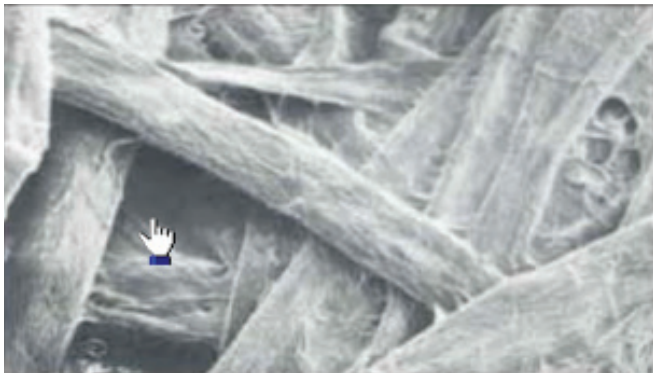
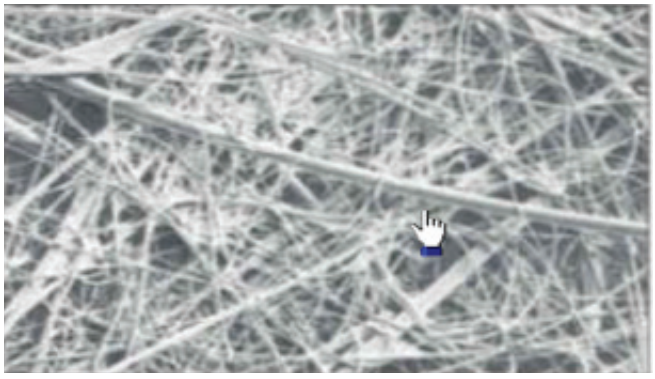
How 3M™ Filters Trap More Dirt

As illustrated below, the finer the fiber in a filter weave, the greater the ability to trap dirt and other particles, thus decreasing blow-by. The photomicrographs show that the 3M filter has a more effective weave than that of a conventional filter bag. This increases the ability to trap dirt and virtually eliminates blow-by.



Photomicrograph of the fiber weave of a conventional filter bag (500x)



Photomicrograph of the fiber weave of a 3M filter (500x)

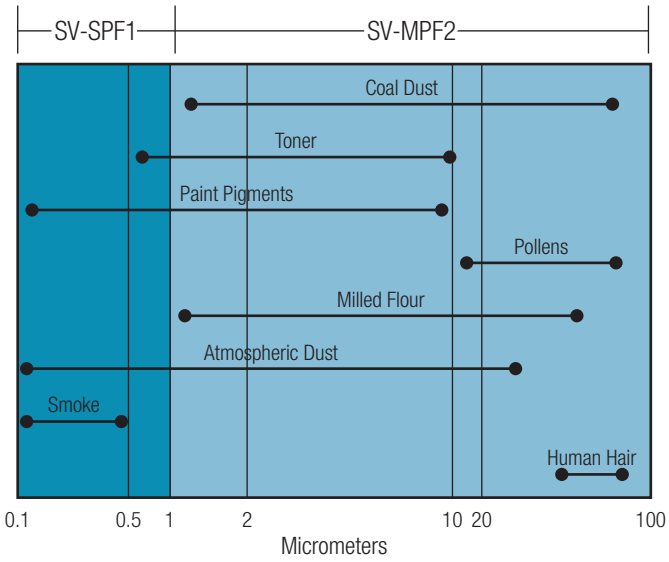
3M™ Filter, Type 1 SV-SPF1 Fine Particle Filters

A thinner, more concentrated weave (HEPA media) for trapping extremely fine particles. Typical applications: color laser printers, color copiers and highly sensitive equipment.

3M™ Filter, Type 2 SV-MPF2 High Performance Filters

Specially designed for trapping unwanted toner from copiers and laser printers. Also ideal for cleaning keyboards, fans and other household dust collections.

Typical Particle Sizes



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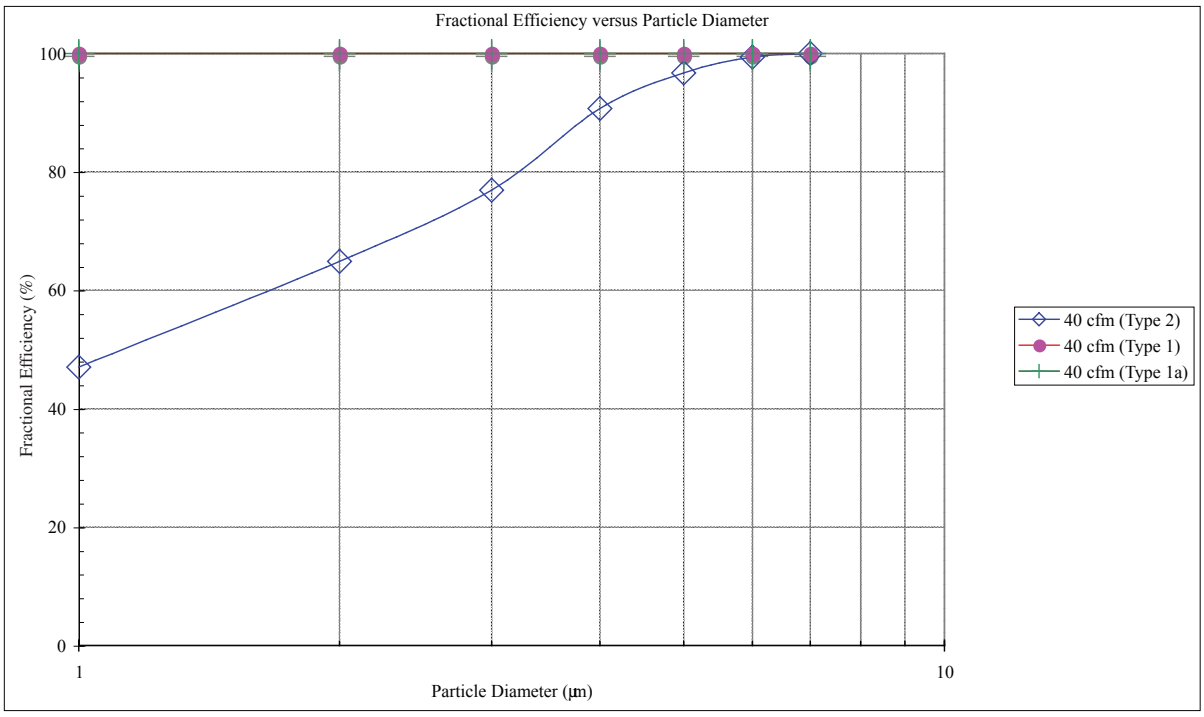
Efficiency

