

# HICOTEC<sup>®</sup>

An incredible advance today.  
Unlimited potential tomorrow.



GASKETS

TECHNICAL TEXTILES

EXPANSION JOINTS

INSULATION

NEW MATERIALS



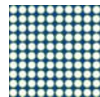
creating  
hightech  
solutions

# A vision today. Reality tomorrow.

What is the precondition for revolutionary products? **Revolutionary materials.** We have developed a series of innovative new high-performance nonwovens called HICOTEC® – with properties that have never been available before. Our new line is manufactured by special nonwoven technology using such high-performance fibres as carbon, aramide, PEEK and PPS. The special feature of them: their properties make HICOTEC® products stand out from both high-performance papers and technical textiles. They are materials that fill the gap between the elements.

Highly consistent longitudinal and transverse basis weight, controllable orientation of the fibres to create anisotropic or isotropic materials that have minimum basis weights at the same time: the numerous outstanding properties HICOTEC® products have make them suitable for a wide range of technical applications in many different industries.

The crucial question is: does the new material satisfy the demands that will be made in future too? Frenzelit therefore supplies you not only standardised but also specific solutions that are tailor-made precisely for your application and your individual needs.



## High porosity – adaptable to your requirements

HICOTEC® is a nonwoven fabric that can be produced with varying porosity levels. This means that permeable configurations are possible, while materials that can be processed in injection moulding systems are feasible as well.



## Additive incorporation – the choice is yours

HICOTEC® can be optimised to meet specific requirements by incorporating additives during production or in subsequent processes.



## Absorbency

From gas adsorption alone to combined particle and gas filtration: no problem with HICOTEC®.



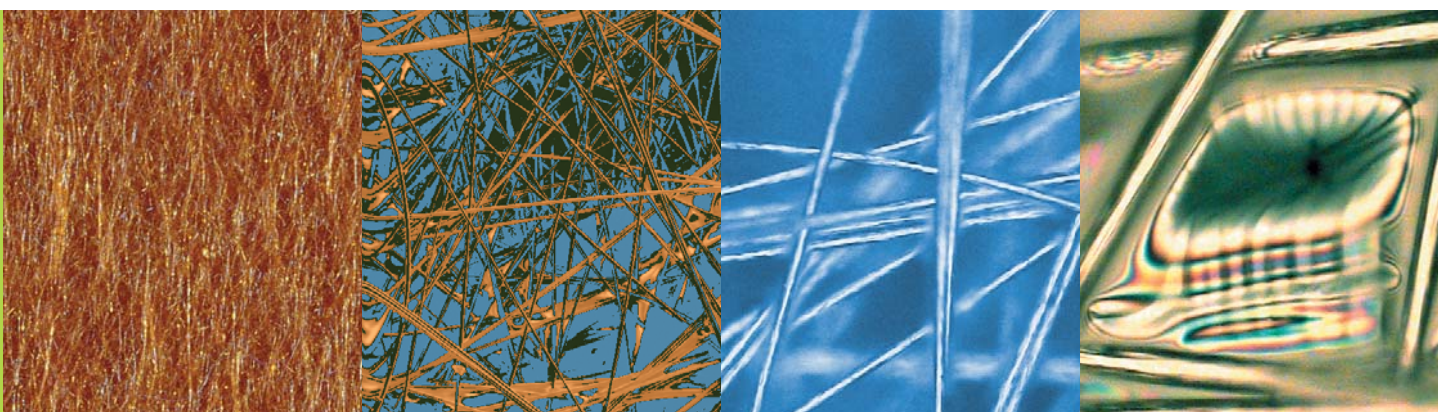
## Electrical conductivity – or would you prefer insulation?

HICOTEC® can be produced not only to conduct electricity and/or heat but also with electrical insulation and/or heat storage properties.



## Impressive homogeneity

HICOTEC® products are precision materials with highly consistent basis weights and thicknesses across their entire width and length.



## HICOTEC<sup>®</sup> NE

**New Energy –  
revolutionary solutions  
for energy generation and  
storage.**



### **Thin, uniform structures and low basis weight**

Depending on the raw material, basis weights of 8 g/m<sup>2</sup> to 400 g/m<sup>2</sup> are possible from thicknesses of 0.1 mm upwards.



### **Modulus of elasticity with controllable flexibility**

From flexible and adaptable to extremely rigid and/or stiff – child's play with HICOTEC<sup>®</sup>.



