INDUSTRIAL FILTER PAPERS & PADS

Advantec Industrial Filter Papers are versatile, strong, and cost-effective. 6 types are available classified by strength, thickness, retentivity, creping, and holding capacity. Please refer to the application guide for additional information.

Standard Filter Papers

Features and Applications

- Standard filter papers for a wide variety of applications
- Use for qualitative filtration analysis, efficient retention of 1-6 µm particles in horizontal and vertical flow systems, and suitable for applications in many fields

Grades

No. 1 • Qualitative filter paper, for coarse filtration
No. 2 • Qualitative filter paper, for mid-grade filtration
No. 131 • Qualitative filter paper, for fine particle filtration
No. 26 • Standard grade for general purpose
No. 27 • For mid-fine filtration
No. 28 • For fine filtration

Fine Particle Filter Papers

Features and Applications

- Highest particle retention of industrial filter papers
- Fibers won't separate or slough off suitable for removal of fine particles

Grades

No. 1640 • 0.4 mm thick, retaining 1µm particles while preserving a fast flow rate
No. 1650 • Highest grade filter paper

Creped Filter Papers

Features and Applications

- Uniformly creped surface with cellulose fiber pre-coat for a larger, more effective surface area
- Increased surface area for higher flow rates than standard filters
- High flow rates can be maintained while effectively filtering, so filtration of high viscosity or high particle concentration fluids can be performed

Grades

No. 101 • Qualitative filter paper useful for many applications
No. 102 • Grade with highest flow rate; useful for airborne particle retention
No. 107 • Reduced thickness filter
No. 126 • Increased thickness for more strength; especially good for viscous liquids

Grade	Standard Filter Paper						Fine Particle Filter		Creped Filter Paper			
	No. 1	No. 2	No. 131	No. 26	No. 27	No. 28	No. 1640	No. 1650	No. 101	No. 102	No. 107	No. 126
Weight (g/m²)	90	125	140	320	325	360	170	300	80	100	80	300
Thickness (mm)	0.20	0.26	0.25	0.74	0.68	0.70	0.40	0.57	0.21	0.3	0.21	0.9
Flow Time (s)*1	45	80	240	80	220	350	90	810	50	28	50	35
Burst Strength (kPa)*2	79	122	147	378	370	445	196	286	127	122	127	364
Nominal Rating (µm)*3	6	5	3	3	1.5	1	1	0.8	5	3	5	4
Surface	Smooth								Creped			
Color	White											

*1. Flow Time is the time in seconds required to filter 100mL of distilled water at 20°C under pressure supplied by a 10cm water column through a 10 cm² section of filter paper measured by Herzberg Tester in accordance with JIS P3801.
*2. Burst Strength is determined by Mullen Burst Strength Tester in accordance with JIS P8112.
*3. Nominal Rating is determined by the particle size of the precipitated Barium Sulfate through the filter by gravity filtration in accordance with JIS P3801.

Wet Strength Filter Papers

Features and Applications

- For special applications requiring high wet strength
- For high pressure filtration or filter press, use to perform filtration on a variety of liquids
- No. 26-3, 28-3, 126-3, and 424-3 are reduced thickness filters

Grades

No. 26-3 • Thinner and higher wet strength compared with No.26, but retention efficiency is equal to No.26

No. 28-3 • Thinner and higher wet strength compared with No.28, but retention efficiency is equal to No.28

No. 126-3 • Thinner and higher wet strength compared with No.126, but retention efficiency is equal to No.126

No. 327 • Comparable to No. 27; good for maintaining high flow rates

No. 408 • Mid-grade wet strength filter

No. 412 • Comparable to No. 2; high wet strength

No. 424 • Comparatively thick filter paper; good for quick filtration of high viscosity fluids

No. 424-3 • Comparable to No. 424; high wet strength, good for filtering high viscosity fluids

No. 431 • Comparable to No. 131; high wet strength, good for applications requiring fine particle retention

No. 434 • Creped light brown filter with soft surface; high filtration rate

No. 436 • Creped brown filter with high wet strength

Grade	Wet Strength Filter Paper										
	No. 26-3	No. 28-3	No. 126-3	No. 327	No. 408	No. 412	No. 424	No. 424-3	No. 431	No. 434	No. 436
Weight (g/m²)	260	310	250	285	92	120	380	325	140	290	250
Thickness (mm)	0.58	0.60	0.75	0.60	0.27	0.25	1.00	0.83	0.25	0.95	0.80
FlowTime (s)*1	80	350	35	220	15	80	50	50	250	30	70
Burst Strength (kPa)*2	299	382	326	401	50	109	687	670	124	212	294
Nominal Rating (μm)*3	3	1	4	1.5	8	1.5	4	4	3	5	2
Surface	Smooth		Creped	Smooth						Creped	
Color	White									Lt.Brown	Brown

*1. Flow Time is the time in seconds required to filter 100mL of distilled water at 20°C under pressure supplied by a 10cm water column through a 10 cm² section of filter paper measured by Herzberg Tester in accordance with JIS P3801.

