I.W. Tremont

Technical and Specialty Papers

ISO 9001:2008 Registered

Cellulose

Optimal Performance

Qualitative cellulose filter papers perform separation by entrapping particulate within the random matrix of cellulose fibers within the depth of the media. This media is widely used in methods requiring the determination and identification of particulate in both liquids and gas. Also, this natural fiber filter paper is commonly used to clarify liquid samples.

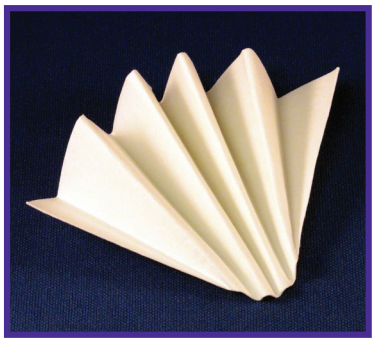
Quantitative cellulose filter papers are primarily used in gravimetric analysis procedures and perform separations by entrapping particulate within the random matrix of cellulose fibers within the depth of the media. This media family is also widely used in methods to prepare samples for further testing using many types of instrumentation. These very high quality filter papers are manufactured from refined pulp and/or alpha cotton linters. Available acid washed and have an extremely low ash content.



Cellulose media is available in many formats such as custom die-cut shapes, disks, rolls, sheets, and thimbles.

FEATURES

- Manufactured from high-quality cotton linters
- Wide range of retention/flow rates to meet various laboratory applications
- Available in Qualitative, Technical Qualitative and Quantitative grades
- Available in a convenient and easy to use fluted version with a sharply creased pre-folded pattern which helps reduce preparation time vs. flat filters when used in a filter funnel. Ideal in repetitive or multiple analyses.



Cellulose grades are available in fluted formats.

APPLICATIONS

Applications may vary by grades of material. Please see inside guide for details.

Application Reference by Grades of Cellulose

Qualitative Cellulose

Grade CFP1
Very widely used filter media demonstrating a retention of approximately 11 µm and medium flow rate. Used in a broad range of laboratory and environmental applications, this media is ideally suited in separating lead sulfate, calcium carbonate and calcium oxalate precipitates. This media is the standard for agricultural procedures such as soil and seed sample testing. Also, it is commonly used as a separation media in the food and beverage industry to extract liquids from solid samples. Due to the consistent bright white color of this media, it is ideal for photometric stain intensity measurement of air samples. The media can also be impregnated with reagents for use in quantifying optical reflectance in gas detection procedures.

Grade CFP2
A more retentive and absorbent media than CFP1, with approximately 8 µm and a medium to slow flow rate. This media is ideal for general filtration and absorbent conveyance. Commonly used in plant growth trials and monitoring pre-isolated contaminants in air and gas.

Grade CFP3
Virtually identical to CFP1, but twice as thick resulting in a significantly slower flow rate with a retention of approximately 6 µm. This media does not clog as easily as the other qualitative cellulose types, which allows for much higher sample volume usage. This media also demonstrates very high levels of absorbency, permitting the media to be used as a sample conveyance substrate.

Grade CFP4
The fastest flow rate demonstrated by any of the qualitative cellulose filter media resulting in a low retention rate of approximately 25 µm. Very commonly used as the first media in a multi-stage filtration process. Ideally suited for use in organic extractions and biological fluid separation processes. Often specified in air monitoring applications where the entrapment of fine particulate is not required.

Grade CFP5
Filtration of very fine particulate and clarification with applications in environmental sciences and chemical analysis.

Grade CFP6
Very similar basis and thickness to CFP5 but with a slightly less retentive porosity. Also, due to the furnish of this paper the ash content is higher than the balance of the qualitative line. Material is commonly specified in environmental applications.

Quantitative Cellulose

Grade CFP40
Demonstrating medium retention and flow rates, this media is widely used in many general quantitative procedures in both liquid and gas. These procedures include: standard environmental test procedures such as soil sample analysis and the collection of trace elements and radionuclides in air samples. Also used in liquid food tests for determination of sediments, primary analysis of cements and slurries and sample preparation prior to spectrophotometry.

Grade CFP41
Very fast flow rates and loose retention characteristics make this grade ideal for initial separation of gelatinous precipitates.

Grade CFP42
This media demonstrates an extremely high retention rate for a cellulose filter media.
Its uniquely high retention rate makes it ideal for any gravimetric analysis of very fine precipitates.

Grade CFP43
Positioned as an intermediate within the quantitative cellulose family, this grade demonstrates medium retention and flow rates. It is ideal for gravimetric analysis of soil samples, surface water testing procedures and used in air sample monitoring equipment.

Grade CFP44
Very similar to CFP42 but demonstrating a slightly wider retention rate within a similar flow rate. Typically used in the analysis of samples requiring separation of very fine precipitates.

Specialty Cellulose Grades
Technical specifications for these grades can be accessed at www.iwtremont.com.

Grade CFP41a (Air Monitoring)
This quantitative cellulose filter paper is primarily used in air monitoring applications and gravimetric analysis procedures. They perform separations by entrapping particulate within the random matrix of cellulose fibers within the depth of the media. This media family is also widely used in methods to prepare samples for further testing using many types of instrumentation. Due to the hardened surface, this material is suited for smear and wipe applications as well. These ashless filter papers are manufactured from refined pulp and linters. They are acid washed and have an extremely low ash content of <0.01%.

Chromatography Paper
This unique media is an ultra-high purity cellulose filter paper. The proprietary production methods employed produce a media which demonstrates a highly durable surface texture without the high level of organic extractables common to traditional acid-hardening processes. The alpha cellulose content is a minimum of 97.5% or above and is single source. This media demonstrates excellent lot-to-lot reproducibility. Material chemistries are verified against a standard using GC techniques prior to paper making process.

