# **Qualitative Filter Papers**

Ahlstrom-Munksjö's qualitative grades of filter paper are, by definition, recommended for use in analytical methods, which determine or identify particulate constituents of a mixture irrespective of the amount present. Qualitative filter papers are often used in routine separation work that still requires high purity and consistent performance.



#### **KEY FEATURES**

- Qualitative analysis
- Low ash content 0.06%
- Untreated
- Consistent performance
- Wet-strengthened grades available
- Custom cut
- Bulk packaging

Ahlstrom-Munksjö offers a complete range of low ash filter papers for general laboratory work that provides you with the correct combination of particle retention, filtration speed, loading capacity and wet-strength. All our qualitative grades consist of > 95% super refined  $\alpha$ -cellulose and linter fibers.

## Standard Grades (Non Wet-Strengthened)

Standard qualitative filter papers are suitable for quadrant folded or gravity flow applications. These grades contain a high level of alpha-cellulose that provides high purity but will weaken when wet. The inherent strength of standard (untreated) grades does not pose a problem when they are used in routine quadrant folded applications. We do not recommend these grades for use in vacuum work or when wet handling is required.

#### Ahlstrom-Munksjö 610 1.5 µm, Slow Speed

This grade is a slow flowing filter designed to retain fine particles encountered in qualitative analysis. Grade 610 is widely used for water analysis, biological products and fine precipitates such as cold-precipitated barium sulfate. Grade 610 is also used in Buchner funnels and to clarify cloudy suspensions.

#### Ahlstrom-Munksjö 642 2 µm, Medium Speed

This grade has finer particle retention than Grade 601 but with slightly lower filtration speed. Grade 642 also has higher absorption than Grade 601. It is used in general laboratory applications to retain particles above 2 µm in size. Grade 642 is also found in agricultural and environmental laboratories for plant growth trials, soil testing, and air analysis for monitoring specific contaminants and in the filtration of organic and sulfide precipitates.

#### Ahlstrom-Munksjö 601 2.5 µm, Medium Speed

This grade covers a wide range of laboratory applications and is used for clarifying liquids and for rapid filtration of coarser precipitates such as lead sulfate, lead chromate, calcium oxalate, calcium carbonate, aluminum phosphate, barium carbonate and beryllium hydroxide. Grade 601 can be found in soil analysis, seed testing and in air pollution to collect dust-laden air and is also commonly used in the food industry to separate foodstuffs from associated liquid or extracting liquid.

# Non Wet-Strengthened Grades (Continued)

#### Ahlstrom-Munksjö 237

#### 3 µm, Medium Speed

This high absorbency grade is twice as thick as Grade 642 with similar particle retention. The superior absorbency offers excellent performance when used as a sample carrier. The extra thickness gives higher wet strength and loading capacity, enabling more precipitate to be held without clogging the filter. Grade 237 is also highly suitable for use in Buchner funnels and for dye filtration.

#### Ahlstrom-Munksjö 609

#### 4 µm, Medium Speed

This grade is an evolution of Grade 613 for use in the beer industry. This is a filter paper with an extremely low iron and nitrogen content for the analysis of protein in beer.

# Ahlstrom-Munksjö 627

#### 4 µm, Medium Speed

This asphalt testing grade has a high loading capacity grade and is almost twice as thick as Grade 237.

#### Ahlstrom-Munksjö 613 6 µm, Medium Speed

This is a strong filter paper with a medium flow rate and retention. Grade 613 is commonly used in student laboratories. This strong general-purpose filter is also useful in Buchner funnels for barium carbonate, lead chromate and beryllium hydroxides.

#### Ahlstrom-Munksjö 631 10 µm, Medium Speed

This grade is used for the filtration of coarse particles and gelatinous precipitates such as ferric aluminum and magnesium hydroxides. Grade 631 is used in air monitoring and gas filtration when high flow rate is needed. This grade is also found in routine cleanup analysis of insoluble liquids such as biological fluids and organic elements.

#### Ahlstrom-Munksjö 615 25 µm, Fast Speed

This fast filtering grade is an intermediate grade between Grade 617 and Grade 631. Grade 615 has a rough surface and is used for filtering aluminum, ferric and magnesium hydroxides. It is also found in general construction filtration work and in the filtration of insoluble iron and ore.

### Ahlstrom-Munksjö 617 35 µm, Fast Speed

This is an extremely fast filtering grade and has a larger particle retention than Grade 631. Grade 617, a thicker filter paper with higher loading capacity, is used for rapid filtration of coarse particles and gelatinous precipitates such as in oils and resin solutions. Grade 617 is also found in construction product testing and is used by students to retain large flocculents and precipitates.

