

Physical Characteristics

- 4" and 5" deep pleated designs
- 100% synthetic media - resists moisture and common chemicals
- Paperboard Frame
- Packaged in clear wrap for added protection.
- Electrostatically charged media (refer to Performance Data on next page)
- Designed for residential use

Performance Characteristics:

Pressure Drop

- Typical initial resistance for all filters is less than 0.20 inches w.c at 300 fpm.
- UL 900, Class 2 flammability rating
- Operating temperature range 122°F (50°C), -22°F (-30°C)

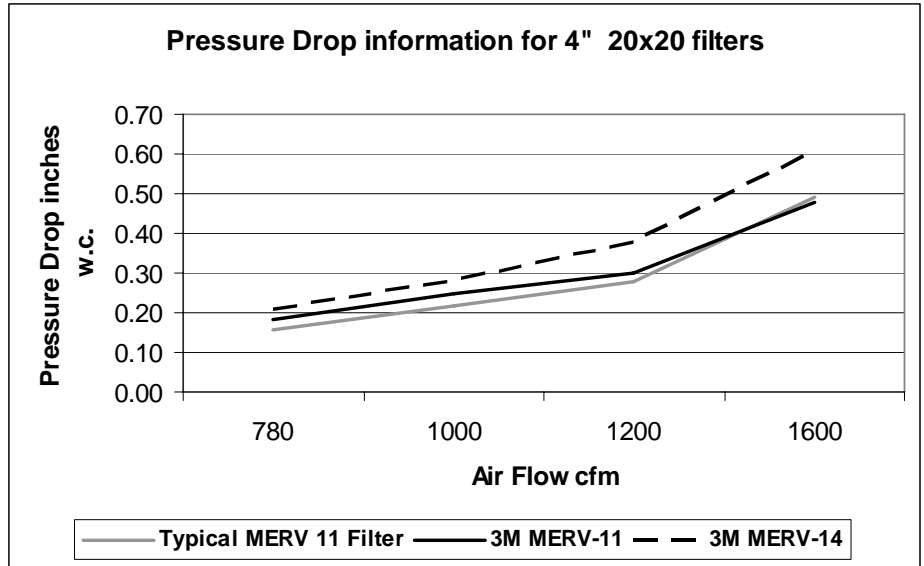
Detailed Pressure Drop for 4" and 5" filters

3M Pro Series Residential Air Cleaning Filters offer consumers a higher initial filtration efficiency with pressure drops lower than competitive filters.

3M's MERV Ratings on its 4" and 5" filters are based on how it is performing at the beginning of its life. Appropriate ratings are noted to indicate performance at end of useful life.

Initial pressure drops on all 4" and 5" filters measured at 300 fpm are less than 0.2 inches of w.c.

Performance Characteristics:



How Our Filters Perform Over Time

This chart shows how our media performs over time as a 20" x 25" filter collects particulates as measured at different air volumes.

3M Pro Series Residential Air Cleaning Filters 4" and 5" filters last up to 6 to 12 months.

Removal Efficiency Percent*		
	MERV-14	
Average Particle Size Range	Initial	At useful life of filter
0.3 to 1.0 microns	82.0	42.5
1.0 to 3.0 microns	95.5	74.3
3.0 to 10.0 microns	98.3	87.5

Certain conditions in your home will significantly add particles to the air. This will cause the filter to capture more particles than usual, shortening its life to less than the time recommended by 3M or reducing the effectiveness of the filter to capture particles.

These conditions include:

- Dirty Ductwork
- Construction Work
- Sanding Projects
- Pets
- Burning Candles
- Tobacco Smoke
- Fireplace and Wood-Burning Stove Smoke

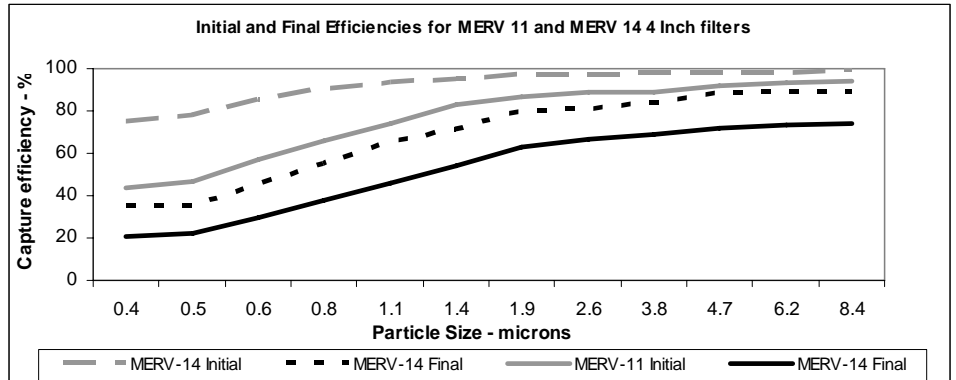
Also, running your furnace or air conditioning fan continuously will help clean the air in your home but could further shorten the life of the filter. If a 3M Pro Series Residential Air Cleaning filters is used under these conditions it may begin to restrict airflow, especially in energy efficient furnaces and air conditioning systems and a more frequent change-out schedule may be required.



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 above. 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.

Detailed Efficiency Testing



How we Perform Against Whole Home Air Cleaners

Many whole house air cleaning solutions use HEPA filters to clean the air. These high efficiency filter solutions are designed to clean a percentage of the air returning to the furnace. Because they restrict air flow, they require a separate fan and can typically clean up to 40% of the bypass air going through the furnace. A standard furnace filter is still required to protect the furnace. Based on the amount of bypass air going through the filter, a theoretical calculation can be done on the particle counts of the air returning to the house.

The following table shows a theoretical particle count in the supply air duct based on having a horse hair fiberglass filter in the furnace used in tandem with a whole house HEPA, air cleaner. The particle count in the supply air can vary with whole house HEPA, whereas 3M Pro Series Residential Air Cleaning Filters clean almost all of the air going through the furnace. The theoretical microparticle counts are shown in the table for a new 3M Pro Series filter, and when it has reached its useful life.

Performance Characteristics:

Whole House Air Cleaning System - Theoretical Microparticle Performance Comparison			
Micro Particle Efficiency < 1.0 micron - percent			
Whole Home HEPA		Rated Efficiency	Theoretical Percentage Particle Removal
Bypass Percent through filter	20% bypass	99.997% (HEPA)	20.0%
	30% bypass	99.997% (HEPA)	30.0%
	40 % bypass	99.997% (HEPA)	40.0%
3M Pro Series Residential Air Cleaning Filters Filters			
MERV 14	100% (New)	82.0%	82.0%
	100% (At Useful Life)	42.5%	42.5%

3M's 4" and 5" Pro Series Residential Air Cleaning filters can offer air cleaning performance that is comparable to whole house HEPA air cleaners, depending on the design of the whole house HEPA installation.

Product Use

All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.