### **Thermoformability**

High degree of freedom in forming by cold or hot pressing and thermoforming.



### **Ideal multi-component fibre blends**

A special solution to just about any problem – thanks to the right fibre blend.

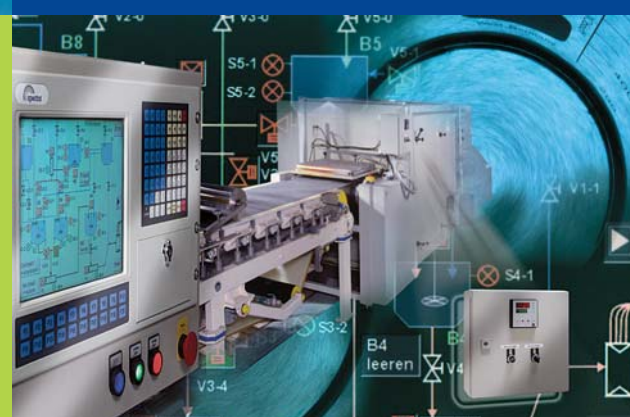
Since the properties outlined above can be combined with almost no restrictions, HICOTEC<sup>®</sup> is an excellent candidate for many different applications: electromagnetic shielding or damping, lightweight construction, wear protection layers, bearing and gasket materials or applications in the composite industry – (almost) anything is possible with HICOTEC<sup>®</sup>!

## HICOTEC<sup>®</sup> TP

**Thermal Power –  
revolutionary solutions  
for radiant heating.**

## HICOTEC<sup>®</sup> CA

**Clean Air Technology –  
revolutionary solutions  
for environmentally  
sound results.**



Do you have any questions about your application?

The HICOTEC<sup>®</sup> information service will help you:

[hicotec@frenzelit.de](mailto:hicotec@frenzelit.de)

**HICOTEC® NE** is exactly what is needed for use in current and future energy generation and storage technologies thanks to its specific material composition. Minimum basis weights combined at the same time with maximum material homogeneity in addition to appropriate fibre orientation and conductivity: these factors are the basis for achieving high energy density levels with smaller component sizes and low component weight.

**HICOTEC® TP** combines the electrical and thermal functions with the reinforcement properties of carbon fibres. Precisely variable surface resistance levels of 1 to 300  $\Omega/\text{sqr}$ , for electrical voltages of 4 to 400 V and electrical power of up to 0.8  $\text{W}/\text{cm}^2$  make it suitable for a large number of different applications in the industrial and privately used radiant heating field. Processing in plastic parts is an ideal way to integrate functions, for example.

**HICOTEC® CA** makes it possible to capture hydrocarbons highly spontaneously or to remove specific acid or alkaline substances from the environment thanks to its selective adsorption properties. Pleated media can be produced if the application requires this – due to the specific material composition. The combination of suitable bonding systems and low material densities leads to systems that optimise pressure loss – maximising efficiency as a result.

# Complete service: from research to series production.

**It is not enough for good ideas to be implementable; they need to be affordable too. We at Frenzelit therefore do everything in our power to make sure that you have not just your development project but also the costs of it under control from the very beginning.**

We support you right from the start, whatever HICOTEC® application interests you and your team: from research and development to sample production and manufacturing.

You benefit here, on the one hand, from our research laboratories, which are available to you for joint development projects. The specific configuration of our production facilities enables us to develop and produce samples of new high-performance materials both quickly and inexpensively, on the other hand – combined at the same time with high series reproducibility. We produce economically for you – whether you need a trial series, small batches or large volumes.

And some more good news: HICOTEC® materials are manufactured in reels. This guarantees not only consistently high, standardised quality but also economic production.

# Good for people and environment.

Frenzelit has obtained certification that the company complies with the requirements of both ISO/TS 16949 and ISO 14001. This means complete transparency in all areas and a high degree of security for our customers.

## Quality management

ISO/TS 16949

## Environmental management

ISO 14001

## For everyone who wants to achieve even more: development partnership with Frenzelit.

Perhaps you are one of those companies for which time to market is a key criterion in the competitive environment. Or are one of those engineers who are convinced that their R & D department can do even more.

As a comprehensive system supplier of gaskets, technical textiles, expansion joints, insulation and new materials, we make sure our customers maintain their lead – and help them to increase it day in, day out.

You have the chance to take advantage of this now. Our proposal: our engineers help you to develop, test and implement HICOTEC® applications in the context of a development partnership – all the way to series production, if you like.

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