



FILTRATION &
SEPARATION

AZUMI

PRODUCT GUIDE

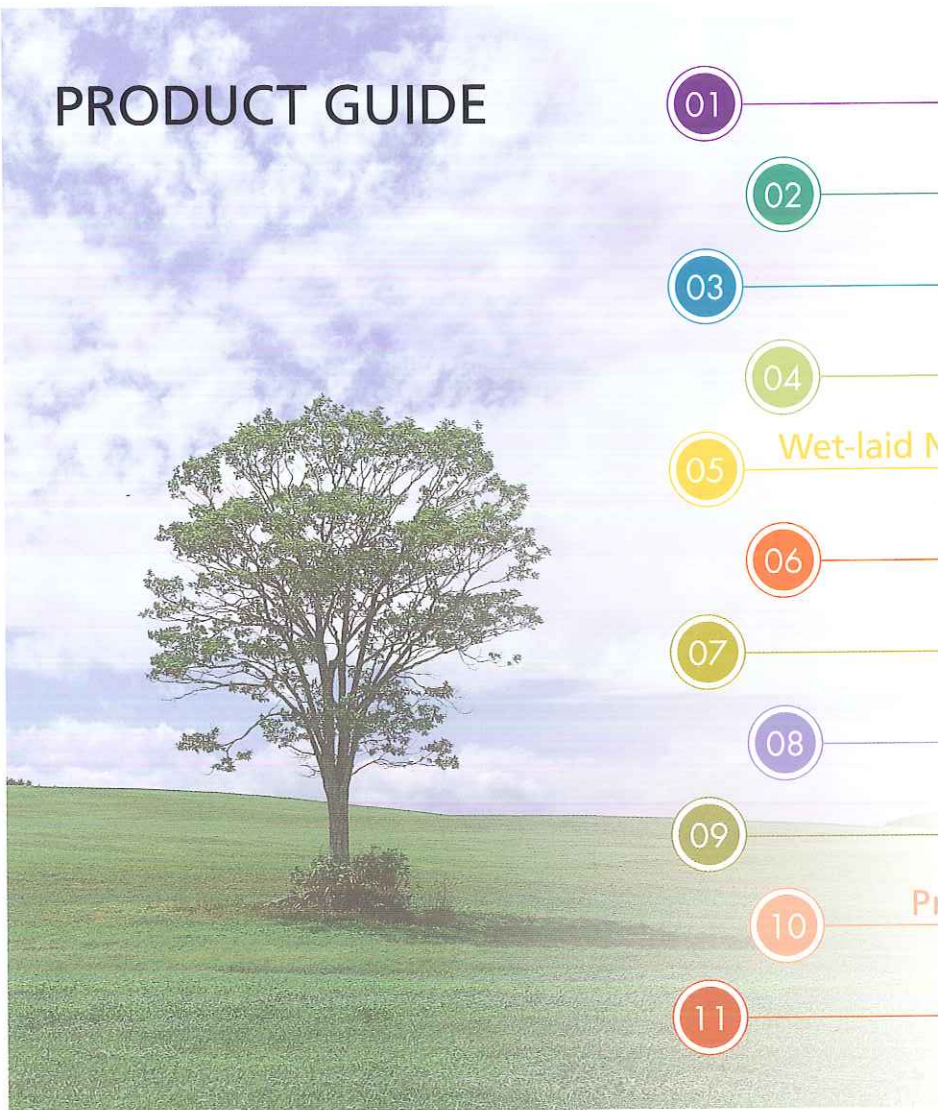


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| | | |
|----------------------------|---|---|
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PRODUCT GUIDE

