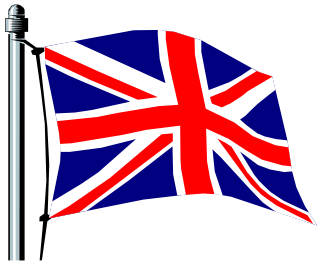
Acousta-fil®
General Product Presentation



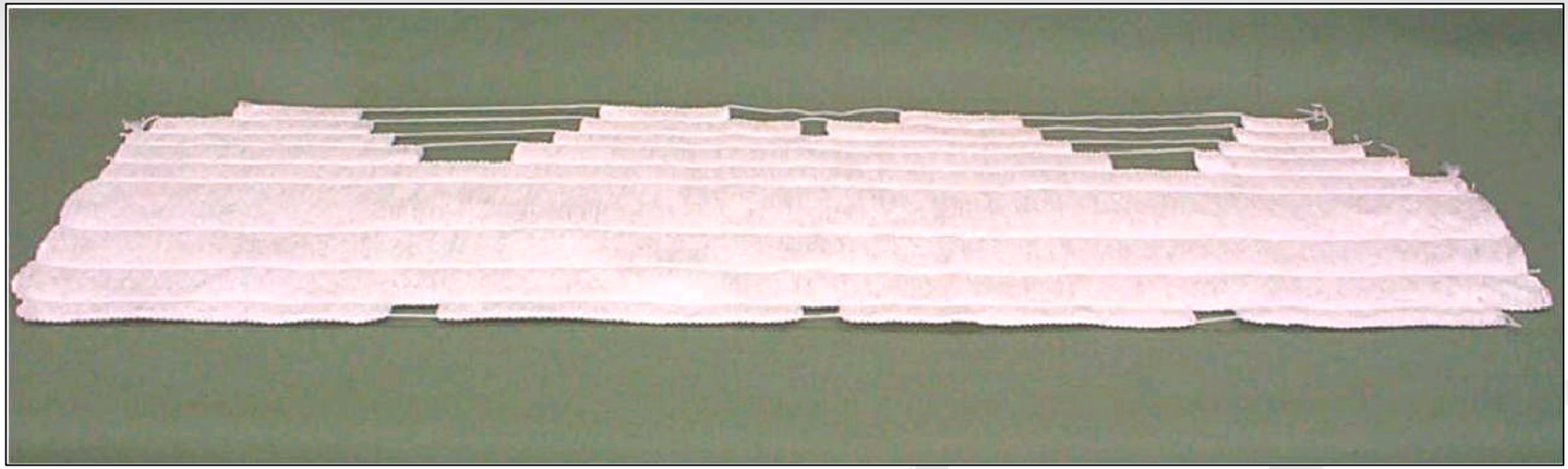
Acousta-fil® & Acousta-fil® CE

- Why was Acousta-fil® developed?
- What is it and how is it made?
- How does it work?
- Where and why is it used?

Acousta-fil® & Acousta-fil® CE
What is it and how is it made?

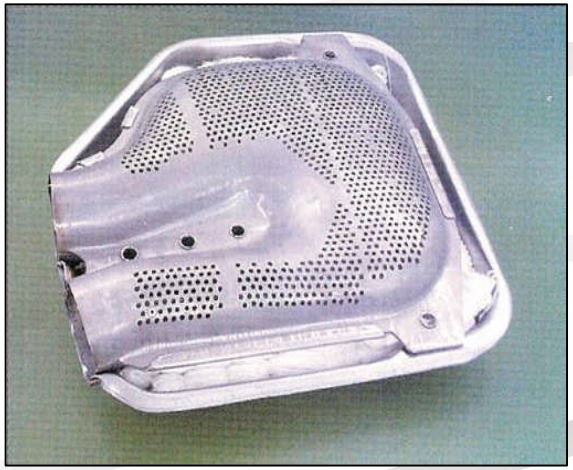
- Process allows variations to:
  - Width
  - Density/weight
  - Thickness
  - Fibre type
  - Levels of texturization
  - measured lengths

Acousta-fil® & Acousta-fil® CE
What is it and how is it made?