*2. Burst Strength is determined by Mullen Burst Strength Tester in accordance with JIS P8112.

*3. Nominal Rating is determined by the particle size of the precipitated Barium Sulfate through the filter by gravity filtration in accordance with JIS P3801.

High Purity Filter Papers

Features and Applications

- Use for quantitative filtration analysis
- Contains low ash content and very low of levels pyrogens: especially good for high purity filtration applications
- Retains fine particles without affecting filtration speed

Grades

No. 5A • For high speed, relatively coarse filtration
No. 5B • For medium-fine quantitative filtration
No. 5C • For fine filtration

High Viscosity Fluid Filter Papers

Features and Applications

- Thick, high and low-density filter papers designed for fast filtration of viscous fluids

Grades

No. 63 • 1 mm thick filter paper; standard type for a variety of filtration applications
No. 63F • 1.35 mm thick, high density filter for increased particle retention than No. 63
No. 63G • For filtration of high viscosity liquids with fine particle sus pensions; can be used in high pressure systems
No. 60, 65, 462 • Thinner, lower density filter papers for gentle filtration of high viscosity fluids

Grade	High Viscosity Filter Paper						High Purity Filter Paper		
	No. 63	No. 63F	No. 63G	No. 60	No. 65	No. 462	No. 5A	No. 5B	No. 5C
Weight (g/m^2)	350	525	525	125	143	168	97	108	118
Thickness (mm)	1.00	1.35	1.35	0.56	0.55	0.53	0.22	0.21	0.22
FlowTime (s)*1	26	25	90	7	9	15	60	195	570
Burst Strength (kPa)*2	196	139	218	49	59	98	61	75	92
Nominal Rating (μm)*3	4	3	1.5	25	15	8	7	4	1
Surface	Smooth								
Color	White								

*1. Flow Time is the time in seconds required to filter 100mL of distilled water at 20°C under pressure supplied by a 10cm water column through a 10 cm^2 section of filter paper measured by Herzberg Tester in accordance with JIS P3801.
*2. Burst Strength is determined by Mullen Burst Strength Tester in accordance with JIS P8112.
*3. Nominal Rating is determined by the particle size of the precipitated Barium Sulfate through the filter by gravity filtration in accordance with JIS P3801.

Application Guide for Industrial Filter Papers

Application \ Grade	HIGH PURITY			STANDARD						HIGH WET STRENGTH							FINE		CREPED				HIGH VISCOSITY					
	No. 5A	No. 5B	No. 5C	No. 1	No. 2	No. 131	No. 26/26-3	No. 27	No. 28/28-3	No. 327	No. 408	No. 412	No. 424/424-3	No. 431	No. 434	No. 436	No. 1640	No. 1650	No. 101	No. 102	No. 107	No. 126/126-3	No. 63	No. 63F	No. 63G	No. 60	No. 65	No. 462
FERMENTED PRODUCTS																												
Sake		O	O		O	O	O	O	O	O										O		O						
Fruit Liquors			O				O	O		O																		
Whiskey, Brandy								O		O																		
Soy Sauce												O		O		O				O								
FOOD & BEVERAGE																												
Soft Drink Syrup							O													O		O						
Carbonated Beverages						O	O	O		O												O						
Mineral Water			O		O	O	O	O	O	O																		
Fruit Juices							O						O									O						
Cooking and Salad Oils	O				O		O	O	O	O			O		O							O	O					
Concentrated Fructose							O															O						
CHEMICALS																												
Industrial Organic Solvents							O		O	O	O		O	O			O	O	O									
Food Coloring	O	O	O	O	O		O							O		O		O	O									
Galvanizing Liquids				O	O						O		O					O										
Photographic Sensitizer				O	O				O												O		O	O				
Photographic Fixer									O		O								O	O			O					
Photographic Developer									O		O								O	O			O					
Photo Resists																							O					
Synthetic Resins					O		O	O		O			O		O	O				O	O			O				
Silicone										O			O		O							O	O	O				
Paints, Varnishes				O	O		O	O		O			O		O	O								O	O			
Ink					O		O						O	O					O	O		O		O	O			
Rayon (viscose)							O															O	O	O		O	O	O
Liquid Cellulose Acetate																							O	O	O	O	O	O
PHARMACEUTICALS																												
Cod Liver Oil							O						O		O							O						
Cough Syrups	O						O							O			O					O						
Eye Drops			O		O	O											O	O										
Infusions			O		O	O											O	O										
Medical Saline			O		O	O											O	O										
Culture Media	O	O		O	O														O	O								
Oils for Pharmaceuticals	O			O	O	O						O	O	O														
Antibiotics			O		O	O											O	O										
Serum			O			O												O										
COSMETICS																												
Hair Care Products						O									O								O			O	O	O
Moisturizer				O			O						O							O						O	O	O
Toner	O	O	O	O		O						O	O	O				O										
PETROLEUM PRODUCTS																												
Light Oil				O			O						O									O						
Heavy Oil				O			O						O		O						O	O						
Kerosene								O	O	O			O		O	O						O	O					
Lubricants					O		O	O	O				O			O							O		O			
Hydraulic Oil					O		O						O		O	O							O	O	O			
Transformer Oil					O		O	O	O	O			O												O			
Wax				O											O											O	O	O