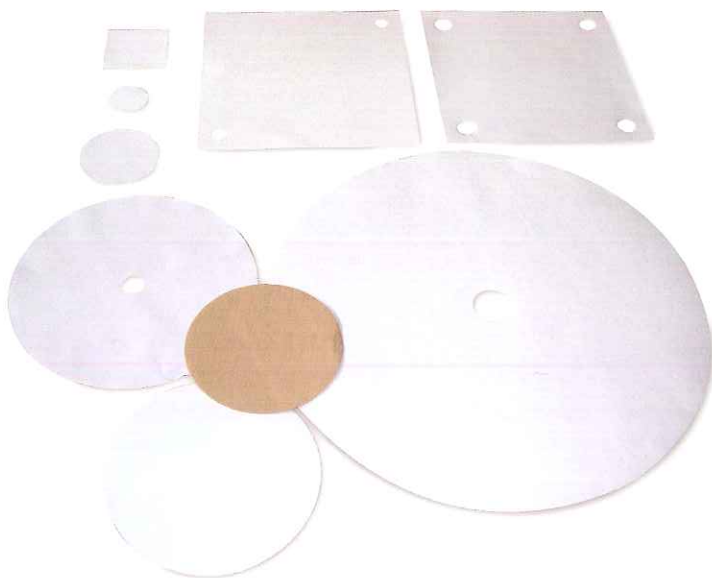


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01

Filter Paper Media

Filter paper is the most economical among many types of filter media with a wide-range of grades. Suitable filter paper should be selected depending on condition of use.








【Classification of filter paper】

- **Qualitative Filter Paper**
Used in laboratories, qualitative analysis and general industrial application.
- **Standard Filter Paper**
Used in general industrial application.
- **High Wet Strength Paper**
High wet strength in wet condition by special treatment.
- **Creped Filter Paper**
Creped (uneven) surface for increasing surface area.
- **Kraft Filter Paper**
Brown color paper by using non-bleaching fiber.

[Selection of Filter Paper]

Grade of filter paper must be selected properly according to accuracy of filtration, life and filtering condition (such as pressure, particle size, shape, pH/viscosity of slurry) etc. It will be necessary to check filtering condition by practical test after selection of filter.

[Physical Properties]

| Classification | | | | | Physical Properties | | | | | | | Application | | | | |
|---|--|--|---|---|---------------------|----------------------------------|----------------|------------------------|---------------------|-------------------------|-------------------------|-------------|-------------|-------------|-----------|--------|
| Qualitative | Standard | High Wet Strength | Crepe | Kraft | Grade | Basis Weight (g/m ²) | Thickness (mm) | Air Permeability (sec) | Freeness Time (sec) | Bursting Strength (kPa) | Retention Particle (μm) | Brewing | Soft Drinks | Edible Oils | Perfumery | Others |
|  |  |  |  |  | No.1 | 93 | 0.23 | 45.0 | 75 | 50≤ | 6 | ● | ● | ● | ● | |
| | | | | | No.2 | 113 | 0.27 | 60.0 | 95 | 70≤ | 5 | ● | ● | ● | ● | |
| | | | | | No.LS100 | 193 | 0.60 | 85.0 | 288 | 245≤ | 0.5 | ● | ● | ● | ● | |
| | | | | | No.800 | 262 | 0.55 | 350.0 | 810 | 170≤ | 2 | ● | ● | ● | ● | |
| | | | | | No.24 | 366 | 0.75 | 120.0 | 215 | 300≤ | 3 | ● | ● | ● | ● | |
| | | | | | No.121 | 127 | 0.29 | 150.0 | 280 | 100≤ | 3 | ● | ● | ● | ● | |
| | | | | | No.18 | 125 | 0.29 | 115.0 | 190 | 100≤ | 4 | ● | ● | ● | ● | |
| | | | | | No.260 | 484 | 1.27 | 35.0 | 70 | 300≤ | 4 | | | | | ● |
| | | | | | No.26 | 336 | 0.75 | 70.0 | 120 | 250≤ | 5 | ● | ● | ● | ● | |
| | | | | | No.277 | 395 | 1.00 | 25.0 | 40 | 350≤ | 6 | ● | ● | ● | ● | ● |
| | | | | | No.244 | 371 | 1.15 | 12.0 | 25 | 150≤ | 7 | ● | ● | ● | ● | |
| | | | | | No.244T | 313 | 1.02 | 8.0 | 15 | 90≤ | 8 | ● | ● | ● | ● | |
| | | | | | No.3250 | 570 | 1.22 | 135.0 | 390 | 500≤ | 1 | ● | ● | ● | | |
| | | | | | No.3100 | 364 | 0.75 | 135.0 | 380 | 350≤ | 3 | ● | ● | ● | | |
| | | | | | No.5065 | 312 | 0.65 | 83.0 | 245 | 700≤ | 3 | ● | ● | ● | | |
| | | | | | No.5121 | 122 | 0.29 | 90.0 | 190 | 150≤ | 4 | ● | ● | ● | | |
| | | | | | No.2024 | 318 | 0.75 | 70.0 | 160 | 300≤ | 4 | | | | | ● |
| | | | | | No.5024 | 362 | 0.75 | 83.0 | 200 | 350≤ | 4 | ● | ● | ● | | |
| | | | | | No.5277 | 407 | 1.00 | 25.0 | 60 | 500≤ | 6 | ● | ● | ● | | |
| | | | | | No.SM-45A | 207 | 0.60 | 8.0 | 16 | 200≤ | 12 | | | | ● | |
| | | | | | No.500 | 450 | 1.85 | 3.5 | 7 | 150≤ | 14 | | | | | ● |
| | | | | | No.3600 | 985 | 2.30 | 100.0 | 250 | 1000≤ | 1> | ● | ● | ● | | |
| | | | | | No.3900 | 1150 | 3.00 | 75.0 | 180 | 1000≤ | 1> | ● | ● | ● | | |
| | | | | | No.5500 | 970 | 2.60 | 34.0 | 155 | 800≤ | 4 | ● | | | | ● |
| | | | | | No.5300 | 920 | 2.80 | 20.0 | 50 | 800≤ | 4 | ● | | ● | | ● |
| | | | | | No.5750 | 490 | 1.20 | 80.0 | 185 | 500≤ | 3 | | | ● | | |
| | | | | | No.5700 | 265 | 0.80 | 35.0 | 70 | 240≤ | 8 | ● | ● | ● | | |
| | | | | | No.5700H | 250 | 0.80 | 13.0 | 25 | 200≤ | 13 | ● | ● | ● | | |
| | | | | | No.107W | 146 | 0.40 | 100.0 | 225 | 150≤ | 6 | ● | ● | ● | ● | |
| | | | | | No.KCP | 110 | 0.31 | 18.0 | 35 | 150≤ | 11 | | | | | ● |
| | | | | | No.5108 | 170 | 0.50 | 9.0 | 15 | 150≤ | 12 | ● | ● | ● | | |
| | | | | | No.5126 | 310 | 0.90 | 15.0 | 35 | 300≤ | 12 | ● | ● | ● | | |

