

Solutions for the Future

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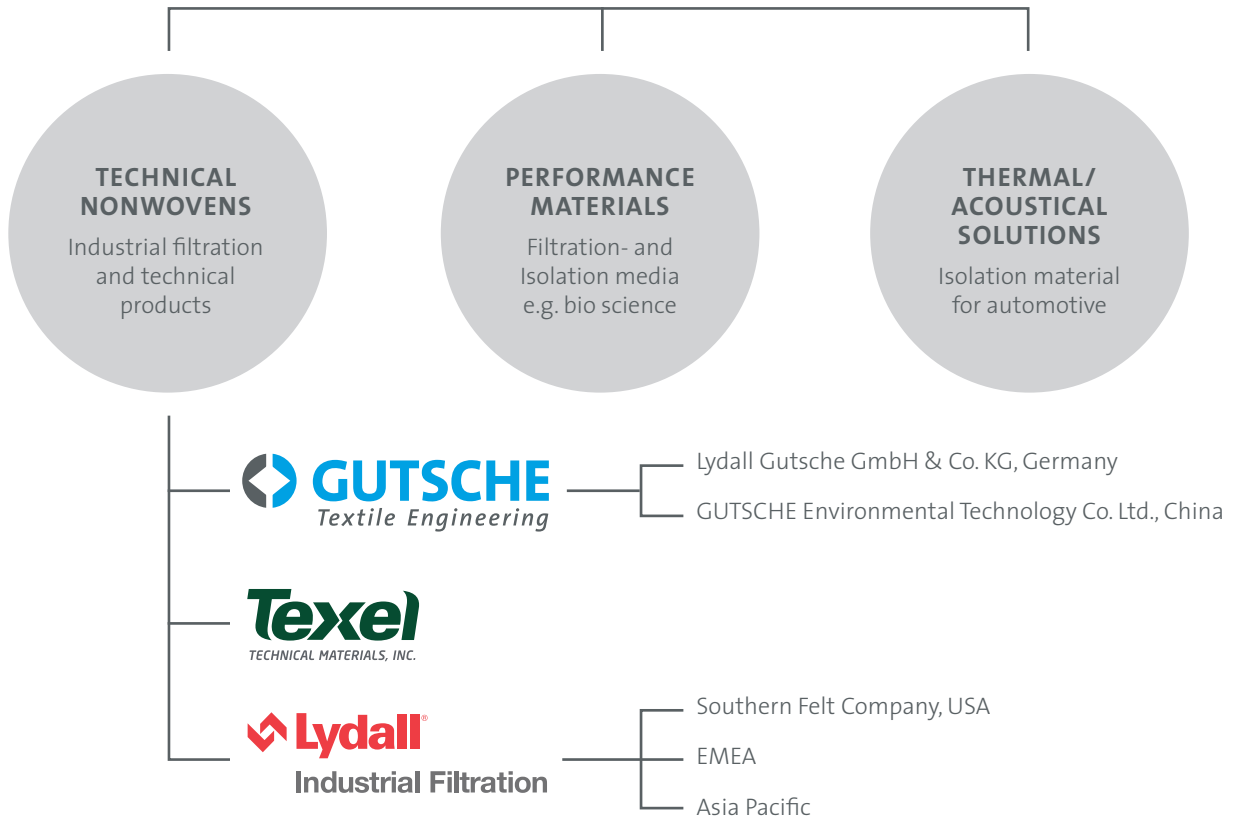


From the vision to the global market leader

It was a vision which initially motivated our founder Eugen Gutsche. He recognised the unique properties of needle felts and envisioned a new generation of sophisticated filter media. As it was not yet recognised how important air pollution control would be one day, Mr. Gutsche was well ahead of his time.

Founded in 1973, our company Lydall Gutsche GmbH & Co. KG developed from small beginnings into one of the global market leaders in filtration technology. With the integration into the international Lydall Group in 2017, we continue to expand our goal - being close to our customers around the world. This enables us to react quickly to different market conditions with great expertise and flexibility.

WHAT WE STAND FOR



LYDALL INC. AT A GLANCE:

- Locations and sites around the world
- Group headquarters in Manchester, Connecticut, USA
- A company listed on the New York Stock Exchange

More information at www.lydall.com



Headquarters Lydall Gutsche GmbH & Co. KG in Fulda

We stand for ...