Industrial Filter Pads

These pads are produced from refined cellulose fibers and diatomaceous earth. The diatomaceous earth has been treated to improve absorption which, in combination with the depth retention characteristics of cellulose fibers, increases overall retention efficiency. These pads can be sterilized by autoclave or in-line within a system by steam, hot water, or chemical sterilization. Primary uses of standard pads are sterilization and clarification of fluids, but are also well suited to applications requiring good surface and depth retention.

NA Standard Filter Pads

Features and Applications

- Zeta-Potential Plus filter pads exhibiting high surface and internal retention efficiency
- Suited for filtering beer, wine, sake and other fluids such as fermented beverages with high particle loads

Grades

NA-10 • For fast filtration retaining 1 µm particles
NA-12 • Medium grade pad retaining 0.8 µm particles
NA-16 • Standard type
NA-17 • High grade pad suitable as a final filter

NA Long-Life Filter Pads

Features and Applications

- Increased thickness, density and strength for comparatively longer life than NA Standard Types
- For filtering fluids with high particle loads over an extended period of time

Grades

NA-050 • High flow rate filter for retention of relatively coarse particles
NA-100 • Long-life filter comparable to the NA-10 for fast filtration
NA-300 • Long-life filter comparable to the NA-12 for medium grade pad
NA-500 • High retention efficiency pad for fine filtration
NA-600 • Long-life filter comparable to the NA-16 for fine filtration
NA-900 • Highest density and particle retention efficiency among NA filter pads

Grade	NA Standard Type				NA Long-Life Type					
	NA-10	NA-12	NA-16	NA-17	NA-050	NA-100	NA-300	NA-500	NA-600	NA-900
Weight (g/m²)	1,300	1,340	1,310	1,500	1,340	1,290	1,220	1,410	1,490	1,700
Thickness (mm)	3.5	3.5	3.5	3.5	3.6	3.6	3.5	3.7	3.6	3.8
Water Flow Rate (kL/h·m²)*1	4.9	2.8	1.1	0.7	11.4	8.1	5.1	1.8	0.8	0.4
Burst Strength (MPa)*2	0.58	0.29	0.29	0.39	0.49	0.49	0.49	0.49	0.39	0.29
Nominal Rating (µm)*3	1	0.8	0.4	0.3	3	1	0.8	0.5	0.4	0.2
pH Range*4	1 ~ 12				1 ~ 12					

*1. Water Flow Rate is determined by the filtration of 0.20µm membrane filter passed water at 25°C under 10kPa differential pressure.
*2. Burst Strength is determined by Mullen Burst Strength Tester in accordance with JIS P8112.
*3. Nominal Rating is determined by the particle size of the precipitated Barium Sulfate through the filter by gravity filtration in accordance with JIS P3801.
*4. pH range : May vary by changes in pressure, duration of filtration, or temperature, so please make adjustments accordingly.

Activated Carbon Filter Pads

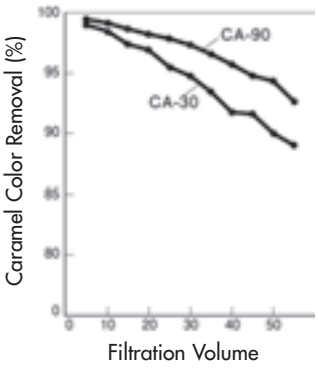
Activated carbon filter pads can be used to remove most organic and some inorganic contaminants from the fluid being filtered. Made of cellulose fibers impregnated with activated carbon particles.