All test values are taken from production runs to show "typical" properties. This is to be used as a guide and is not a specification sheet.

[Method of Measurement]

Thickness [mm] According to JIS P8118

Air permeability [sec] According to JIS P8117. Measure time in seconds to pass through 300ml of air for 10 φ of test piece under a specific pressure. In general a value is greater, pore size is smaller and flow rate gets slower and vice versa.

Freeness time [sec] According to JIS P3801. Measure time in seconds to filter 100ml of water at 20°C under pressure of 100mm H₂O for 10cm² test piece by Herzberg Tester.

Bursting strength [kPa] According to JIS P8112. Measure strength at bursting by giving force to test piece by rubber membrane.
Filter paper keeps strength by entanglement of fiber and hydrogen bond.
When emerged in water, paper strength become weaker by deteriorating hydrogen bond.
Wet strengthen paper has characteristics for less degree of deterioration.

Retention particle [μm] Particle size which has 90% of filtering efficiency for the dust of JIS Z8901 class 7 under a specific condition.



[Storage of filter paper]

Since filter paper is made from natural fiber, it has a characteristics for absorbing moisture and gas. Store in a cool, dry, ventilated storage area. Keep out of direct sunlight and away from heat, water, smell and odor.

[Note]

- (1) Filter paper is generally disposable.
- (2) Since filter paper has characteristics for absorbing moisture, hardness and touch feeling may differ.
- (3) Replace immediately for end of filter life.

[Sample book]

Above product list is as of September 2009. Please be noted it may have alternation or abolition of products.

Nonwoven Filter media

Azumi Nonwoven Filter Media is developed and produced to filtrate for cutting oil, grinding oil, cold-rolling oil and such coolant oils.

Azumi Nonwoven Filter Media usable for almost the fluid filtration according to coolant oil, retention particle size, filtering conditions, filter equipment and so on.



