



Commercial Mid-Performance HVAC Filter



- **Physical Characteristics**
 - 2" deep mini-pleat design
 - 100% synthetic media - resists moisture and common chemicals
 - 100% synthetic frame - lightweight, resists moisture
 - Integral gaskets - provide an effective seal
 - High durability - no special handling required
 - Continuous pleat spacing glue bead
 - Electrostatically charged media
(refer to Performance Data on next page)

- **Performance Notes**
 - Typical initial resistance: 0.23 inches (0.58 cm) of water @ 492 fpm
 - UL 900, Class 1 flammability rating (US)
 - UL 900, Class 2 flammability rating (Canada)
 - Operating temperature range: 122°F (50°C), -22°F (-30°C)



Performance Data

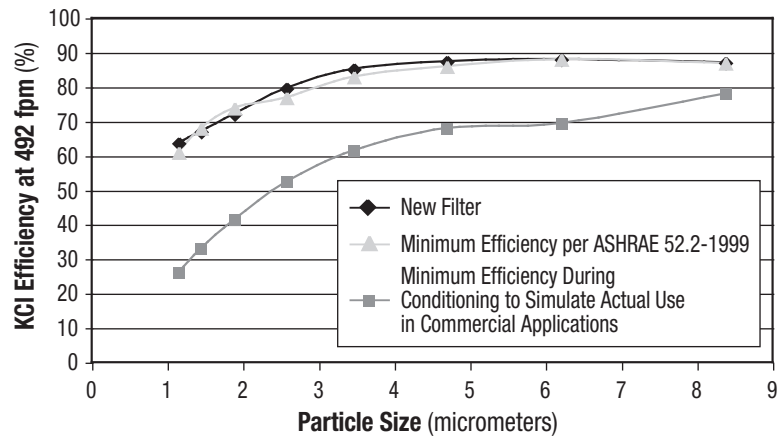
Filtrete™ Commercial Mid-Performance HVAC Filter

Air Velocity	492 fpm
Initial Resistance	0.23 inches (0.58 cm) of water
Recommended Final Resistance	1.40 inches (3.56 cm) of water
Average Dust Spot Efficiency per ASHRAE 52.1-1992	60-65%
Initial Efficiency Rating per ASHRAE 52.2-1999	MERV-8
Minimum Efficiency Rating During Conditioning to Simulate Actual Use in Commercial Applications	Corresponds to MERV-7

Efficiency During Use: Particle capture efficiency of electrostatically charged filters has been shown to decrease during actual use. The timeframe and the extent to which this decrease occurs depend on particle size and loading conditions as shown in the graph and table below. This effect has been observed in as little as one week to six weeks of actual use. Actual particle efficiencies during use may be lower than those shown below, also depending on particle size and loading conditions.

Service Life: Filter should be replaced before reaching a final resistance of 1.40 inches (3.56 cm) of water to maintain design performance of the filter. Certain system designs may require filter replacement at lower resistances.

Efficiency vs. Particle Size



Particle Size Range	Average Particle Efficiencies (492 fpm)		
	New Filter	Minimum efficiency during conditioning per ASHRAE 52.2-1999 ^{1,3}	Minimum efficiency during conditioning to simulate actual use in commercial applications ²
3.0-10 µm	87 ± 2%	85 ± 5%	70 ± 7%

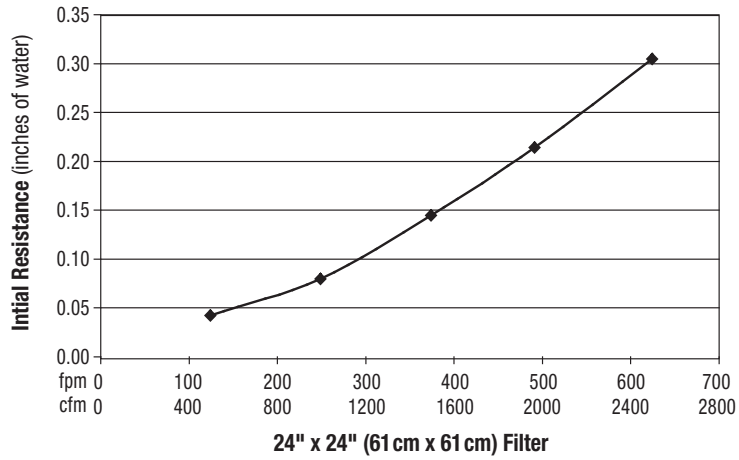
¹Filtrete™ Commercial Mid-Performance HVAC Filters have been tested by an independent laboratory in accordance with ASHRAE standards. Performance ratings based on testing of new filters.

²Performance ratings based on testing of new filters by an independent laboratory.