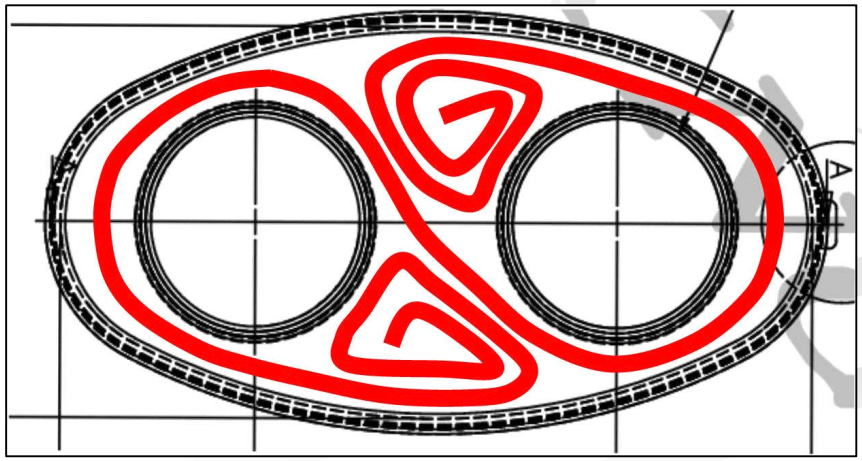
3D Packs for Clamshell Applications

Acousta-fil® & Acousta-fil® CE
What is it and how is it made?

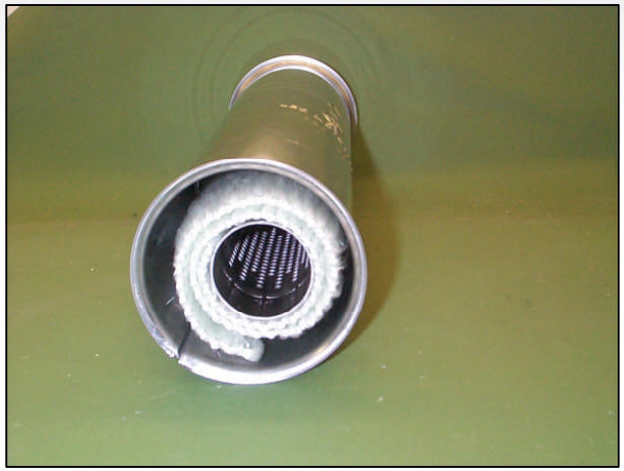


Typical installation of a 3D pack

Acousta-fil® & Acousta-fil® CE
Where & why is used?



Acousta-fil® & Acousta-fil® CE
How does it work?



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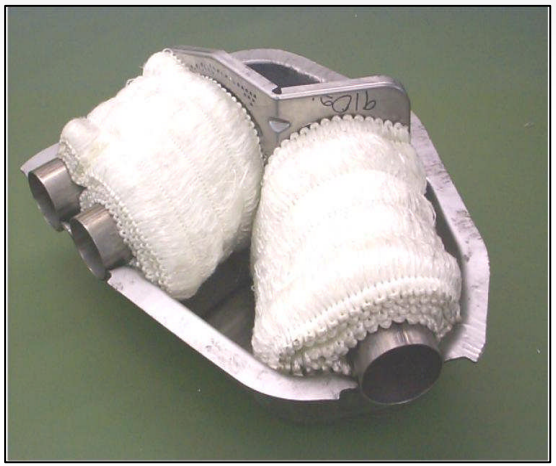
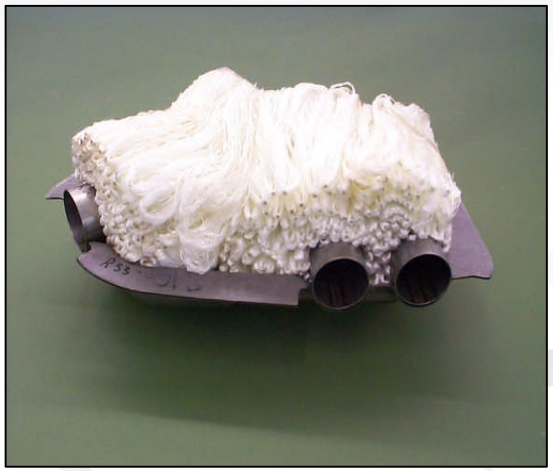
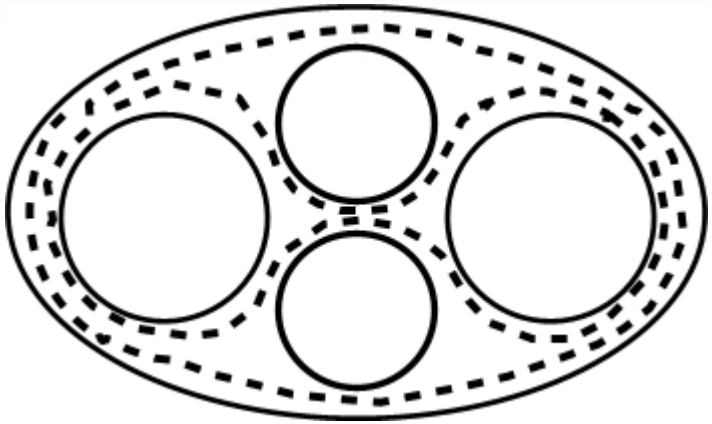
Cylindrical Muffler with offset perf tube

