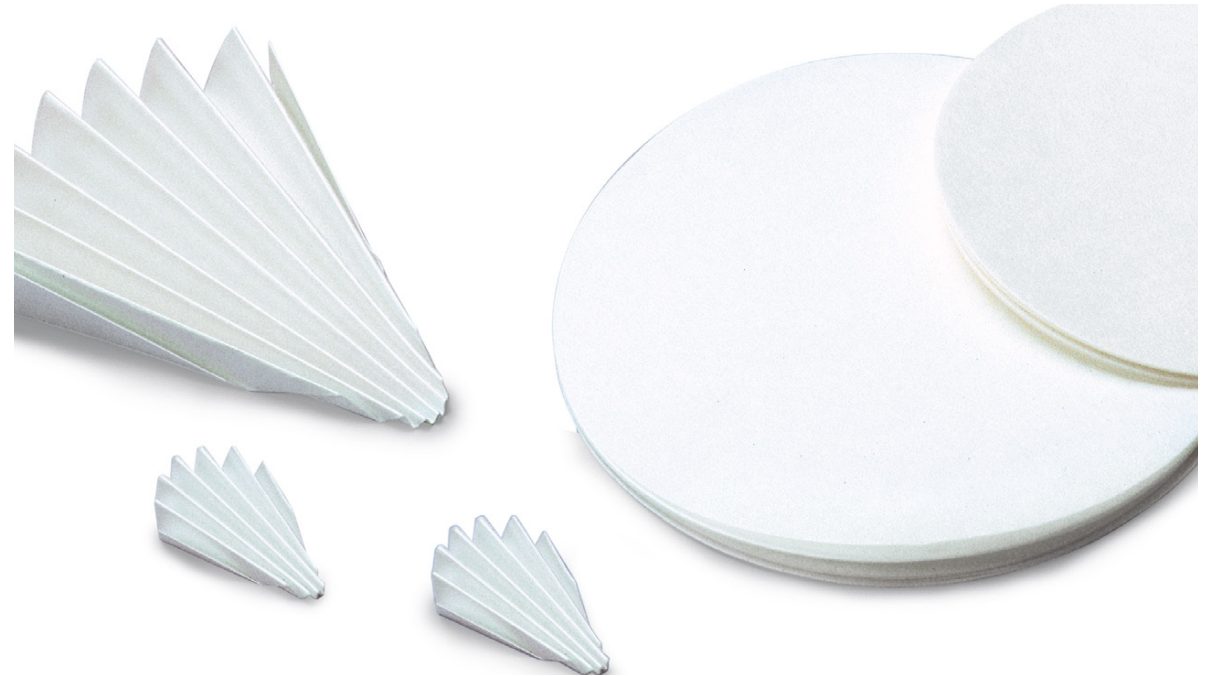
Depth Filters - Specifications

April 2024

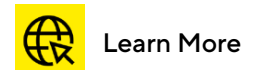


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Quantitative Filter Papers

| Grade | Weight g/m ² | Thickness (mm) | Filtration Time (s)* | Particle retention (µm) | Precipitates | Properties |
|---------------------|----------------------------|-------------------|-------------------------|----------------------------|-------------------------|----------------------------------|
| 388 (black dot) | 84 | 0.21 | 10 | 12 - 15 | Coarse crystalline | Fast filtration |
| 389 (white dot) | 84 | 0.19 | 20 | 8 - 12 | Medium-fine crystalline | Medium-fast filtration, fat-free |
| 392 (red dot) | 84 | 0.17 | 50 | 5 - 8 | Fine crystalline | Medium-fast filtration |
| 390 (green dot) | 84 | 0.16 | 100 | 3 - 5 | Fine crystalline | Slow filtration |
| 391 (blue dot) | 84 | 0.15 | 180 | 2 - 3 | Very fine crystalline | Very slow filtration |
| 393 (purple dot) | 100 | 0.18 | 300 | 1 - 2 | Very fine crystalline | Very slow filtration |

* Time required to filter 10 mL of distilled water at 20°C through a 110 mm folded filter