... comprehensive solutions from a single source

Among our customers are companies from various sectors with individual and demanding requirements. Standard or high-end products - we find the perfect solution in close cooperation with our customers. As your partner, we support you in all relevant process stages: We deliver comprehensive solutions from a single source - from the first idea, through the planning, the production and the installation to the after sales service.

... customised innovative solutions

We place great importance on research and development. Our highly-qualified employees drive the development of new textile solutions for our customers forward with perfectly customised engineering services and great passion for innovation. We are proud to significantly influence the market development in textile technology with our innovative brands and patented products.

... close proximity to our customers around the world

As part of the Lydall Group, we have representatives around the world. With our production sites and distribution locations we ensure flexibility and the highest delivery performance. This enables us to react to the wishes of our international and local customers without delay.

... active environmental protection

We are proud that our high-quality textile filter solutions are premium products for air pollution control. We also implement this principle within our company through sustainable action and the responsible use of resources.

 **GUTSCHE**[®]
porotex

advantex[®]

antafin[®]

condutex[®]

cenatex[®]

createx[®]

membratex[®]

novotex[®]

microvel[®]

optivel[®]

sparktex[®]

Innovativ.
Patented.
Trusted.

Dust and flue gases which are harmful to our environment are the by-product of many incineration and production processes. Thanks to our innovative filtration media, particles can be filtered out highly efficiently, ensuring for example optimal flue gas cleaning. We stand for perfectly customised solutions and excellent service on-site around the clock. As reliable partners, we support our customers from the first product idea to the supervision of the final filter solution in daily operation.

We are familiar with the diverse and demanding requirements of our customers. This is why the range of our filtration solutions covers everything from trusted brand products from the GUTSCHE *porotex*[®] filter series to the development of individual specialised solutions.

Our high-performance filter media can be ordered as rolled material, and as manufactured filter bags. Our valued customers can benefit from our many years of experience in numerous, demanding sectors.

Every single brand of the GUTSCHE *porotex*[®] filter media programme stands for an innovative, tried and tested solution for the future. Insiders associate highest quality and efficiency with our products.



***You can utilize our FilterCare Service
- around the clock and on-site***

To ensure the smooth operation of the filter in the facility for many years to come, we support our customers with a service offer individually tailored to the application:

This includes removal and re-installation of filter bags and pre-coating, laboratory and leakage tests, or deep high-pressure cleaning of installed filter bags. A large portfolio of equipment and spare parts ensures quick and efficient service.

Our high performance filter solutions have proven to be a success as a result of them having been fitted in plants in the most diverse branches for years:

RDF and Waste combustion plants

Highly efficient exhaust gas cleaning systems form the basis of modern waste incineration plants. Not only do fabric filters ensure an efficient separation of reaction products, they also ensure that contaminants are minimised. Our GUTSCHE *porotex*® filter media are being put to very successful use in systems from Europe to Southeast Asia.

Metallurgy

In the metallurgic industry, great value is placed on the de-dusting of the processes. High performance filter media are decisive when it comes to the adhering to low dust emissions. The steel manufacturing industry can no longer be imagined without our Lydall Gutsche filter bags.

Coal-fired power stations

High quality filters are an absolute necessity when it comes to keeping the air clean in coal-fired power stations. Customised filter solutions are also required here as the lignite and hard coal can differ with regard to their composition, depending on where they are extracted from.

Chemical, food and pharmaceuticals industries

The manufacturing of food and pharmaceutical and chemical products are all sensitive processes that have to face special demands. Our *cenatex*® filter media are manufactured according to high quality standards before being tested and sent to our customers together with Declarations of Conformity.

Cement, lime and gypsum industries

Our GUTSCHE *porotex*® filter media have proven themselves in cement plants together with the lime and gypsum industries on a global scale. Not only does the filtration serve to clean the air, but also to recover and recycle the separated product.



One material. Endless possibilities.