Blotting Paper
This media is a smooth surface, bright white cellulose filter paper. The material is manufactured from carefully selected, fully bleached and chemically-free pure cellulose fiber without additives or binder. General laboratory blotting applications require smooth, flat paper stock demonstrating high absorption and wicking characteristics. Some of these applications include: membrane backing, sample collection and conveyance of pastes and gels, wicking media for blot apparatus, draw down tests of liquid samples such as paints and adhesives. The media is also specified in TAPPI T-205 sp-06-Forming handsheets for physical tests of pulp, section 3.9-“Blotting paper”. Also specified in Development of USPS laboratory and pilot-scale testing protocols, 2000, Appendix 1A II, no. 8, Materials, “Blotters”.

TECHNICAL SPECIFICATIONS:

TECHNICAL GUIDELINES
(see back page for grade specification charts)

Filter Media:	Nomenclature is serialized and no indication of grade or quality.
Furnish:	The raw materials used in the manufacture of the wet laid product.
Ash content:	Dry method, determined in exposure at 900ºC air in muffle furnace.
Retention:	Nominal retention of particulate at 98% efficiency in liquid.
Flow:	Liquid flow rate speed relative to other comparable products listed in this product alignment.
Basis weight:	Nominal weight of material per meter^2 indicated “gram weight” unit of measure at 8% moisture.
Thickness:	As measured under 4 psi using TAPPI method T411.
Flat/Fluted:	Flat stock is supplied as sheets, rolls or die cut parts. Fluted is ¼ or ½ quadrant funnel folding.
Surface:	Stated as relative to comparable products listed in this product alignment.
Brightness:	Stated as relative to comparable products listed in this product alignment.

QUALITATIVE CELLULOSE GRADES

Filter Media	Retention	Flow	Ash Content (%)	Basis Weight (g/m^2)	Thickness (mm)
CFP1	11 µm	Medium	0.05	86	0.200
CFP2	8 µm	Medium-Slow	0.05	101	0.170
CFP3	6 µm	Slow	0.05	190	0.320
CFP4	25 µm	Fast	0.05	94	0.210
CFP5	2.5 µm	Slow	0.05	97	0.195
CFP6	3-4 µm	Slow	0.22	103	0.177

QUANTITATIVE CELLULOSE GRADES

Filter Media	Furnish / Finish	Retention	Flow	Ash Content (%)	Basis Weight (g/m^2)	Thickness (mm)
CFP40	Cotton/Ashless	8 µm	Medium	<0.01	85	0.200
CFP41	Cotton/Ashless	20 µm	Fast	<0.01	85	0.220
CFP42	Cotton/Ashless	2.5 µm	Slow	<0.01	140	0.170
CFP43	Cotton/Ashless	15-17 µm	Medium	<0.01	85	0.210
CFP44	Cotton/Ashless	3.0 µm	Slow	<0.01	85	0.165
CFP540	Cotton/Ashless/Hardened	7-8 µm	Medium	<0.01	85	0.210
CFP541	Cotton/Ashless/Hardened	21-23 µm	Fast	<0.01	85	0.200
CFP542	Cotton/Ashless/Hardened	2-3 µm	Very Slow	<0.01	85	0.170
CFP50	Cotton/Low Ash/Hardened	2-3 µm	Slow	0.015	86	0.177
CFP52	Cotton/Low Ash/Hardened	6-7 µm	Very Slow	0.015	101	0.200
CFP54	Cotton/Low Ash/Hardened	21-23 µm	Fast	0.015	85	0.200

QUALITATIVE CELLULOSE GRADES - (TECHNICAL APPLICATIONS)

Filter Media	Furnish	Ash Content (%)	Retention	Flow	Basis Weight (g/m^2)	Thickness (mm)	Avail. Flat / fluted	Surface	Brightness
CFP200	Cotton	0.1	1-5 µm	Slow	95	0.17	Flat	Smooth	White - High
CFP201	Cotton	0.1	7-14 µm	Medium-slow	70	0.16	Flat	Smooth	White - High
CFP801	Cotton	0.1	5-15 µm	Medium-slow	70	0.16	Fluted	Smooth	White - Medium
CFP202	Cotton/Binder	n/a	15-19 µm	Medium fast	90	0.3	Flat	Crepe	White - Low
CFP226	Cotton/Binder	n/a	20-25 µm	Fast	70	0.24	Flat	Crepe	Gray - Low
CFP802	Cotton/Binder	n/a	15 µm	Fast	70	0.22	Fluted	Crepe	Gray - Low
CFP230	Cotton/Binder	n/a	30 µm	Very fast	120	0.44	Flat	Crepe	Gray - Low
CFP113	Cotton/Binder	n/a	25-30 µm	Very fast	120	0.44	Flat	Crepe	Gray - Low
CFP114	Cotton/Binder	0.1	4-12 µm	Medium	85	0.2	Fluted	Smooth	White - High
CFP1384	Softwood/Binder	n/a	25-33 µm	Fast	70	0.23	Flat	Crepe	White - Low
CFP1312	Softwood/Cotton/Binder	0.24	20-30 µm	Fast	85	0.22	Flat	Rough	White - High
CFP1202	Softwood/Binder	n/a	35-40 µm	Very fast	140	0.66	Flat	Crepe	White - Low

ORDERING INFORMATION

For the complete listing of cellulose and specialty cellulose media available in a wide range of grades and porosities, please refer to our website at www.iwtremont.com.

COMMON COMPETITIVE EQUIVALENTS

For the complete up-to-date listing of competitive product alignments, please visit our website at www.iwtremont.com for the new easy-to-use Equivalency Converter tool.

PACKAGING

Cellulose disks packaged
50/100 disks per box.



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