



*Better Air is Our Business®*

**AmericanAirFilter®**

**MEGAcel I**  
with helior™

### **High Efficiency PTFE Filters**

- **Lower energy consumption — greater than 40% lower resistance**
- **AAF Helior PTFE media combines ultra-high efficiency with lowest pressure drop**
- **Highly resistant to corrosive environments (acids, alkalis, and organic substances)**
- **Negligible off-gassing properties (boron, sodium, potassium, silicon)**
- **High tensile strength media, more resistant to rough handling in transportation and installation**
- **Withstands pressure up to 20 in. w.g. (5,000 Pa)**
- **99.99% minimum efficiency @ 0.3 µm**

MEGAcel I HEPA filters are designed to meet the demanding airflow and efficiency requirements of critical applications in which airborne contaminants must be carefully controlled. Manufactured with high-performance Helior media and unique tapered aluminum separators, MEGAcel I filters optimize efficiency while keeping operating costs to a minimum.

### **State-of-the-Art Design**

Designed to combine maximum efficiency with lowest pressure drop, the MEGAcel I filter media pack is available in different depth, size, and cell-side configurations, allowing for a variety of application requirements including:

- |                  |                   |
|------------------|-------------------|
| ✓ Healthcare     | ✓ Food Processing |
| ✓ Pharmaceutical | ✓ Laboratory      |
| ✓ Electronic     | ✓ Semiconductor   |

### **Developed by AAF Engineers: Helior™ PTFE Media**

Groundbreaking Helior PTFE media technology was engineered by AAF's research and design teams. Media production, testing, and packaging are all performed in AAF's (ISO 7) ultra-modern controlled environment, eliminating the potential for contamination of the filter during manufacturing.



### **Energy Conservation = Energy Savings**

PTFE pleat pack resistance is a minimum of 40% lower than conventional micro-fiberglass media, a significant factor contributing to greatly reducing fan energy consumption. AAF Helior media combined with tapered aluminum separators optimizes pleat pack resistance. With a reduction in fan energy consumption, overall energy savings can be realized.

### **Perfect Filter Media**

Compared with micro-fiberglass media, Helior media provides superior benefits including inert chemical properties, more uniform fiber distribution, smaller fiber diameters, and smaller pore size. As a result, reduced resistance and higher filtration performance provide substantial energy savings.

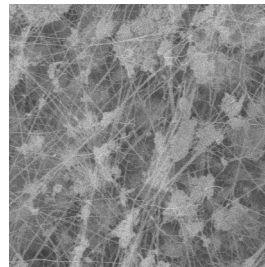


Figure A (10,000x)

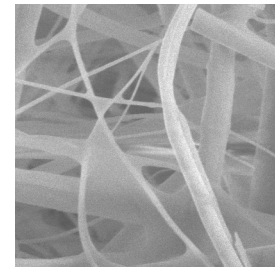


Figure B (10,000x)

Photographed at 10,000x magnification, these images illustrate the finer fiber diameter and more consistent composition of Helior™ media (Figure A), when compared with micro-fiberglass media (Figure B).

### Sturdy Construction

MEGAcel I filters are available in a variety of construction materials and cell-side configurations to fit AAF and competitive framing systems or sealing designs. MEGAcel I filters are UL classified.

### Individual Scan Testing

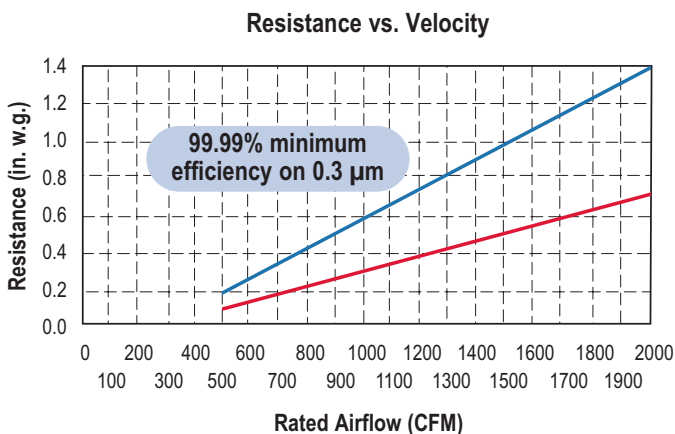
AAF has established an air filtration testing methodology that is among the most comprehensive and accurate in the industry. Testing is essential in documenting filter efficiency and assisting in research and development of filtration products. AAF's testing facilities meet the highest standards for quality control.

Every MEGAcel I filter is individually tested and certified, using procedures tailored to your specifications, to meet your performance requirements prior to shipping.



AAF's testing procedures for overall efficiency include laser particle counters with liquid or solid aerosol challenge. Pinhole leaks can be detected using either AAF's proprietary static scan test or automatic scan testing.

### Performance Data



Performance data based on a 24 x 24 x 11½ filter.



### Chemical Advantages of Helior™ Media

#### Negligible Off-gassing

Helior media has a smaller pore size and fiber diameter than micro-fiberglass. These characteristics significantly reduce the levels of off-gassing impurities typical to micro-fiberglass (which include boron, sodium, potassium, and silicon) to almost zero.

#### High Corrosion Resistance

Helior media has proven to be resistant in highly corrosive environments including alkaline, acid, and organic substances; common in a variety of manufacturing processes.

#### Superior Water Resistance

Based on AAF's test lab results, Helior media provides superior water resistance in comparison with micro-fiberglass and low boron microglass media.



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AAF has a policy of continuous product research and improvement and reserves the right to change design and specifications without notice.

ISO Certified Firm

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