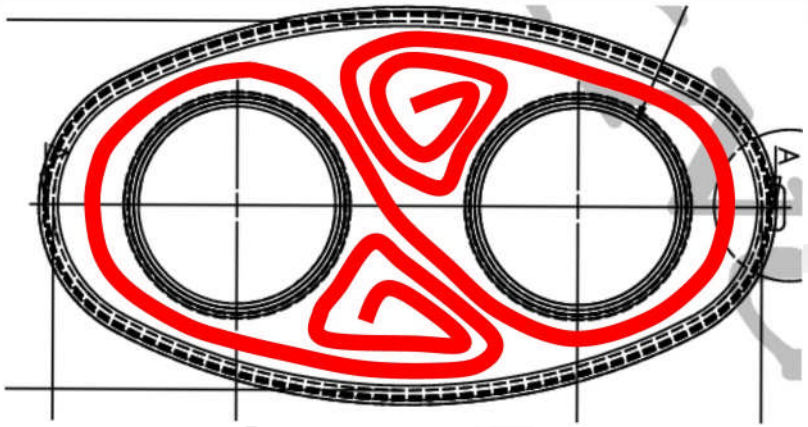
Acousta-fil® & Acousta-fil® CE
How does it work?





Acousta-fil® & Acousta-fil® CE
How does it work?

