



Commercial

Product Benefits

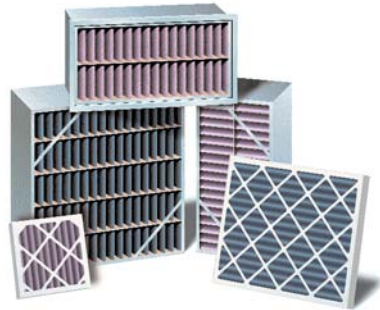
- Contains up to 10 times the media of activated carbon filters.
- Removes more gaseous chemicals and odors than activated carbon.
- Removes gaseous chemicals and solid particulates.
- Adhesive - free filter design
- Minimized by-pass and high removal efficiency.
- Purafil Select Media will not desorb.
- Low pressure drop.
- Long filter life.
- Reduced maintenance.
- Improved IAQ.



PURAFIL®
First...in clean air

2654 Weaver Way Doraville, GA 30340 U.S.A.
(Phone) 770-662-8545 • (Toll-Free) 1-800-222-6367
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Purafil®



Product Description

The Purafil® is a combination chemical and particulate filter designed to replace existing particulate filters in retrofit or rework applications. Purafil engineers are the first to successfully suspend potassium permanganate adsorbents in a bi-component fiber matrix. Chemical filtration systems utilizing potassium permanganate remove a broader range of contaminants than carbon-only filters and exhibit higher efficiencies. Because of the Purafil's broad-spectrum removal capabilities, it is the only chemical filter capable of meeting the stringent requirements of ASHRAE 62's Indoor Air Quality Procedure.

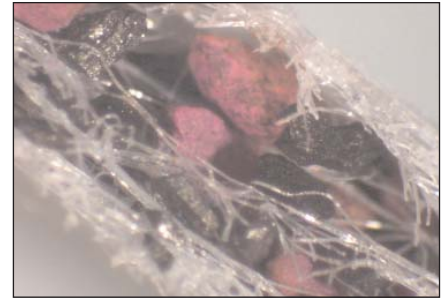
The bi-component fiber matrix, or filter, does not require the use of adhesives, so adsorbents are fully exposed for reaction with gaseous chemical contaminants and odors. Adsorbents are evenly distributed throughout the filter structure to assure the highest filtration efficiencies. The Purafil offers a higher media loading than other chemical filters, allowing for a longer service life and reduced maintenance.

Product Applications

Commercial environments, including hotels, airports, office buildings, schools, casinos, restaurants, museums, and athletic stadiums.

System Advantages

Longer Service Life: The Purafil offers a higher media loading capacity and up to ten times the removal capacity of other chemical filters.



Magnified Purafil cross-section

Superior Efficiency: The Purafil removes a broader range of odors and common indoor pollutants than activated carbon alone.

Easy Life Testing: The Purafil can be tested to determine remaining service life. Purafil's filter monitoring program assures ongoing compliance with ASHRAE 62's Indoor Air Quality Procedure.

Permanent Odor Removal: The Purafil will not desorb like traditional activated carbon filters and removes gases through an irreversible chemical reaction process.

Standard Features

- » Purafil Select (potassium permanganate) and Purakol (activated carbon) media
- » Bi-component fiber matrix filter
- » Paperboard, Galvanized, or Aluminum frames
- » Factory sealed filter to insure integrity
- » Highest available removal efficiencies
- » Particulate removal efficiency: 30%
- » Airflow: up to 500 ft./min (2.54 m/sec)
- » Temperature Rating: -4° F to 125° F (20° C to 45° C)
- » Filter weight: dependent upon filter
- » All filter sizes available

Optional Features

- » Purafil media types
- » Filter size
- » Media loading
- » Frame type
- » Pleat count
- » Particulate filter efficiencies



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Pressure Drop Performance

No particulate filter media.

Size	$\Delta P/IWG^*$
24x24x12"	0.26
12x24x12"	0.26

With particulate filter media.

Size	$\Delta P/IWG^*$
24x24x2"	0.51
12x24x2"	0.51
20x25x2"	0.52
24x24x4"	0.43
12x24x4"	0.43

* Pressure drop at 492 fpm
(2.5 m/s)

Purafilter® - Suggested Specifications

1. General

- 1.1. The Purafilter Commercial Grade air filters, as manufactured by Purafil, Inc., Doraville, GA, shall be high performance, 2" and 4" deep pleated, rigid, disposable, gas-phase (chemical) filters supplied with or without an integral particulate filter.

2. Filter Media

- 2.1. Purafilter medium shall be an adsorbent-loaded non-woven medium containing a combination (50:50) of Purafil Select potassium permanganate granular media and Purakol activated carbon granular media.
- 2.2. This media combination shall not only remove gaseous contaminants by physical adsorption, but also utilizes chemisorption to react with contaminants in the airstream. Thus, it is not to be replaced with a filter whose gas-phase medium is activated carbon.
- 2.3. These adsorbent-loaded non-woven media may be combined with an integral particulate filter media having a Minimum Efficiency Reporting Value (MERV) of 8 or better in the pleated filter form.

3. Frame Enclosure (Filter Construction)

- 3.1. The filter frame shall be constructed of a rigid, heavy-duty, high wet strength, die-cut beverage board with diagonal support members bonded to the air entering and air exiting side of each pleat to ensure pleat stability.
 - 3.1.1. 4" deep filters shall be equipped with individual die cut or prefabricated contour stabilizers (fingers) or other approved devices to ensure uniform separate and parallel pleats and to stabilize each pleat.
- 3.2. The frame shall consist of two mated pieces that form a double wall around the entire perimeter of the filter.
 - 3.2.1. The inside periphery of the enclosing frame shall be bonded to the pleat pack to eliminate the possibility of air bypass.
 - 3.2.2. Adhesive shall be applied uniformly with not apparent gaps to all inside surfaces of the enclosing frame to ensure bonding with the pleat pack and with all mated surfaces of the frame.
- 3.3. All materials of construction - especially adhesives - shall be of low- or non-emitting materials so as not to adversely affect the media.

4. Labeling

- 4.1. All Commercial Grade Purafilters will be listed by their nominal dimensions.
- 4.2. Airflow directional arrows must point in the proper direction to assure the correct orientation of the combination media.
 - 4.2.1. Standard media orientation for the 30% combination filter will have the particulate media on the air entering (inlet, upstream) side of the filter.

5. Packaging requirements

- 5.1. Purafilters shall be placed individually in a non-porous bag (HDPE, LLDPE, etc.) and each bag shall be taped or otherwise sealed to inhibit exposure to atmospheric contaminants during transit and storage.
- 5.2. There shall be no more than 6 or 3 filters packaged in a shipping box for the 2" and 4" deep filters, respectively, (min 250 lb test).

6. Performance

- 6.1. The Purafilter Enersave air filters shall have the capacity, via oxidation, adsorption, absorption, and chemical reaction to remove contaminants from the airstream, including but not limited to: formaldehyde, nitrogen dioxide, ozone, sulfur dioxide, and toluene.
- 6.2. The Purafilter Enersave air filters with an integral particulate filter shall have a MERV of 8 according to ASHRAE Standard 52.2-1999.
- 6.3. Resistance at 492 fpm (2.5 m/s) shall be the following values (see left).



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