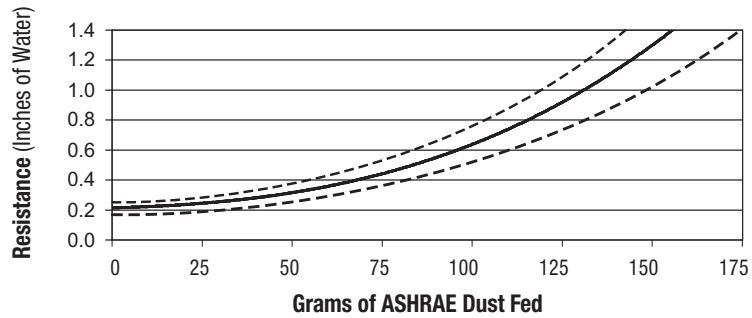
³Basis for MERV rating per ASHRAE 52.2-1999.

Performance Data
(continued)

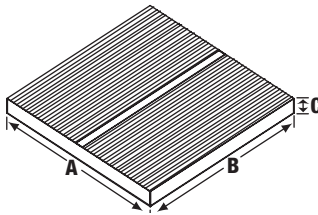
Initial Resistance vs. Air Velocity¹



Resistance vs. Dust Loading at 492 fpm^{1,4}



Filter Measurements



Product No.	Stock No.	Nominal Dimensions inches (mm)	Width "A" inches (mm)	Height "B", inches (mm)	Depth "C" inches (mm)
E276	70-0712-4438-1	10 x 10 x 2 (254 x 254 x 51)	9 3/8 (238)	9 3/8 (238)	1 7/8 (48)
E277	70-0712-4439-9	10 x 20 x 2 (254 x 508 x 51)	9 3/8 (238)	19 3/8 (492)	1 7/8 (48)
E278	70-0712-4440-7	12 x 20 x 2 (305 x 508 x 51)	11 3/8 (289)	19 3/8 (492)	1 7/8 (48)
E279	70-0712-4441-5	12 x 24 x 2 (305 x 610 x 51)	11 3/8 (289)	23 3/8 (594)	1 7/8 (48)
E280	70-0712-4442-3	14 x 20 x 2 (356 x 508 x 51)	13 3/8 (340)	19 3/8 (492)	1 7/8 (48)
E281	70-0712-4443-1	14 x 25 x 2 (356 x 635 x 51)	13 3/8 (340)	24 3/8 (619)	1 7/8 (48)
E282	70-0712-4444-9	15 x 20 x 2 (381 x 508 x 51)	14 3/8 (365)	19 3/8 (492)	1 7/8 (48)
E283	70-0712-4445-6	16 x 16 x 2 (406 x 406 x 51)	15 3/8 (391)	15 3/8 (391)	1 7/8 (48)
E284	70-0712-4446-4	16 x 20 x 2 (406 x 508 x 51)	15 3/8 (391)	19 3/8 (492)	1 7/8 (48)
E285	70-0712-4447-2	16 x 24 x 2 (406 x 610 x 51)	15 3/8 (391)	23 3/8 (594)	1 7/8 (48)
E286	70-0712-4448-0	16 x 25 x 2 (406 x 635 x 51)	15 3/8 (391)	24 3/8 (619)	1 7/8 (48)
E287	70-0712-4449-8	18 x 20 x 2 (457 x 508 x 51)	17 3/8 (441)	19 3/8 (492)	1 7/8 (48)
E288	70-0712-4450-6	18 x 24 x 2 (457 x 610 x 51)	17 3/8 (441)	23 3/8 (594)	1 7/8 (48)
E289	70-0712-4451-4	18 x 25 x 2 (457 x 635 x 51)	17 3/8 (441)	24 3/8 (619)	1 7/8 (48)
E290	70-0712-4452-2	20 x 20 x 2 (508 x 508 x 51)	19 3/8 (492)	19 3/8 (492)	1 7/8 (48)
E291	70-0712-4453-0	20 x 24 x 2 (508 x 610 x 51)	19 3/8 (492)	23 3/8 (594)	1 7/8 (48)
E292	70-0712-4454-8	20 x 25 x 2 (508 x 635 x 51)	19 3/8 (492)	24 3/8 (619)	1 7/8 (48)
E293	70-0712-4455-5	20 x 30 x 2 (508 x 762 x 51)	19 3/8 (492)	29 3/8 (746)	1 7/8 (48)
E294	70-0712-4456-3	24 x 24 x 2 (610 x 610 x 51)	23 3/8 (594)	23 3/8 (594)	1 7/8 (48)
E295	70-0712-4457-1	25 x 25 x 2 (635 x 635 x 51)	24 3/8 (619)	24 3/8 (619)	1 7/8 (48)

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⁴+/- 95% confidence interval of the average

Additional Information

For questions or to place an order in the U.S., contact your local 3M Filtration distributor or 3M Customer Service at 1-800-648-3550 or 651-737-2433.

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Filtration

3M Center, Building 223-6S-04
St. Paul, MN 55144-1000
1-800-648-3550

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