

# Product Specification

## PUROLATOR® KEY PLEAT® HIGH CAPACITY SELF SUPPORTED PLEATED FILTERS

### 1.0 Scope

This specification covers pleated panel filters that are a component of heating, ventilating and air conditioning systems.

### 2.0 Construction

The filters shall consist of a self-supported pleated media pack contained in a die cut beverage board frame.

#### 2.1 Media

The media shall consist of 100% synthetic fibers, white in color.

#### 2.2 Media Pack

The media shall be formed into uniformly shaped pleats with equal height measured from apex to apex. The media shall be self-supporting, without use of metal backing.

The media pack shall have boxed pleat tips to maximize surface area to ensure adhesion with the stabilizer support straps and die cut diagonal support straps.

The media pack and die cut frame dimensions shall be equal to completely seal the pack inside the filter. The edges of the pack shall be roughened to allow complete adhesion to the frame.

The media pack shall contain no less than the number of pleats per linear foot as specified in the following schedule:

Filter Depth	Pleats per Linear Foot
1"	14
2"	15
4"	11



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## 2.3 Filter Frame

The pleated media pack shall be contained in a frame made from a single piece of die cut beverage board with high wet strength characteristics. The die cut frame shall fully overlap around the entire perimeter of the filter.

Diagonal support members in a seven-strap pattern shall provide support for the media pack on the air leaving side. There shall be a minimum of 250 contact points between the diagonal support members and media pack on a 24x24x2 filter.

## 2.4 Frame Adhesive

The entire inside surface of the die cut frame shall be coated with a water repellent adhesive to bond the pack inside the frame on all four edges and diagonal support members on the air-leaving side.

The adhesive shall be water-repellent and maintain its bonding characteristics when wet. The adhesive shall not soften or dissolve when the filter is wet.

## 3.0 Performance

The filters shall meet the following minimum performance requirements per ASHRAE Standard 52.2-2012. Tests conducted at 295 FPM face velocity on 1" depth and 492 FPM face velocity on 2" and 4" depth on 24 x 24 nominal size filters shall be representative of the performance of all sizes manufactured.

Depth	1"	2"	4"
Nominal Size	24 x 24 x 1	24 x 24 x 2	24 x 24 x 4
Rated Face Velocity (FPM)	300	500	500
Rated Air Flow Capacity (CFM)	1200	2000	2000
Initial Resistance (In. W.G.)	0.13	0.18	0.15
Final Resistance (In. W.G.)	1.00	1.00	1.00
MERV	8	8	8
MERV-A per 52.2 Appendix J	8-A	8-A	8-A



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## **4.0 Underwriters Laboratories Classification**

The filters shall be classified per UL Standard 900 for flammability.

## **5.0 Operating Temperature Limits**

The filter shall operate at temperatures up to 150 °F (65 °C) without materially affecting filter integrity or performance.

## **6.0 Incinerable**

The filter shall be incinerable. No metal components are acceptable.

