

The Benefits of Tetratex®

- Increased particulate collection efficiency • Increased filter element life •
- Reduced baghouse downtime • Reduced baghouse pressure drop •
- Reduced emissions • Increased productivity • Reduced energy consumption •

Substrates	Tetratex Release	Tetratex EXTREME	Tetratex High Efficiency	Tetratex Ultra High Efficiency
Acrylic	•	•		
Acrylic Antistatic		•		
Aramid	•	•		
Aramid Antistatic		•		
Pleatable Aramid		•		
Pleatable Polyester		•	•	
Pleatable Polyester Antistatic		•	•	
Pleatable PPS		•		
Polyester Antistatic	•	•		•
Polyester	•	•	•	•
Polyimide		•		
Polypropylene		•		
Polypropylene Antistatic		•		
PPS	•	•		
PPS Antistatic		•		
PTFE Felt			•	
Woven Glass			•	•
Woven Polyester			•	
Woven Polyester Antistatic			•	
Woven PTFE			•	•



Please contact us if you would like advice on maximising filter efficiencies. We offer a range of support services including process evaluation, troubleshooting and filter media analysis.

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Tetratex® ePTFE Membrane Filter Media for Flue Gas Treatment Systems

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Donaldson Membranes is a leading worldwide manufacturer of expanded microporous PTFE membranes, films and laminates. A technology-driven company committed to satisfying customer needs through innovative research and development, with production and sales offices located throughout Europe, America and Asia.

Donaldson places great emphasis on high quality manufacturing and customer service and has been accredited ISO/TS16949 and environmental certificate ISO14001, testaments to our high standards.

Municipal/Urban - Clinical - Hazardous - Industrial - Coal-Fired Boiler - Biomass

We all live in a world driven by power. From the cars we love to the homes in which we live, mankind now consumes energy at an alarming rate. Sadly, Earth's natural fuel resources are finite and as they become evermore scarce, the efficient and 'green' production of energy is increasingly important.



Pulse jet filter bag manufactured in Tetratex woven glass filter media

Whilst natural fossil fuels such as oil, coal and gas continue to provide for a large share of our global needs, many alternative methods of power generation are becoming increasingly common, which is making use of energy that is obtainable from renewable sources.

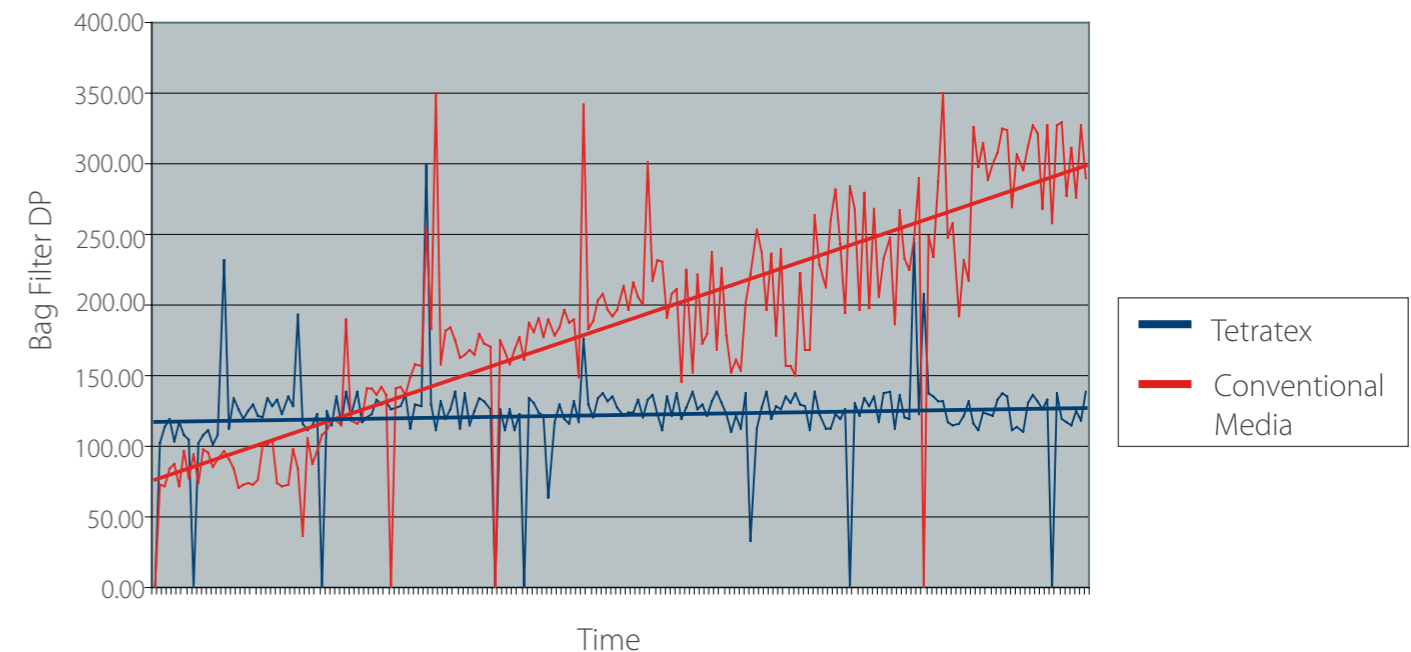
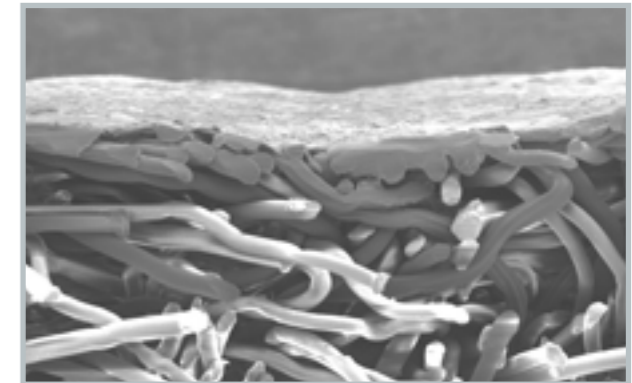
Waste is a natural by-product of civilisation and its safe disposal can present challenges. Traditional use of landfill sites is often no longer possible and many countries simply no longer have the physical space in which to do so.