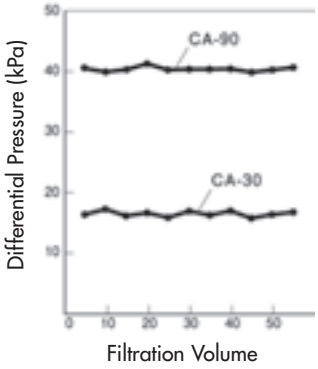
General Grade

- For decolorization and deodorization of gasses or liquids

CA-30 • Thick pad with high flow rate for fast filtration

CA-90 • High density and thickness for high-pressure applications





Pharmaceutical Grade

- Specially made for high purity applications

CA-1000 • Very high density and thickness for applications requiring high levels of purity

Example of Pyrogen Removal Ability

Vol. L.P.S. added (ng / mL)	0.9% NaCl	5% Glucose
100	(-)	(-)
150	(-)	(-)
200	(-)	(-)
600	(+)	(+)

L.P.S. Test : E-coli UKT-B strain was filtered at 2 mL/min·cm^2, over an effective filtration area of 50 cm^2. Detection was by LAL Test method.

Cellulose Filter Pads for Support and Purification

Features and Applications

- Made of natural cellulose fibers
- Most useful as a support for diatomaceous earth
- Pad thickness increases depth retention efficiency resulting in pure liquid filtrates

Grades

No. 1034-2 • 1.8 mm thick, lightweight and low density pad

No. 1034-3A • 3.2 mm thick, for maintaining a fast flow rate

No. 1034-3B • 3.2 mm thick, for high pressure resistance. Washable

Grade	Activated Carbon			Cellulose for Purification & Support		
	CA-30	CA-90	CA-1000	No. 1034-2	No. 1034-3A	No. 1034-3B
Weight (g/m^2)	1,050	1,130	2,500	700	950	1,000
Thickness (mm)	4.0	4.0	8.0	1.8	3.2	3.2
Water Flow Rate (KL/h.m^2)*1	13.2	7.2	-	46.9	3.16	29.8
Burst Strength (MPa)*2	0.27	0.39	0.019	0.58	1.17	1.27

*1. Water Flow Rate is determined by the filtration of 0.20μm membrane filter passed water at 25°C under 10kPa differential pressure.

*2. Burst Strength is determined by Mullen Burst Strength Tester in accordance with JIS P8112.

Application guide for Industrial Filter Pads

Application \ Grade	STANDARD				LONG-LIFE						ACTIVATED CARBON			PUR/SUPP CELLULOSE		
	NA-10	NA-12	NA-16	NA-17	NA-050	NA-100	NA-300	NA-500	NA-600	NA-900	CA-30	CA-90	CA-1000	No. 1034-2	No. 1034-3A	No. 1034-3B
FERMENTED PRODUCTS																
Beer								O	O					O	O	O
Sake	O	O	O			O	O	O						O	O	O
Water for Dilution	O				O											
Fruit Liquors		O	O	O		O	O	O	O	O					O	O
Brandy		O	O			O	O	O	O							
Vinegar		O	O			O	O		O	O				O	O	O
Soy Sauce	O				O		O							O	O	O
FOOD & BEVERAGE																
Soft Drink Syrup	O	O			O	O	O	O	O		O	O	O			
Mineral Water	O				O	O	O				O	O	O	O	O	O
Fruit Juices					O	O	O	O								
Cooking and Salad Oils	O	O	O		O	O					O	O				
Concentrated Fructose	O	O	O		O	O	O				O	O	O		O	O
CHEMICALS																
Industrial Organic Solvents	O	O			O	O		O			O	O		O	O	O
Food Coloring		O	O					O	O						O	O
Galvanizing Fluids	O				O									O	O	O
Synthetic Resins	O	O			O	O									O	O
Silicone					O	O									O	O
Paints, Varnishes	O	O			O	O								O	O	O
Ink					O	O	O									
PHARMACEUTICALS																
Cod Liver Oil	O	O			O	O	O									
Cough Syrups	O				O										O	O
Eye Drops											O	O				
Infusions	O	O	O	O		O	O	O	O	O		O	O			
Medical Saline			O	O				O	O	O		O	O			
Culture Media	O	O				O	O	O	O						O	O
Oils for Pharmaceuticals		O	O					O	O				O			
Antibiotics			O	O				O	O	O						
Serum	O		O	O			O	O	O	O						
COSMETICS																
Hair Care Products	O				O	O									O	O
Moisturizer	O	O			O	O										
Toner	O	O	O				O	O	O				O			
PETROLEUM PRODUCTS																
Heavy Oil	O				O	O									O	O
Kerosene	O				O	O									O	O
Lubricants	O	O					O								O	O
Hydraulic Oil	O	O			O	O	O								O	O
Transformer Oil	O					O	O								O	O