SMART BRIEF

Filter Media Adaptability Ensures Performance of Your Dust Collector

Ensure Performance of Your Dust Collector with Media that Adapts

There are a variety of fabrics available for use as filtration media for industrial applications. Choosing the right filter media is essential to baghouse performance. Testing and analysis have revealed key reasons behind filter bags that fail; learn more about what to look for to improve your filter bag life and baghouse performance.

Process Variation

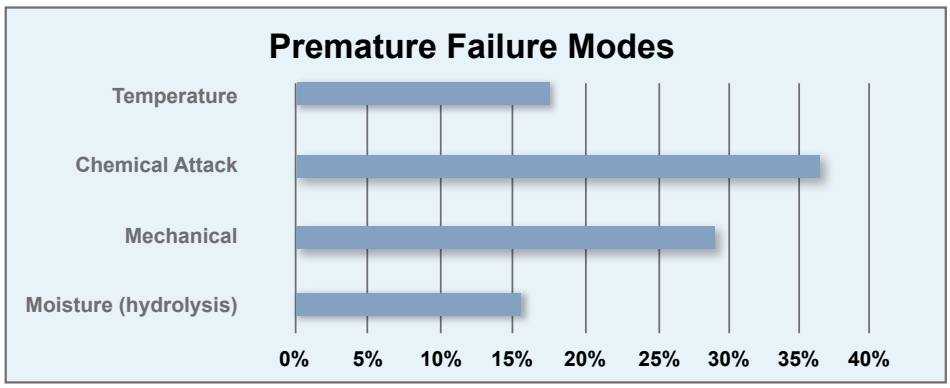
When your operation has process variation that could potentially be carried over to your baghouse you may want to consider a filter media that has properties which are not impacted by variation.

Common Types of Process Variation

1. Moisture carryover from the process upstream, cold weather, condensation, and high humidity can wreak havoc on the filter media used inside the baghouse. Hydrolysis is a form of chemical attack which rapidly weakens the filter bag media creating holes in the media.

2. Acid carryover from the process or acid gas condensation inside the baghouse can result from the use of different types of fuel or feedstock in the process upstream of the baghouse. Many times even small amounts of acids present in the gas stream can cause big issues with the filter bags. Most filter media's are not equipped to handle strong acids in the flue gases. The acids will attack the media and accelerate the weakening of the substrate, therefore shortening filter life.

3. Temperature fluctuation is common, yet difficult to control and becomes problematic to baghouse performance. Filter media needs to be capable of handling the temperature ranges generated by your processes.



For more information, contact your BHA representative at CLARCOR Industrial Air.
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Filter Media Flexibility

Owners and operators of processes that are vented with baghouses will benefit from a filter media that provides flexibility to a variety of environments.

The patent pending media from CLARCOR Industrial Air used in fabric filters delivers the flexibility that industrial baghouse applications need. The media exhibits exceptional resistance to moist heat, acidic gas stream environments and superior temperature resistance while maintaining excellent filtration properties. This product, the OPAN blend is offered as an upgrade to traditional media choices.

The media consists of a proprietary blend of aramid and oxidized polyacrylonitrile (OPAN) staple fibers. OPAN exhibits outstanding chemical and flammability resistance and has traditionally been utilized in applications such as fire-protective apparel as well as automotive and aircraft applications.

Fabrics	Polypropylene	Acrylic	Polyester	PPS	OPAN blend	Aramid	P84†††*	Fiberglass†	PTFE Felt†††
Max. Continuous Operating Temperature	170°F (77°C)	265°F (130°C)	275°F (135°C)	375°F (190°C)	400°F (204°C)	400°F (204°C)	356–500°F (180–260°C)	500°F (260°C)	500°F (260°C)
Abrasion	Excellent	Good	Excellent	Good	Excellent	Excellent	Fair	Fair	Good
Energy Absorption	Good	Good	Excellent	Good	Good	Good	Good†	Fair†	Good
Filtration Properties	Good	Good	Excellent	Excellent	Excellent	Excellent	Excellent	Fair	Fair
Moist Heat	Excellent	Excellent	Poor	Good	Excellent	Good	Good	Excellent	Excellent
Alkalines	Excellent	Fair	Fair	Excellent	Good	Good	Fair	Fair	Excellent
Mineral Acids	Excellent	Good	Fair	Excellent	Excellent	Fair	Good	Poor††	Excellent
Oxygen (15%+)	Excellent	Excellent	Excellent	Poor	Excellent	Excellent	Excellent	Excellent	Excellent

†*Sensitive bag-to-cage fit.* ††*Fair with chemical- or acid-resistant finishes.* †††*Must oversize bag for shrinkage for temperatures above 450°F (232°C).*

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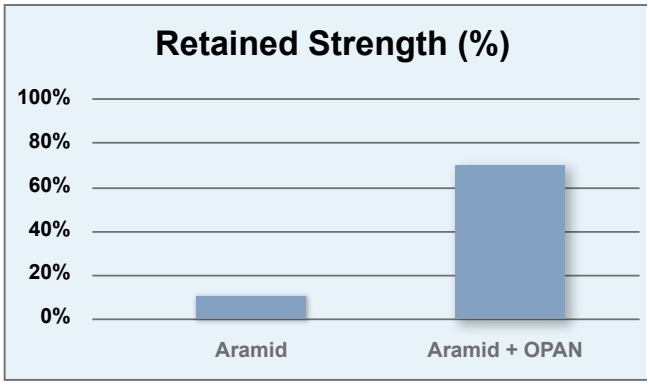
Multiple Acid Cycle Testing

100% Aramid Media
A typical 100% aramid filter media retains approximately 10% of its original mullen burst strength (ASTM D751) after multiple acid cycle testing.

Aramid with Acid Resistant Finish
The Aramid with Acid Resistant Finish retains a little more of its mullen burst strength (ASTM D751) after multiple acid cycle tests, but still only 15%.

Aramid + OPAN Media
The CLARCOR Industrial Air proprietary blend retains approximately 70% of its original mullen burst strength following the same test.

Felt Acid Resistant Properties



The samples were four cycle tested in a 1N solution of sulfuric acid consisting of a submerge for 5 minutes and heat exposure to 350° F.

Testing: ASTM D751 for mullen burst test values

OPAN Blend Media, the Right Fabric for Operations with Process Variation

The patent pending filter media Aramid + OPAN produces a mid-temperature range filtration solution by blending multiple fiber types to obtain the optimum price/performance solution for end use. This media rates “excellent” at handling both “moist heat” and “mineral acids”, is rated up to 400°F (204°C) Filters constructed of this new blended felt media are available exclusively from CLARCOR Industrial Air.

Felt Options

- PX001 – 14 oz. self-supported aramid + OPAN proprietary blend
- PX002 – 16 oz. self-supported aramid + OPAN proprietary blend

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