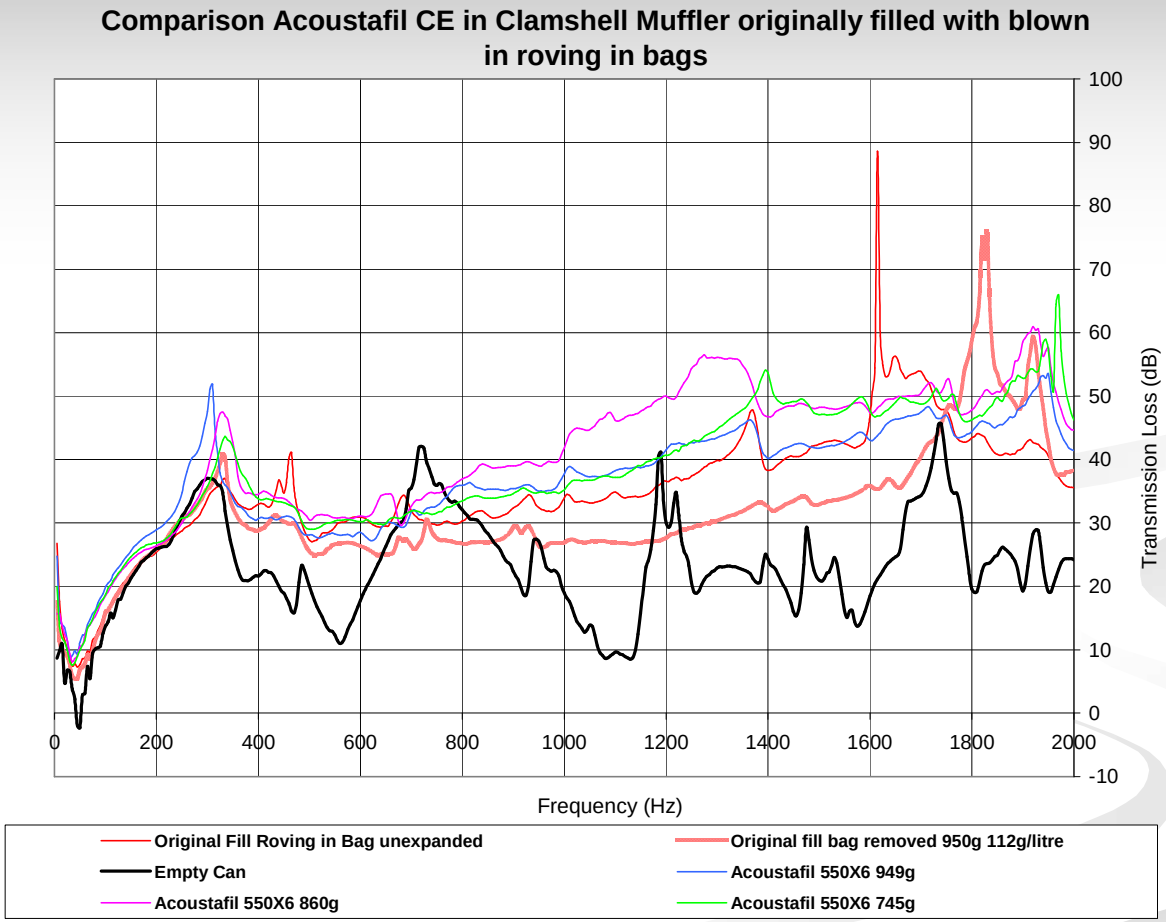




Acousta-fil® and Acousta-fil® CE Design Criterion

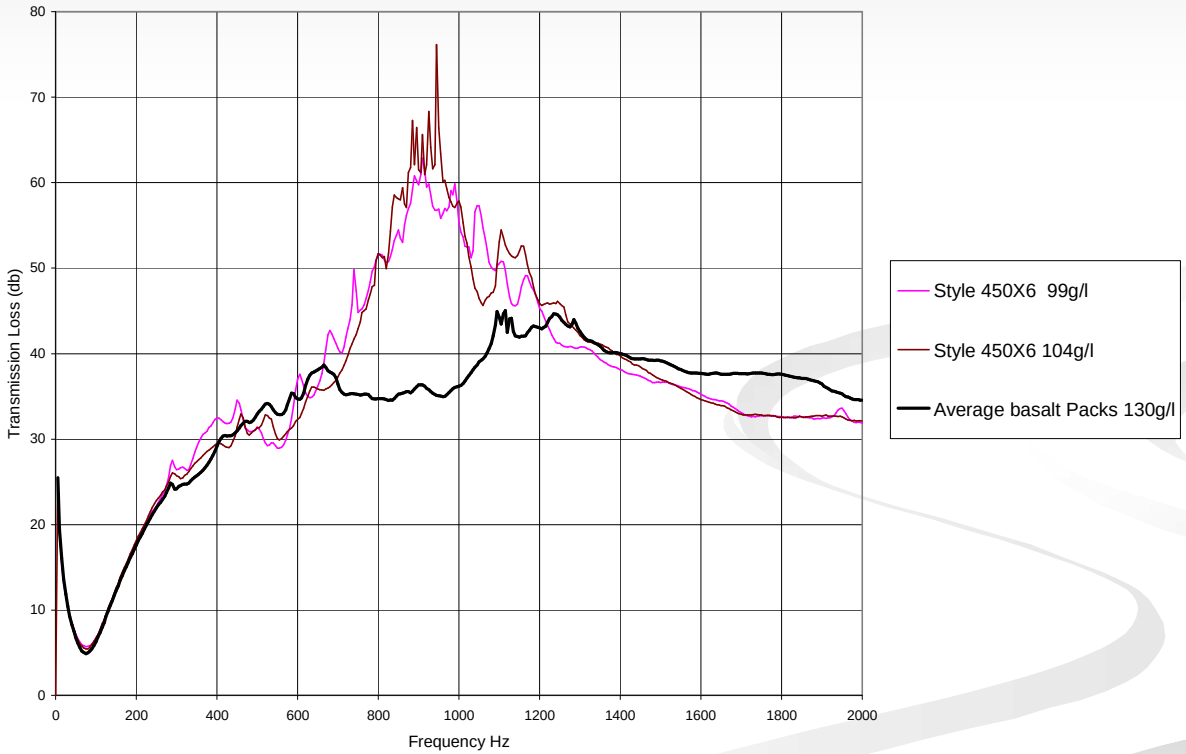
- Dimensions of the chamber
- Architecture of the chamber
- Temperatures involved
- Existing specifications
- Levels of acoustic performance required
- Weight restrictions
- Financial considerations