[Physical Properties]

| Grade | Thickness (mm) | Basis Weight (g/m ²) | Air Permeability (sec/300cc, 10mmφ) | Frazier (cm ³ /cm ² /sec) | Bursting Strength (kPa) | Retention Particle Size (μm) | Fiber Material |
|-----------------------------|----------------|----------------------------------|-------------------------------------|---|-------------------------|------------------------------|----------------|
| Chemical bonded type | | | | | | | |
| No.250 | 0.16 | 20 | 0.8 | 420 | 90≤ | 25~35 | Rayon |
| No.350 | 0.21 | 27 | 1.0 | 330 | 110≤ | 15~25 | Rayon |
| No.350-3 | 0.27 | 30 | 0.7 | 460 | 130≤ | 45~55 | Rayon |
| No.550 | 0.30 | 40 | 1.2 | 250 | 150≤ | 8~15 | Rayon |
| No.550-3 | 0.35 | 40 | 0.9 | 385 | 170≤ | 30~40 | Rayon |
| No.550-7 | 0.39 | 40 | 0.5 | 530 | 160≤ | 65~75 | Rayon |
| No.650 | 0.37 | 50 | 1.4 | 195 | 160≤ | 5~8 | Rayon |
| No.750 | 0.44 | 60 | 1.6 | 170 | 180≤ | 3~6 | Rayon |
| No.750-3 | 0.55 | 60 | 1.0 | 290 | 180≤ | 15~20 | Rayon |
| No.850 | 0.51 | 70 | 1.8 | 165 | 190≤ | 2~5 | Rayon |
| No.55K | 0.27 | 40 | 0.9 | 280 | — | 8~15 | Polyester |
| No.65K | 0.34 | 53 | 1.1 | 215 | — | 5~8 | Polyester |
| Spun bonded type | | | | | | | |
| G2070 | 0.24 | 70 | — | 90 | — | 4~7 | Polyester |
| E01015S | 0.12 | 15 | — | — | — | 80~100 | Polyester |
| E01025S | 0.16 | 25 | — | 349 | — | 60~70 | Polyester |
| E01040S | 0.24 | 40 | — | 189 | — | 20~30 | Polyester |
| Meltblown type | | | | | | | |
| MTR-3 | 1.20 | 145 | — | 20.0 | — | 8~11 | Polypropylene |
| MTR-B | 1.60 | 195 | — | 9.5 | — | 7 | Polypropylene |
| MTR-4 | 1.70 | 230 | — | 5.0 | — | 5 | Polypropylene |
| MTR-4LH | 1.90 | 230 | — | 8.0 | — | 4~5 | Polypropylene |

[Remarks] All test value are taken from production runs to show "typical" properties. This is to be used as a guide and is not a specification sheet.
Thickness is measured by Dial thickness gauge. Air Permeability is measured with piled up four (4) sheets. Retention Particle Size is nominal micron rating.

Bag Filter

As compared with the cartridge filter, a bag filter is compact and is suitable for filtration of the large flow. Filter replacement is easy and reduction of a disposal cost would be possible.



| | Material | Shape | Size | Ring | Micron rate |
|---|----------|-------|-----------------------------------|--------------------|--------------------------|
| B | M | 1 | S, W, M | P | 001,005,015 |
| | P | 1 | S, W, M | P, S ^{※1} | 001,005,010, 025,050,100 |
| | | 2 | S ^{※2} , W ^{※3} | S | |
| | E | 1 | S, W | E | |

M: PP Meltblown

P: PP Felt

E: Polyester Felt

1: O-ring

2: Band ring

S: φ180X430mm

M: φ180X820mm

L: φ110X230mm

P: PP

S: SUS

E: Polyester

※1: only S and W size ※2: φ190X440mm ※3: φ190X770mm ※4: Nominal filtering rate (μm)

BM type

BM type is made from PP meltblown nonwoven, and highly efficient filtration is possible for BM type. BM type is made from 100% PP material, and excellent in chemical resistance.