Qualitative Filter Papers

| Grade | Material | Weight g/m ² | Thickness (mm) | Wet bursting strength (kPa) | Ash content (%) | Wet strength | Particle retention (µm) | Properties |
|-------|--------------------------|----------------------------|-------------------|--------------------------------------|-----------------------|-----------------|-------------------------------|--|
| 1288 | Refined pulp and Linters | 84 | 0.21 | ≥ 30 | < 0.1 | x | 12 -15 | Wide pored, fast rate of filtration |
| 1289 | Refined pulp and Linters | 84 | 0.21 | ≥ 30 | < 0.1 | x | 8 -12 | Medium-wide pored, medium-fast rate of filtration |
| 1292 | Refined pulp and Linters | 84 | 0.17 | ≥ 30 | < 0.1 | x | 5 -8 | Medium pored moderately fast rate of filtration |
| 1290 | Refined pulp and Linters | 84 | 0.15 | ≥ 30 | < 0.1 | x | 3 -5 | Narrow pored, slow rate of filtration |
| 1291 | Refined pulp and Linters | 84 | 0.15 | ≥ 30 | < 0.1 | x | 2 -3 | Fine pored, very slow rate of filtration |
| 293 | Refined pulp and Linters | 80 | 0.15 | ≥ 20 | < 0.1 | x | 1-2 | Very fine pored, very slow rate of filtration |
| 131 | Refined pulp and Linters | 80 | 0.16 | 20 | < 0.02 | | 3 -5 | Narrow pored, slow rate of filtration |
| 132 | Refined pulp and Linters | 80 | 0.17 | 20 | < 0.02 | | 5 -8 | Medium pored, medium-slow rate of filtration |
| 292 | Cotton Linters | 87 | 0.18 | 5 | < 0.06 | | 5 -8 | Medium pored, medium-slow rate of filtration |
| 292a | Cotton Linters | 97 | 0.19 | 5 | < 0.06 | | 4 -7 | Medium to narrow pored, medium-slow rate of filtration |



eShop (1288 - 293)



eShop (131 - 292a)

Qualitative - Technical Filter Papers, Smooth

| Grade | Weight g/m ² | Thickness (mm) | Filtration Time (s)* | Particle retention (µm) | Wet Bursting Strength (kPa) | Color | Properties |
|-------|----------------------------|-------------------|-------------------------|----------------------------|--------------------------------|-------|--|
| 6 | 80 | 0.17 | 15 | 10 - 13 | ≥ 30 | White | Medium-fast filtration |
| 3 w | 65 | 0.14 | 15 | 9 - 13 | ≥ 15 | White | Medium-fast filtration |
| 3 hw | 65 | 0.14 | 20 | 8 - 12 | ≥ 15 | White | Medium-fast filtration |
| C 140 | 140 | 0.30 | 20 | 7 - 11 | > 50 | White | Medium-fast filtration |
| 4 b | 75 | 0.15 | 22 | 8 - 12 | ≥ 30 | White | Medium-fast filtration |
| 3 m/N | 65 | 0.14 | 30 | 7 - 10 | ≥ 30 | White | Medium-fast filtration |
| 100/N | 85 | 0.18 | 30 | 6 - 8 | ≥ 80 | White | Medium-fast filtration, low ammonium, potassium & sodium content |
| 918 | 85 | 0.17 | 45 | 8 - 10 | n/a | Black | Medium-fast to slow filtration, black paper, stained with a sulfur coloring |
| 3 S/h | 200 | 0.36 | 55 | 5 - 7 | ≥ 15 | White | Medium-fast to slow filtration |

* Time required to filter 10 mL of distilled water at 20°C through a 110 mm folded filter



Qualitative - Technical Filter Papers, Creped

| Grade | Weight g/m ² | Thickness (mm) | Filtration Time (s)* | Wet Bursting Strength (kPa) | Air Resistance (mbar) | Properties |
|-------------|----------------------------|-------------------|-------------------------|--------------------------------|--------------------------|--|
| 5 H/N | 85 | 0.28 | 3 | ≥ 40 | n/a | Very fast filtration, wide-pore |
| 34/N | 80 | 0.25 | 5 | ≥ 50 | 2.0 | Very fast filtration |
| 37/N | 135 | 0.50 | 4 | ≥ 70 | 1.9 | Very fast filtration |
| 1602/N | 70 | 0.23 | 5 | ≥ 30 | n/a | Very fast filtration |
| 39/N, 180 g | 180 | 0.65 | 5 | ≥ 90 | 2.5 | Very fast filtration |
| 39/N, 300 g | 300 | 0.95 | 5 | ≥ 120 | 2.5 | Very fast filtration |
| 603/N | 75 | 0.25 | 8 | ≥ 50 | n/a | Fast filtration |
| 6 S/N | 145 | 0.55 | 12 | ≥ 90 | n/a | Medium-fast filtration |
| 601/N | 65 | 0.19 | 13 | ≥ 30 | n/a | Medium-fast filtration, for sugar industry |

