

Air filter selection chart

Filter performance ratings to Australian Standard AS1324.1

Performance rating	Average arrestance Arrestance (Am) No. 4 test dust	Average arrestance Efficiency (Em) No. 1 test dust	Maximum final resistance Pa
G1	$Am < 65$		250
G2	$65 \leq Am < 80$		250
G3	$80 \leq Am < 90$		250
G4	$90 \leq Am$		250
F5		$40 \leq Em < 60$	450
F6		$60 \leq Em < 80$	450
F7		$80 \leq Em < 90$	450
F8		$90 \leq Em < 95$	450
F9		$95 \leq Em$	450

Filter types

Type 1: Dry

Type 2: Viscous impingement i.e. Adhesive (gel) coated

Type 3: Metal viscous, MVO or honeycomb grease type

Type 4: Electrostatic precipitators

Filter classes

Class A: Fully disposable, entire filter i.e. Disposable panel filters

Class B: Replaceable media reusable frame i.e. FT3 bag filters etc.

Class C: Reusable frame and media, after cleaning i.e. Washable panels or bag filters

Class D: Self-renewable i.e. Automatic roll filter etc.

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Typical particle arrestance efficiency for various grades of filter media Particulate diameter in microns

1 micron = 1/1000 of a mm

10 micron = 10/1000 of a mm and is the smallest particle able to be seen by the human eye.

Rating performance	10 micron	5 micron	1 micron	0.5 micron	0.1- 0.3 micron	Filter type
G1	90%	60%	20%	0%	0%	pre-filter
G2	96%	75%	30%	10%	0%	pre-filter
G3	97%	85%	45%	25%	0%	pre-filter
G4	98%	92%	58%	35%	5%	pre-filter
F5	98%	97%	70%	45%	20%	secondary
F6	99%	98%	82%	62%	40%	secondary
F7	99.9%	99%	88%	72%	55%	secondary
F8	99.9%	99.9%	97%	88%	78%	secondary
F9	99.99%	99.99%	98%	95%	93%	secondary
H10-H14	100%	100%	100%	100%	99.99%	HEPA
U15-U17	100%	100%	100%	100%	99.9975%	ULPA

For more information on HEPA or ULPA grades please contact your local distributor

AS1324 test dusts approximate micron sizes

No. 1 (methylene blue) - mass median diameter of .65 microns

No.4 5% Cotton fibres

23% Mollocko Black 0.8 micron

72% Air Cleaner fibres

39%	0 to 5 micron
18%	5 to 10 micron
16%	10 to 20 micron
18%	20 to 40 micron
9%	40 to 80 micron

Sizes of particles

Heavy industrial dusts - up to 4000 micron (4mm) Fine road dust - 5 to 20 micron

Dense smoke carbons and cigarette smoke - 0.01 to 1 micron bacteria - 0.8 to 10 microns

Pollens - 5 to 80 micron

Mould spores - 3 to 15 microns

Viruses - 0.01 to 0.25 microns

Particle size table

Substance	approximate range of particle diameters (microns)
Rain drops	500 - 5000
Natural mist	60 - 500
Natural fog	2 - 60
Pollens	10 - 100
Ground talc	0.5 - 50
Bacteria	0.3 - 35
Plant spores	10 - 35
Insecticide dusts	0.5 - 10
Stoker fly ash	10 - 8000
Pulverized coal, fly ash	1 - 50
Foundry dusts	1 - 1000
Cement dust	3 - 100
Metallurgical dust	0.5 - 100
Dust damaging to lungs	0.5 - 5
Oil smoke	0.1 - 1.0
Resin smoke	0.01 - 1.0
Tobacco smoke	0.01 - 1.0
Carbon black	0.01 - 0.3
Pigments (paints)	0.1 - 5
Viruses	0.003 - 0.05
Human hair	35 - 200

Conversion factors

Length

1 inch = 25.4 mm = 2.54 centimeters
 1 metre = 100 centimetres = 3.28 ft
 1 ft = 305 mm = 30.5 centimetres
 1 ft = 12 Inches

Area

1 square metre = 10.76 square feet
 1 square foot = 0.0929 square meters

Imperial - Metric

Inches x 25.4 = mm
 Feet x 0.3048 = Metres/feet/min x 0.005 = Metres/sec
 Square feet x 0.0929 = square metres
 Cubic feet/min x 0.472 = Litres/sec
 Inches water gauge x 249.089 = Pascals gauge
 CFM x 0.472 = litres per second

Metric - Imperial

mm x 0.0394 = inches
 Meters x 3.2808 = feet meters/sec x 197 = feet/min
 Square meters x 10.764 = square
 Litres/sec x 2.1186 = cubic feet/min
 Pascals x 0.004 = inches water
 m³ hr x 0.588 = CFM



Due to on-going product development, Filterfit reserves the right to change design and specifications without notice