BP/BE type

BP type is made from PP felt fabrics and BE type is made from Polyester felt fabrics.

| | |
|-------------|------------------------------|
| Application | Paint, Cleaning solution, |
| | Electroplating solution, |
| | Coolant, Process water, etc. |



Filter Housing

By center top inlet structure seal performance is excellent, which expect less leakage. Hinged cover opens quickly, easily and safely. Replacement of a bag filter can be easy and quickly. No special tool is necessary for opening and closing of a lid.



| | AZB-S1 | AZB-S2 | AZB-W1 | AZB-W2 | AZB-M1 |
|---------------------|-----------|--------|-----------|--------|---------------------------|
| Size (mm) | A | 350 | 340 | 720 | 690 |
| | B | 120 | 115 | 120 | 115 |
| | C | 320 | 313 | 320 | 313 |
| Connection gauge | JIS10K50A | Rc2 | JIS10K50A | Rc2 | Rc1 |
| Material (standard) | SUS304 | SUS304 | SUS304 | SUS304 | SUS304 (only wetted part) |
| Gasket (standard) | NBR | NBR | NBR | NBR | NBR |
| O-ring (standard) | NBR | NBR | NBR | NBR | NBR |
| Flow rate (L/min) | 100 | 100 | 200 | 200 | 50 |
| Pressure (MPa) | 1.0 | 0.5 | 1.0 | 0.5 | 0.7 |

04

Filter Cloths

We have a wide range of filter cloths available designed for all types of filtration processes. We can provide products designed to meet the needs of customers such as filter cloths for filter presses, centrifuges, dust collectors, etc.

- [Materials]** Polyester, Nylon, Polypropylene, Cotton, Teflon, etc
[Weave] Plain, Twill, Satin
[Application] Cold rolling, Mining, Ceramics, Petroleum, Galvanize, Chemical fertilizer, Chemical, Medicine
 Dust collection, Water treatment
[Weaving yarn] Short Fiber: Spun Long Fiber: Monofilament
 Multifilament



05

Wet-laid Nonwoven Filter media

Although AZUMI wet-laid nonwoven filter media is mainly used for gaseous filtration, it is applicable also to filtration of a liquid.

AZUMI will select the best grade and/or develop the optimal product according to your operating condition.

[Physical Properties]

| Grade | Thickness (mm) | Basis Weight (g/m ²) | Air Permeability (sec/300cc, 10mm ϕ) | Frazier (cm ³ /cm ² /sec) | Retention Particle Size (μ m) | Pressure Drop 5.3cm/sec (Pa) | Efficiency 5.3cm/sec 0.3 μ m \leq (%) |
|----------|----------------|----------------------------------|--|---|------------------------------------|------------------------------|---|
| No.308 | 0.35 | 80 | 3.0 | 16 | — | 38 | 67 |
| No.327 | 0.29 | 68 | 8.0 | 4 | — | 157 | 95 |
| No.335 | 0.95 | 200 | 3.6 | 14 | 2~3 | 47 | 63 |
| No.335H | 0.94 | 200 | 4.4 | 12 | 1~3 | 53 | 74 |
| No.336 | 0.40 | 80 | 1.3 | 36 | 5~7 | 16 | 28 |
| No.337 | 1.05 | 200 | 1.4 | 45 | 10~15 | 13 | 24 |
| No.340 | 0.37 | 80 | — | 65 | 10~15 | 11 | 15 |
| No.341 | 0.55 | 122 | 2.8 | 17 | 2~3 | 36 | 62 |
| No.343 | 1.00 | 175 | — | 104 | 20~30 | 5 | — |
| No.355 | 0.89 | 200 | 4.2 | — | — | 50 | 65 |
| No.356 | 0.60 | 131 | 5.4 | 9 | 1 | 74 | 90 |
| No.359B | 0.67 | 122 | — | 115 | 40 | 4 | — |
| No.371 | 0.31 | 75 | 16.5 | — | — | 270 | 99.97 |
| No.381M | 0.30 | 75 | 18.0 | — | — | 300 | 99.98 |
| No.56920 | 0.75 | 200 | 5.3 | 9 | 7~10 | 63 | 44 |

[Typical applications]



06

Cartridge Filter

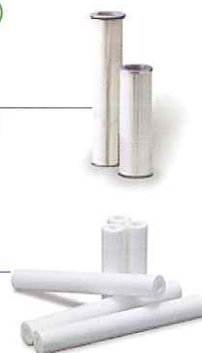
We also have a wide range of general specification filter elements available designed for the filtration of liquids. We select filter elements by the type (wound, depth, pleated filter elements, etc.) and degree of precision required for each application.