As a result, the deriving of energy from waste is now seen in an increasingly positive light and incineration is no longer the dirty word it once was. With emissions from modern waste-to-energy plants having to comply with stringent regulations, the adoption of high performance Tetratex® ePTFE membrane filter media in flue gas fabric filters can help ensure operators are able to maintain process emissions well below statutory limits.

Tetratex filter media employs a microporous ePTFE membrane laminated to a suitable supporting substrate.

Employing 'surface filtration' technology, Tetratex can bring significant benefits to flue gas filtration systems...

- Near-zero particulate emissions providing enhanced collection of dioxins, furans and other particle-enriched contaminants
- Improved capability for process upset recovery
- Greater ability to handle sticky/moist dusts
- Optimised dust cake management for acid gas emission control
- Resistance of chemically aggressive gas conditions
- Higher airflow
- Reduced constant baghouse pressure drop
- Fewer element changes
- Extended element life
- Reduced cleaning regime
- Reduced maintenance costs



The above chart details indicative results of comparative bag filter pressure drop of Tetratex vs. conventional media

Applications

Donaldson Tetratex ePTFE membrane filter media is today employed in a wide variety of energy generation applications with numerous flue gas cleaning systems benefitting from its advanced surface filtration technology.

The two references cited below are typical of the increased use of alternative 'biomass' fuels in the market and indicate process parameters on installations where operation with Tetratex has not only met, but exceeded required performance levels.

PROBLEM FREE PERFORMANCE AT SWEDISH BIOMASS INCINERATOR

Tetratex #6255 Ultra High Efficiency Woven Glass filter media has provided consistent problem-free performance on a waste-to-energy plant at a paper mill, location Sweden.

- Fuel: Paper Sludge
- Gas Volume: 185,200Am³/h
- Operating Temperature: 200°C Peak
- Total Filtration Area: 3283m²
- Inlet Dust Loading: 60g/Nm³
- Particulate Emissions: <10mg/Nm³

The client is extremely satisfied with the problem-free performance of the filter media, which has helped to reduce maintenance costs and energy consumption resulting in increased productivity.

EFFICIENT FILTRATION SOLUTION AT A TURKISH PAPER PRODUCTION FACTORY

Tetratex #6255 Ultra High Efficiency Woven Glass filter media has helped to eliminate the use of non-renewable fossil fuels and decrease the impact on the environment at a Turkish paper production plant.

- Fuel: Wood Waste
- Gas Volume: 120,000Am³/h
- Operating Temperature: 165°C
- Total Filtration Area: 1242m²

The site Plant Manager, commented: "The production of steam has been made more successful since the implementation of the new Tetratex filterbags; we are now able to lower the amount of LPG fuel we use, therefore saving costs to the company and also the environment".

Technical Assistance

Donaldson Membranes is committed to working closely with partners to provide comprehensive technical and sales support.

Our experience in innovative design, manufacturing, filtration knowledge and technical support will help you and your organisation to succeed.

Having an enviable resource of more than twenty-five years of dry filtration experience, Donaldson Membranes is able to provide a thorough and educated evaluation of your system process to best determine the most suitable Tetratex filter media solution.

The Donaldson Membranes technical team can provide assistance with manufacturing requirements, installation support, commissioning, recommended routine maintenance advice and troubleshooting, providing you with everything you require to ensure full satisfaction and a successful filtration solution.



In order to ensure your application continues to run at optimum levels, regular routine condition testing of filter media is recommended. The laboratory facility of Donaldson Membranes is able to provide detailed analytical feedback, providing a full breakdown of the testing carried out (typically retained permeability, residual tensile strength and supporting microscopic photography). If carried out on a regular basis, this information can be catalogued, trended and used to highlight potential process issues which may adversely affect media performance ahead of filter problems being experienced and/or to provide an invaluable indication of expected filter element life.

Donaldson Membranes can also provide SEM (Scanning Electron Microscope) and particle size analysis capability where more detailed examination is required.

Donaldson Membranes is committed to ensuring excellent service and life-long product performance.

