

The Role of Thermafleece in Sound Control

In an acoustic system, Thermafleece acts as the absorbent filler within voids, breaking up sound waves to limit their ability to reverberate or echo in the voids within walls, roofs and floors.

Why Coarse Wool is Acoustically Superior

The unique structure of coarse British wool makes it an exceptionally effective acoustic material:

- **Dual-Action Fibres:**
Under a microscope, wool fibres have a scaly surface with fine ridges. These ridges are so small they act like fine fibres wrapped around a coarse core, allowing the wool to disrupt sound waves of various sizes simultaneously.
- **Disruption:**
The irregular size and structure of these fibres are more effective at “breaking up” sound waves than uniform synthetic materials.

Optimising Performance: Thickness vs. Density

The effectiveness of fibrous insulation depends on how much material the sound must pass through:

- **In Thin Layers:**
Density is the most important factor, as it provides the necessary “bulk” to absorb sound in a shallow space. This is why we recommend Thermafleece UltraWool when space is limited.
- **In Thick Layers:**
Depth becomes as important as density, as the sheer volume of the insulation provides the absorption. This is why it is OK to use Thermafleece CosyWool when space isn’t limited.
- **Maximum Benefit:**
While increasing both depth and density generally improves performance, every system eventually reaches a “point of diminishing returns” where additional material no longer provides a noticeable benefit. For thickness over 100mm there is no significant benefit in using UltraWool over CosyWool.

Note:

Acoustic systems are complex. For the best results, we recommend consulting an acoustic specialist during the design stage to ensure the right combination of mass, separation, and absorption.