

Meltunit – Acoustically effective meltblown composite

Objective

The aim of the research project was the development of an innovative composite nonwoven based on kunit and meltblown technologies. The focus was set on increasing the efficiency and flexibility of nonwoven production in order to achieve higher performance and adaptability. At the same time, the objective was to open up new possibilities for the use of acoustic materials, thereby expanding the range of applications. Another focus was the optimisation of filament quality to be improved through the use of an innovative nozzle geometry.

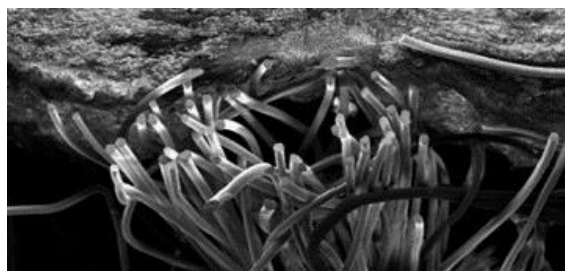
Approach and results

In the course of this research project, the meltblown process was extensively optimised to increase production efficiency and flexibility. Material throughput has been significantly increased through targeted adjustments and optimisation of the overall process.

- Nozzle geometry: A multi-row nozzle geometry was implemented to achieve a more uniform material distribution. This led to an improvement in the quality of the filaments produced.
- Material selection: Comprehensive tests and analyses were carried out to identify the most suitable materials for the production of a composite nonwoven.
- Composite nonwoven: A new type of composite nonwoven combining kunit and meltblown technologies has been developed. The suitability of this innovative composite nonwoven as an acoustic nonwoven has been extensively tested and the results show promising properties for sound insulation applications.



Samples of the composite variants produced



SEM image of composite nonwoven in cross section

Acknowledgement

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The final report on this project is available on request.

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