Date :	August 20, 2008
Filter ID :	Type 2 Filter
Test Type :	Fractional Efficiency
Test Aerosol :	KCl, Neutralized
Flow rate(cfm)	40 cfm (Type 2)
Dp (" H2O)	3.079
Size Range (mm)	Fractional Efficiency (%)
0.3-0.5	47.0
0.5-0.7	64.9
0.7-1.0	76.9
1.0-2.0	90.7
2.0-3.0	96.7
3.0-5.0	99.4
>5.0	100.0

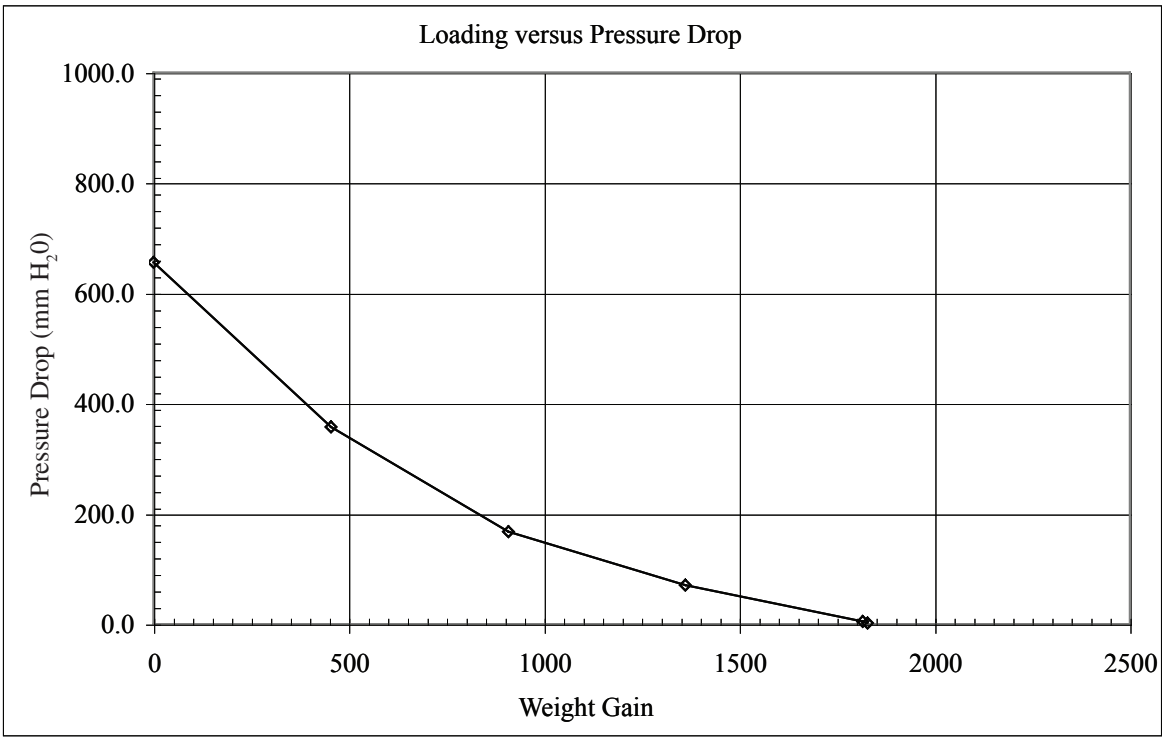
Date :	August 20, 2008
Filter ID :	Type 1 Filter
Test Type :	Fractional Efficiency
Test Aerosol :	KCl, Neutralized
Flow rate(cfm)	40 cfm (Type 1)
Dp (" H2O)	3.157
Size Range (mm)	Fractional Efficiency (%)
0.3-0.5	99.980
0.5-0.7	99.991
0.7-1.0	99.999
1.0-2.0	100.000
2.0-3.0	100.000
3.0-5.0	100.000
>5.0	100.000

Date :	August 20, 2008
Filter ID :	Type 1a Filter (HEPA)
Test Type :	Fractional Efficiency
Test Aerosol :	KCl, Neutralized
Flow rate(cfm)	40 cfm (Type 1a)
Dp (" H2O)	3.157
Size Range (mm)	Fractional Efficiency (%)
0.3-0.5	99.988
0.5-0.7	99.995
0.7-1.0	100.000
1.0-2.0	100.000
2.0-3.0	100.000
3.0-5.0	100.000
>5.0	100.000



Typical Loading

"Weight Gain (gram) Alumina Fines"	"Pressure Drop (mm H2O)"
0.0	655.7
454.0	358.0
908.0	168.0
1362.0	70.6
1816.0	5.1
1828.3	2.2



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