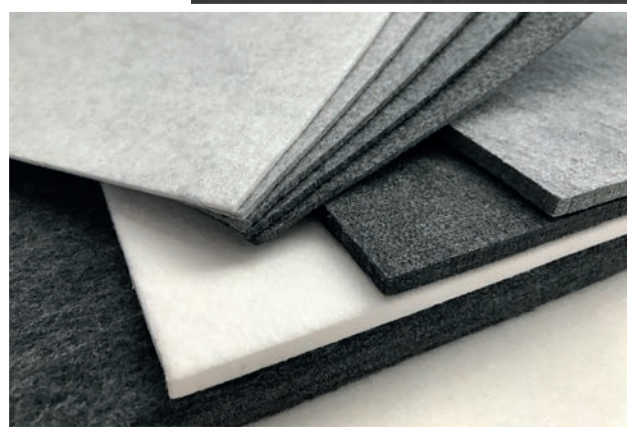
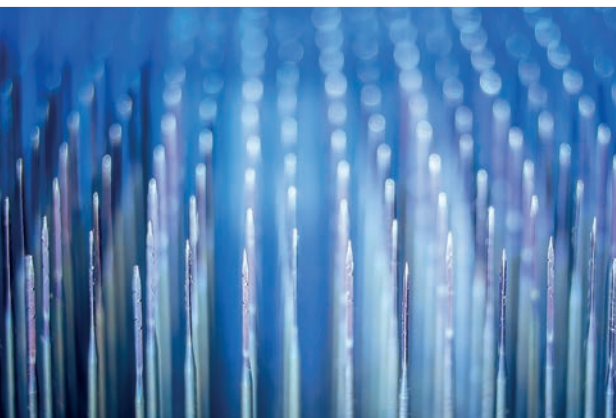
Our innovative technical textiles are the first-choice material in many quality products and special applications. Nonwovens from Lydall Gutsche are ideally suited for the combination with other fabrics. This makes them the basis of individual composite fabrics which serve as carrier material, filter medium or insulation material.

We fulfil complex requirements: In close cooperation with our customers, we look for suitable composite materials, such as foil, fabric and equipment, and take care of the perfect lamination, manufacture and wrapping. This ensures that our customers receive customised solutions, perfectly tailored to the individual operation requirements.

We process all common fibres in our highly-functional needle felts - pure fibres, homogeneous mixtures or layered structures

Fibre properties at a glance:

- ✓ mechanically high-strength (e.g. aramid fibres)
- ✓ chemically stable (e.g. PTFE, polyimide)
- ✓ flame-retardant and non-combustible (e.g. polyester flame retardant, preox)
- ✓ standard polymers (e.g. polyester, polypropylene)



Innovative technical textiles can be used in numerous areas and fulfil various requirements:

Protective clothing

Wherever people need to be protected effectively in dangerous situations, only the best is good enough. Our high-performance nonwovens help provide protective clothing with the desired properties, while offering maximum wearing comfort. Whether it is heat protection, protection from chemicals or cut protection, our customers have been trusting our high-quality technical textiles for years.

Acoustics

With our *audiovel*® brand we have developed a needle felt which combines the highest demands of acoustic applications: noise protection, flexibility, flame resistance and environmental compatibility.

Automotive industry

Widely used and an important basis for functionality, appearance and driving comfort - our technical textiles are used in a variety of vehicles. Lydall Gutsche nonwovens serve for example as noise insulation, as a highly-functional component in premium vehicles or as a carrier material for high-end surfaces.

Construction engineering

Our needle felts are inseparably intertwined with construction engineering: Breathable and waterproof nonwovens provide protection against humidity while simultaneously allowing air exchange, and thus provide a pleasant indoor climate. Other areas of use such as mattress technology, dryer seals or protective covers for chair legs illustrate how versatile and flexible our textile solutions are.

Industry

Our nonwovens fulfil individual requirements in numerous industrial applications: they can be used as insulation material which can withstand high temperatures, as cleaning fleece, to hold back materials or as composite material. Our textile product solutions are thus used as welding protection or insulation felt among other things, or play an important role in liquid filtration. As a reliable partner for our customers, we develop the optimal solution for them.



METICULOUS QUALITY



Your trust is our motivation.
For highest performance.

Environmental protection for our future

We help the environment with our filter media every single day. Sustainable, environmentally and resource friendly processes are of the utmost importance to us as a company. This is why we rely on certified processes in environmental and energy management.

Guaranteed best quality

Our products stand for reliability and high quality. With state-of-the-art production technologies, we are able to fulfil our customers' demanding requirements in a safe and reproducible way. Regular internal and external audits in accordance with the applicable ISO standard certify the high quality of our products and processes.