Design and manufacture

Because filter elements require relatively small amounts of space for installation and can be easily replaced, they are used in a wide range of different areas including food (beverage) factories, chemical factories, and electronic industries, etc. We provide products from our large number of product lines to meet all the needs of customers. We undertake the design and manufacture of unique filter elements designed to meet the needs of customers utilizing the experience we have accumulated up until this point in time.

General products

We also have a wide range of general specification filter elements available designed for the filtration of liquids. We select filter elements by the type (wound, depth, and pleated filter elements, etc.) and degree of precision required for each application.



- **Deodorizing paper** : Activated carbon fiber (VOC & common odor, Ammonia, Aldehyde)
Photocatalyst
Formaldehyde
Adsorption agent
- **Water absorbing / Evaporating paper** (Antibacterial and Antifungal)
- **Decolorizing / Deodorizing paper** (Activated carbon fiber + Activated earth(Power up Decolorization performance))
- **Static-free paper** (Carbon fiber)
- **Others**

Deodorizing paper

[Function]

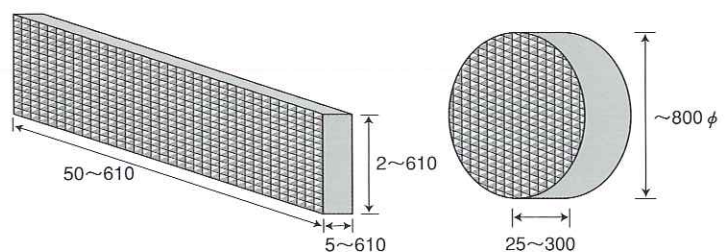
| Grade | Characteristics | | Application |
|--------|--|--|---|
| DC121 | Adsorption and recovery of solvents | Contains 70% unimpregnated activated carbon | Recovery of solvents and as a base material for impregnation with a wide variety of compounds |
| DC141 | | Thin type of the above product Paper thickness: 0.2mm | |
| DC5411 | Enhanced ammonia odor removal | Flame resistance equivalent to UL94VO standards | Air purifiers |
| DC621 | Enhanced ammonia and hydrogen sulfide odor removal | | Air purifiers |
| DC9413 | Enhanced aldehyde odor removal | Flame resistance equivalent to UL94VO standards | Air purifiers |
| TDO4 | Deodorization using a photocatalyst | Titanium oxide + adsorbent | Air purifiers |
| DFA2 | Formaldehyde odor removal | Contains a reactive adsorbent | Furniture and building materials |

[Application]



· Corrugated honey comb

| Corrugation type | Number of cells per unit area (cells/sq. inch) |
|------------------|--|
| A-flute (AF) | 40 |
| B flute (No.3) | 85~90 |
| B flute (No.5) | 120~130 |
| 210 cell (B7) | 210 |
| E-flute (EF) | 300 |



※ product size range (mm)

Water adsorbing / Evaporating paper

Water absorbing and evaporating paper made from specially treated polyester nonwoven fabric, and which possesses the ability for rapidly absorbing and evaporating of liquids as well as antibacterial and fungicidal properties.

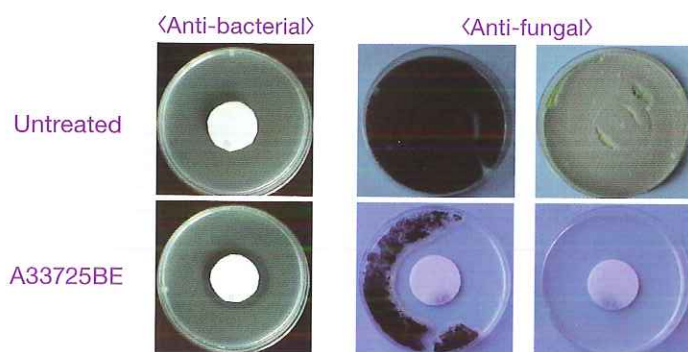
This product can be used to treat drain water in vending machines and refrigerated showcases as well as in humidifiers.