* Time required to filter 10 mL of distilled water at 20°C through a 110 mm folded filter



Absorptive Filter Papers and Cardboards

| Grade | Weight g/m ² | Thickness (mm) | Filtration Time (s)* | Wet Bursting Strength (kPa) | Dry bursting strength (kPa) | Air Resistance (mbar) | Capillary Rise (mm/ 10 min) | Water Capacity (%) | Properties |
|---------|----------------------------|-------------------|-------------------------|--------------------------------|--------------------------------|-----------------------------|-----------------------------------|--------------------------|--|
| C 160 | 160 | 0.30 | 40 | > 50 | | 25 | 80 | | Filtration of fine-flaked precipitates |
| 1339 | 315 | 0.63 | | ≥ 230 | ≥ 500 | 42 | ≥ 60 | | Raw paper for Bowie-Dick-test indicator sheets, sterilization control |
| C 350L | 360 | 0.75 | | ≥ 200 | | 30 | 80 | | Antibiotic testing paper, ash content < 0.08 % |
| 151 | 460 | 1.00 | | | ≥ 400 | 19 | 120 | | Base paper for cyto-strips |
| 1220 | 475 | 1.00 | 200 | | | | 120 | | Filtration of essential oils, galvanic baths, use in filter presses, ash content of 0.15 % |
| SEK 770 | 800 | 100 | | | | | | ≥ 500 | Absorbent paper board for the transport of liquids |



* Time required to filter 10 mL of distilled water at 20°C through a 110 mm folded filter



Blotting and Chromatography Papers

| Grade | Weight g/m ² | Thickness (mm) | Capillary Rise (mm/10 min) | Capillary Rise (mm/30 min) | Ash Content | pH Value | Properties |
|--------|----------------------------|-------------------|-------------------------------|-------------------------------|----------------|----------|---|
| BF 2 | 195 | 0.35 | 70 | 115 | | | Blotting paper |
| BF 3 | 330 | 0.76 | 130 | | | | Blotting paper |
| BF 4 | 550 | 1.30 | 160 | | | | Blotting paper |
| FN 3 | 90 | 0.19 | | 95 | ≤ 0.04 | 7 | Blotting & Chromatography paper, medium-fast absorption |
| FN 4 | 125 | 0.24 | | 95 | ≤ 0.04 | 7 | Blotting & Chromatography paper, medium-fast absorption |
| FN 7 | 150 | 0.32 | | 145 | ≤ 0.04 | 7 | Blotting & Chromatography paper, fast absorption |
| FN 30 | 320 | 0.90 | | 240 | ≤ 0.05 | 7 | Blotting & Chromatography paper, very fast absorption |
| FN 100 | 195 | 0.35 | 70 | 115 | ≤ 0.04 | 7 | Blotting & Chromatography paper, fast absorption |



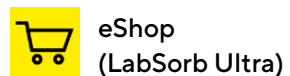
Seed Germination Test Papers

| Grade | Weight (g/m ²) | Thickness (mm) | Color | Wet Bursting Strength (kPa) | Water Absorption (g/100 cm ²) | ISTA Test Method | Properties |
|----------|----------------------------|----------------|------------|-----------------------------|---|------------------|---------------------------------------|
| 20 | 110 | 0.22 | White | | | PP | Pleated strips, white, 2,000 x 110 mm |
| 20, gray | 110 | 0.22 | Gray | | | PP | Pleated strips, gray, 2,000 x 110 mm |
| 4 b | 75 | 0.15 | White | ≥ 30 | | PP | Wrapping strips |
| 6 | 80 | 0.17 | White | ≥ 30 | | PP | Wrapping strips |
| C 140 | 140 | 0.30 | White | ≥ 50 | | TP | Smooth paper |
| 6 S/N | 145 | 0.55 | White | ≥ 90 | | TP | Creped paper |
| 193 | 160 | 0.32 | Yellow | | | TP | Smooth paper |
| 191 | 700 | 1.35 | Light Blue | ≥ 50 | 12.8 | TP | Smooth paper |
| 39/N | 180 | 0.62 | White | | | BP | Creped paper |