Acousta-fil® and Acousta-fil® CE Test & Evaluation

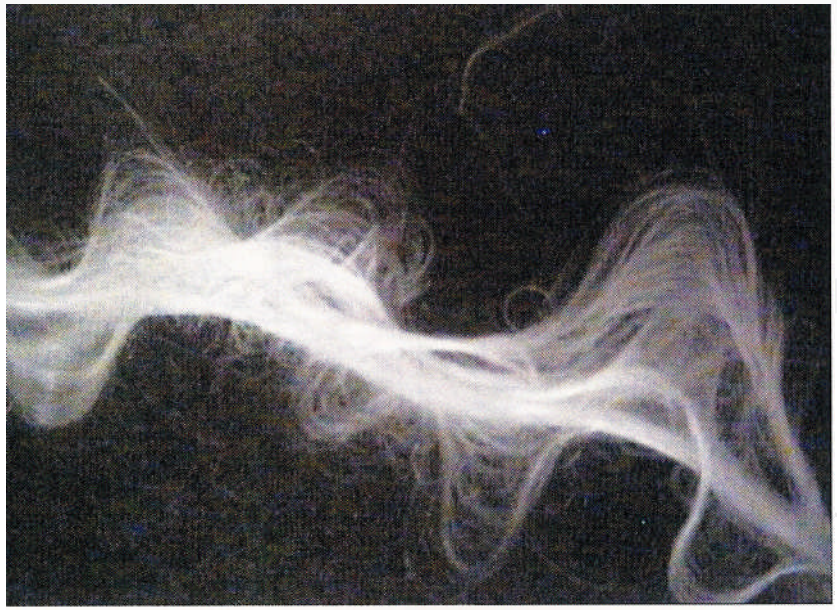


Acousta-fil® and Acousta-fil® CE Performance

Comparison with Acoustafil CE and Basalt Preforms in intermediate clamshell muffler



Acousta-fil® and Acousta-fil® CE Performance



Acousta-fil® and Acousta-fil® CE
The Advantages

- Enhanced Muffler Performance
- Technical and Development Support
- Production Efficiencies
- Cost Effectiveness

Acousta-fil® and Acousta-fil® CE
The Advantages

1. Enhanced Muffler Performance

- Uses only continuous filament fibres
- Contains no particulate or short fibres
- Can be manufactured from a range of glass fibres
- Accurate and repeatable control of fill weights
- Muffler ‘tune-ability’

Acousta-fil® and Acousta-fil® CE
The Advantages

2. Design & Development Support

- Utilization of our in-house test facilities
- Acoustic performance can be established with confidence prior to full dyno testing.

Acousta-fil® and Acousta-fil® CE
The Advantages

3. Production Efficiencies

- As a compact product, Acousta-fil is easily incorporated to give the most efficient production pattern
- Minimizes closure problems
- Easy to install in confined chambers; resonators etc.
- Fibres are soft and easier to handle

Acousta-fil® and Acousta-fil® CE
The Advantages

4. Cost Effective

- Keep fill weights to an engineered minimum
- Ease of installation
- Reduce storage areas

Acousta-fil® and Acousta-fil® CE Availability

- On the roll, made to a specific width
- On the roll and made to a specific width, but incorporating pre-determined cut points
- As pre cut lenghts (for small silencers)
- Shaped and Pre-folded as packs

Acousta-fil® and Acousta-fil® CE Future Developments

- Catalyst support mat
- Optimisation of Acousta-fil with mixed filament diameters
- Therma-fil