INNOVATIVE MILESTONES

Patent for our brand *createx® advantex®*

This innovative needle felt combines dimensional stability and filtration efficiency and is being internationally patented.

2015

Innovative light nonwovens

As the first manufacturer of nonwovens in Europe, we developed a new type of needle nonwoven for the automotive engineering sector weighing only 60 g/m².

1993

membratex® brand

Development of the first microporous PTFE equipment as technological pioneer for the European filtration market.

1986

First PPS needle felt

As the first company in Europe, we processed a new type of PPS fibre polymer, which later revolutionised de-dusting in power plants.

1981

Always a step ahead

We place great importance on research and development in close collaboration with our customers. For this reason, we can look back on patents and innovative

developments with which we have set new standards in textile technology.

A strong team. For your success.

Our team consists of motivated and highly qualified employees, who contribute on a daily basis to making good things even better. The training and development of our

employees is very important to us. Many skilled employees and managers have been working for us for years and also completed their training in our company.

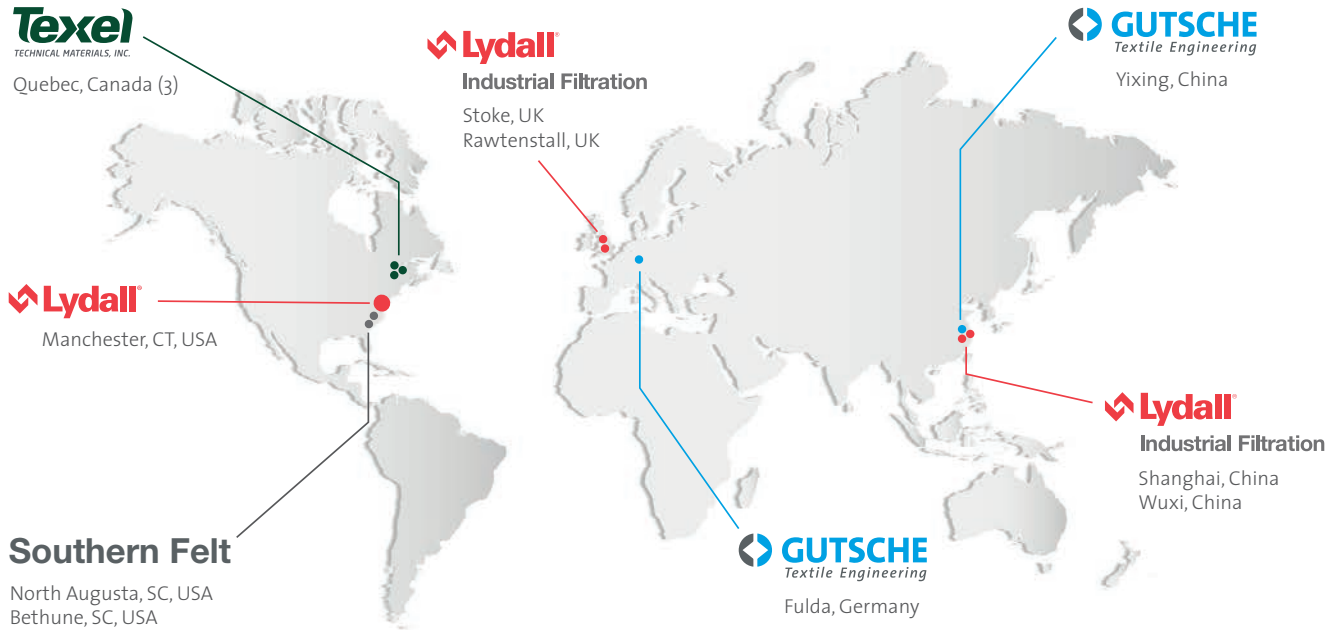


HIGH PERFORMANCE FOR YOUR FUTURE

Our training programs

Industrial business management assistants (m/f)
 Electronics technician for operating systems technology (m/f)
 Industrial mechanic (m/f)
 Textile product refiner (m/f)
 Textile production mechanic (m/f)
 B.A. Business management specialising in industry

Everyone who strives to get ahead professionally is welcome at our company! Because we are continually growing.



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GUTSCHE *porotex*®, *optivel*®, *sparktex*®, *microvel*®,
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