Special Papers

| Grade | Material | Weight (g/m ²) | Thickness (mm) | Water Absorption (%) | Properties |
|---------------|--------------------------------|----------------------------|----------------|----------------------|--|
| LabSorb | Polyethylene-coated paper | 140 | | 150 | Polyethylene-coated paper for surface protection |
| Labsorb Ultra | Polyethylene-coated paper | 187 | | 300 | Polyethylene-coated paper with high water absorption |
| 480 | Silicone-impregnated paper | 85 | 0.19 | | Hydrophobic phase separating paper for the filtration of solvents |
| 470 | Cellulose & diatomaceous earth | 140 | 0.32 | | Diatomaceous earth filter paper for the filtration of fine precipitates – slow filtration: 80 s |
| 605 | Parchment paper | 23 | 0.07 | | Smooth, soluble for weighing solid particles |
| 2113 | Non-linting silk paper | 13 | | | Very thin and soft lit-free paper for the cleaning of optical surfaces such as lens and mirrors of microscopes, cuvettes |



Glass Microfiber Filters with Binder

| Grade | Weight (g/m ²) | Thickness (mm) | Penetration 0.3 μm (%) | Pressure Drop at 5.3 cm/s (Pa) | Binding Agent | Temperature Resistance (°C) | Applications |
|-------------|----------------------------|----------------|------------------------|--------------------------------|---------------|-----------------------------|--|
| 13430 | 220 | 1.25 | < 0.02 | | Hydrophilic | 180 °C | Prefiltration |
| 13400 | 73 | 0.39 | < 0.015 | | Hydrophilic | 180 °C | Prefiltration |
| MG 1387/1 | 90 | 0.38 | < 0.003 | 400 | Hydrophilic | 220°C | Gas monitoring, sample preparation |
| MG 227/1/60 | 60 | 0.32 | < 0.5 | | Hydrophobic | 220 - 250°C | Air pollution control |
| MG 400 XA | 75 | 0.35 | < 0.001 | 425 | Hydrophobic | 180 °C | Air sampling for collection of atmospheric particulates and aerosols |



Glass Microfiber Filters without Binder

| Grade | Weight (g/m ²) | Thickness (mm) | Penetration 0.3 μm (%) | Particle Retention in Liquids (μm) | Filtration Time* (mL/min) | Fulfills requirements in EN 872:2005 (weigh loss) | Temperature Resistance (°C) | Applications |
|-----------|----------------------------|----------------|------------------------|------------------------------------|---------------------------|---|-----------------------------|---|
| MGA | 56 | 0.24 | < 0.001 | 1.6 | 435 | yes | 500 | Clarification of buffer and reagent solutions. Air and water pollution monitoring |
| MGB | 145 | 0.66 | < 0.001 | 1.0 | 500 | | 500 | Prefiltration of large volumes |
| MGC | 56 | 0.24 | < 0.001 | 1.2 | 320 | yes | 500 | Analysis of suspended solids in wastewater according to EN 872:2005 |
| MGD | 118 | 0.51 | < 0.01 | 2.7 | 885 | | 500 | Prefiltration |
| MGF | 78 | 0.36 | < 0.001 | 0.7 | 135 | | 500 | Clarification of protein solutions, filtration of liquids prior to HPLC, TCLP Testing |
| MGG | 67 | 0.29 | < 0.001 | 1.5 | 570 | | 500 | Filtration of gasses and liquids |
| 13440 | 88 | 0.44 | | 0.7 | 120 | yes | 500 | Prefiltration |
| MG 160 | 73 | 0.33 | < 0.001 | 1.2 | 410 | | 500 | Air monitoring; PM-10 sampling |
| MG 550-HA | 65 | 0.27 | | 1.5 | 500 | | 550 | Analysis of suspended solids in wastewater according to 2540D |

*Herzberg method



Quartz Microfiber Filters

| Grade | Weight g/m ² | Thickness (mm) | Penetration 0.3 µm (%) | Pressure Drop at 5.3 cm/s (Pa) | Dry tensile strength, longitudinal (N/m) | Dry tensile strength, crosswise (N/m) | Temperature Resistance | Pre-heated |
|-------|----------------------------|-------------------|---------------------------|-----------------------------------|---|--|---------------------------|------------|
| Q3400 | 85 | 0.43 | < 0.002 | 450 | 200 | 80 | 900 °C +/-10 % | yes |
| T293 | 85 | 0.43 | < 0.002 | 450 | 150 | 70 | 900 °C +/-10 % | no |



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