【Test Data】

| | Basis Weight (g/m ²) | Thickness (mm) | water absorption sec/4cm sec/7cm | | Anti-bacterial halo method | Anti-fungal fungus resistance |
|----------|-------------------------------------|-------------------|--|----|-------------------------------|----------------------------------|
| A33725BE | 247 | 0.85 | 20 | 81 | confirmed | 0 |

【Test condition】

- **Water absorption** The end of the test piece(20cm width) is soaked in water, and time until water goes up to fixed height is measured.
- **Anti-bacterial** According to JIS L 1902(Testing for antibacterial activity and efficacy on textile products)
- **Anti-fungal** According to JIS Z 2911-2000(Testing for fungus resistance)



【Application】



Decolorizing / Deodorizing paper

Decolorizing and deodorizing paper products containing activated carbon and activated earth, and designed for use with liquids. These products can also be used to treat cooking oils. Activated carbon restores the original colors of oils and removes odors, and activated earth adsorbs and removes impurities that cause the degradation of oil. In addition, a wood pulp layer removes particulates and helps to restore oil to an almost pure state. These products can be used for applications including the filtration of fryer oil, etc.

【Physical properties】

| Grade | Basis Weight (g/m ²) | Thickness (mm) | Air permeability (sec) | Deodorize (%) | Decolorize (%) | remarks |
|-------|-------------------------------------|-------------------|---------------------------|------------------|-------------------|----------------------------------|
| CE500 | 500 | 1.40 | 20 | 63 | 36 | activated carbon+activated earth |
| C210 | 210 | 0.90 | 5 | — | 45 | Activated carbon |
| C500 | 500 | 2.10 | 10 | — | 54 | Activated carbon |

【Test result】



【Test condition】

- **Deodorizing** Measure relative odor intensity by semiconductor laser.
- **Decolorizing** According to evaluation method for decolorization for activated carbon.

Carbon fiber composit paper

Resin impregnated paper blended with carbon fiber which has conductive property. Prevent from electrostatic problem of filter.

【Physical properties】

| Grade | Basis Weight (g/m ²) | Thickness (mm) | Air permeability (sec) | Bursting strength (kPa) | Electrical resistivity (MΩ · cm) |
|-------------|-------------------------------------|-------------------|---------------------------|----------------------------|-------------------------------------|
| CF7618-10CM | 210 | 1.00 | 1.6 | 390 | 2×10 ³ |
| CF5828-83CM | 190 | 0.83 | 3.3 | 120 | 2×10 ⁵ |

【Application】

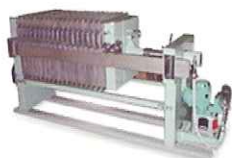


【Test condition】

- **Electrical resistivity** According to JIS K6911(15) (Measurement method for volume resistivity)

Filtering Machines

At Azumi Filter Paper, in addition to the manufacture and marketing of filter media, we also undertake the design and manufacture of filtration devices. We can provide the perfect filtration device designed to meet your purpose or application, so please feel free to contact us.



▲ Filter presses



▲ Paper roll filtration machines



▲ Horizontal plate filters



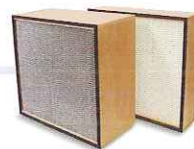
▲ Bag filter housings

Air Filter

Air filters are used in a wide variety of locations including factories, workplaces, and offices, etc. in order to create clean and comfortable air-conditioning environments.

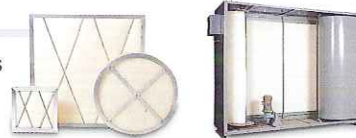
HEPA and medium-high performance filters

These products are designed to purify air and are used as main (final) filters in clean rooms and air purifiers.



Coarse particles

In addition to use in air-conditioning equipment and air intakes, these products can also be used in combination with HEPA and medium-high performance filters to lengthen the lifetimes of main filters.



Design and manufacturing

We undertake original filter design and manufacturing activities including the pleating of filtration materials and the production of filtration units, etc. in order to meet the needs of customers. Please feel free to contact us if you are looking for a filter with specifications that cannot be met by existing products.



Products for Dairy industry

In order to produce good quality milk, filtration is an important conclusive factor. Please select according to your application.

- Milpap
- Milpap (for Pipeline)
- Milcloth
- B Net
- Funnel (common type)

- Milpap (for Bulk)
- New Filter Socks
- FC Cup
- B Pup
- New My Mask



Consumer Products

- Coffee filter paper (home use)
- Coffee filter paper (business use)
- Filter paper for cooking oil (home use)
- Filter paper for cooking oil (business use)
- Vacuum cleaner bag
- Others