#### Typical grade properties

Standard Grades	Retention in µm	Filtration Speed Herzberg sec/100mls	Filtration Speed Rapidity mls/min	Loading Capacity	GE Whatman Cross Reference
610	1.5	1724	4	Medium	5
642	2.0	229	30	Medium	2
601	2.5	124	55	Medium	1
237	3.0	114	60	Very High	3
609	4.0	98	70	Medium	_
627	4.0	80	85	High	_
613	6.0	114	60	Medium	Student Grade
631	10.0	34	200	High	4
615	25.0	29	235	High	_
617	35.0	19	360	Very High	_

#### Catalog numbers (100/box; items with grade numbers in bold are 50/box)

\*All circle diameters are in centimeters

Size*	237	601	609	610	613	615	617	631	642
2.5	2370-0250	6010-0250	6090-0250	6100-0250	6130-0250	6150-0250	6170-0250	6310-0250	6420-0250
4.25	2370-0425	6010-0425	6090-0425	6100-0425	6130-0425	6150-0425	6170-0425	6310-0425	6420-0425
4.7	2370-0470	6010-0470	6090-0470	6100-0470	6130-0470	6150-0470	6170-0470	6310-0470	6420-0470
5.5	2370-0550	6010-0550	6090-0550	6100-0550	6130-0550	6150-0550	6170-0550	6310-0550	6420-0550
7.0	2370-0700	6010-0700	6090-0700	6100-0700	6130-0700	6150-0700	6170-0700	6310-0700	6420-0700
9.0	2370-0900	6010-0900	6090-0900	6100-0900	6130-0900	6150-0900	6170-0900	6310-0900	6420-0900
11.0	2370-1100	6010-1100	6090-1100	6100-1100	6130-1100	6150-1100	6170-1100	6310-1100	6420-1100
12.5	2370-1250	6010-1250	6090-1250	6100-1250	6130-1250	6150-1250	6170-1250	6310-1250	6420-1250
15.0	2370-1500	6010-1500	6090-1500	6100-1500	6130-1500	6150-1500	6170-1500	6310-1500	6420-1500
18.5	2370-1850	6010-1850	6090-1850	6100-1850	6130-1850	6150-1850	6170-1850	6310-1850	6420-1850
20.5	2370-2050	6010-2050	6090-2050	6100-2050	6130-2050	6150-2050	6170-2050	6310-2050	6420-2050
24.0	2370-2400	6010-2400	6090-2400	6100-2400	6130-2400	6150-2400	6170-2400	6310-2400	6420-2400
27.0	2370-2700	6010-2700	6090-2700	6100-2700	6130-2700	6150-0270	6170-2700	6310-2700	6420-2700
32.0	2370-3200	6010-3200	6090-3200	6100-3200	6130-3200	6150-3200	6170-3200	6310-3200	6420-3200
38.5	2370-3850	6010-3850	6090-3850	6100-3850	6130-3850	6150-3850	6170-3850	6310-3850	6420-3850
40.0	2370-4000	6010-4000	6090-4000	6100-4000	6130-4000	6150-4000	6170-4000	6310-4000	6420-4000
45.0	2370-4500	6010-4500	6090-4500	6100-4500	6130-4500	6150-4500	6170-4500	6310-4500	6420-4500
50.0	2370-5000	6010-5000	6090-5000	6100-5000	6130-5000	6150-5000	6170-5000	6310-5000	6420-5000

### **Wet-Strengthened Grades**

#### Ahlstrom-Munksjö 950 2.0 µm, Slow Speed

This slow flow rate grade with very good retention is used in the filtration of fine precipitates and super phosphates. Grade 950 is also recommended for boiler water analysis applications and gas filtration.

## Ahlstrom-Munksjö 909 3.0 µm, Medium Speed

This medium flow rate grade with very good retention is a tighter version of Grade 962. This grade has a rough surface and is often found in the food industry for routine tests.

### Ahlstrom-Munksjö 962 27 µm, Fast Speed

This fast filtering grade is a thinner version of Grade 961. Grade 962 is recommended for the filtration of coarse and gelatinous precipitates. The creped surface of Grade 962 also offers higher surface area to maintain high filtration speed.

### Ahlstrom-Munksjö 961 40 µm, Fast Speed

This fast filtering grade, with extremely high loading capacity, is recommended for the filtration of coarse and gelatinous precipitates. The creped surface of Grade 961 also offers higher surface area to increase filtration speed.

#### Typical grade properties

Wet-Strength Grades	Retention in µm	Filtration Speed Herzberg sec/100mls	Filtration Speed Rapidity mls/min	Loading Capacity	GE Whatman Cross Reference
950	2.0	491	14	Medium	6
909	3.0	105	65	Medium	91
962	27.0	28	245	High	114
961	40.0	19	360	Very High	113

#### Catalog numbers (100/box; items with grade numbers in bold are 50/box)

\*All circle diameters are in centimeters

Size*	950	909	962	961
4.25	9500-0425	9090-0425	9620-0425	9610-0425
4.7	9500-0470	9090-0470	9620-0470	9610-0470
5.5	9500-0550	9090-0550	9620-0550	9610-0550
7.0	9500-0700	9090-0700	9620- 0700	9610-0700
9.0	9500-0900	9090-0900	9620-0900	9610-0900
11.0	9500-1100	9090-1100	9620-1100	9610-1100
12.5	9500-1250	9090-1250	9620-1250	9610-1250
15.0	9500-1500	9090-1500	9620-1500	9610-1500
18.5	9500-1850	9090-1850	9620-1850	9610-1850
20.5	9500-2050	9090-2050	9620-2050	9610-2050
24.0	9500-2400	9090-2400	9620-2400	9610-2400
27.0	9500-2700	9090-2700	9620-2700	9610-2700
32.0	9500-3200	9090-3200	9620-3200	9610-3200
38.5	9500-3850	9090-3850	9620-3850	9610-3850
40.0	9500-4000	9090-4000	9620-4000	9610-4000
45.0	9500-4500	9090-4500	9620-4500	9610-4500
50.0	9500-5000	9090-5000	9620-5000	9610-5000