MAKE THE WORLD
a cleaner place
FILTRATION LINE
Norafin
materials for life

The manufacturing process affects performance

Spunlace Technology

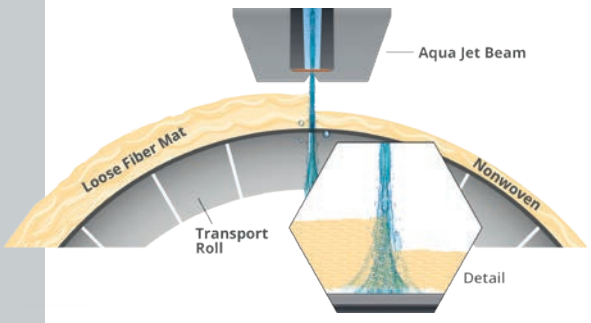
During the spunlacing process, a homogeneous, intertwined textile structure is created through high pressure water jets. Two autonomous carding machines enable us to combine different nonwoven layers in one step.

PROCESS POSSIBILITIES

Basis weight range:
15 – 750 g/m²

Width upon request:
max. 2.40 m

Capacity:
6,000 t/year



Needlepunch Technology

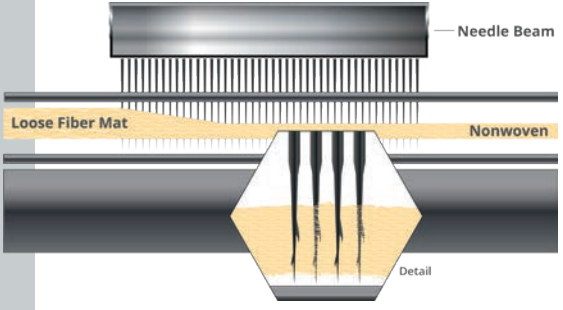
The fibrous web is processed "dry" on the independent needle line. The web is mechanically consolidated by vertically moving needles. Additional layers can then be added to the material in a second step.

PROCESS POSSIBILITIES

Basis weight range:
60 – 1,000 g/m²

Width upon request:
max. 2.20 m

Capacity:
1,000 t/year



Comparison of the technologies and their benefits

Spunlace Technology

- no perforation of the nonwoven in the spunlacing process – fibers are not exposed to mechanical stresses
- high material density, thus denser pores and better pore size distribution
- high homogeneity of the surface – higher filtration efficiency through better dedusting
- multi-layer technology – integration of scrims (metal, glas, etc) possible

Needlepunch Technology

- higher pore size through strengthening process – higher weights are necessary to achieve the desired separation efficiency
- some of the dust cake remains in the filter media after dedusting – no entire dedusting possible
- limited choice of scrims – no metal support scrims possible

We use only staple fibers in various lengths and with different properties, which allows us to offer a wide range of product options.

Our fiber portfolio

We can process a wide variety of fibers and fiber blends to provide a broad range of temperature and chemical resistance.

Basic Material	cont. – max. °F*	cont. – max. °C*	LOI in %	Acid	Alcaly	Hydrolysis	Oxydation	Solvents
PA6.6 (Polyamid 6.6)	230 – 239	110 – 115	28	⊗⊗	✓	⊗⊗	⊗	✓
PAN (PolyacryInitrile)	257 – 284	125 – 140	18	✓	●	✓	✓	✓
PET (Polyester)	302 – 356	150 – 180	20	●	⊗	⊗	✓	●
para Aramid	302 – 356	150 – 180	28	⊗⊗	⊗⊗	-	-	✓✓
PPS (Polyphenylensulfid)	374 – 392	190 – 200	41	✓✓	✓✓	✓✓	●	✓✓
oxidized PAN	392 – 428	200 – 220	45	✓	✓	✓	✓✓	✓
meta Aramid	392 – 428	200 – 220	30	⊗⊗	✓	⊗⊗	✓	✓
PI (Polyimide)	392 – 464	200 – 240	38	✓	⊗	●	✓	✓

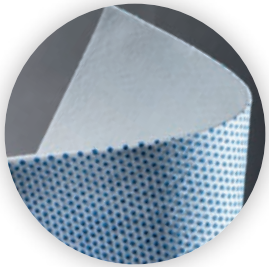
*According to polymer performance under laboratory conditions.

✓✓ very good ✓ good ● neutral ⊗ weak ⊗⊗ very weak

Internal aftertreatment capabilities

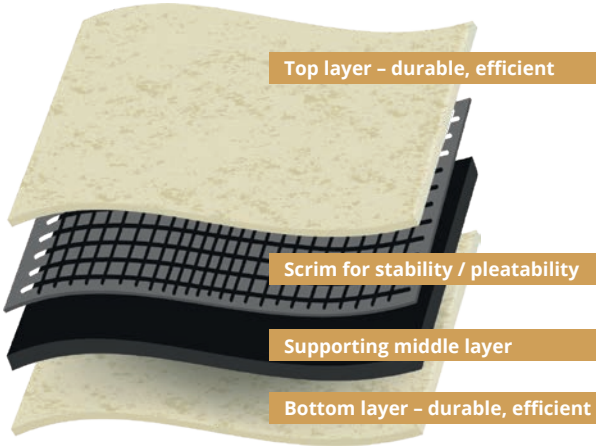
In addition to advising our customers on the right fiber, we are able to adapt our lines to produce a material that meets your requirements and needs. Thanks to our self-sufficient finishing line, we can modify and improve technical nonwovens, textiles, and fabrics in the following way.

- **Impregnation: water and oil repellent, flame-retardant, stiffen**
- **Surface modification: calender**
- **Foam application: stable, unstable**
- **Lamination**

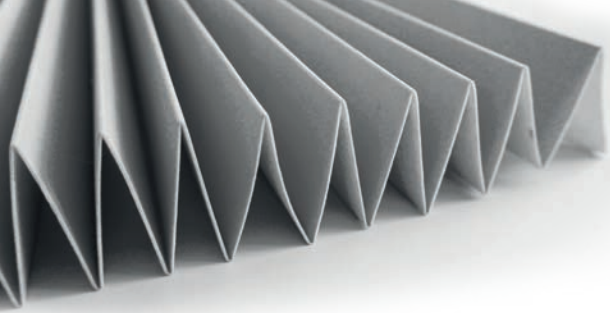


Multilayer SOLUTIONS

Multiple nonwoven and scrim layers with different performances can be combined in one step through our spunlace technology to a robust and reliable filter media without adhesives.



This is an example of what a multilayer structure might look like, with each layer having a specific function.



Antistatic filter media

Our technology allows us to directly implement antistatic fibers into the filter media to provide homogeneous and everlasting high conductivity.

- **Prevention of dust caused explosions (flour, wooden dust, milk powder etc.)**
- **Enabling voltage discharge**

High-temperature filter media

Depending on the requirements we can combine various fibers, layers and structures for an optimal, durable media. Through binder impregnation or scrim inclusion these can be evolved into a self-supported pleated filter media.

- **temp. above 150 up to 260°C**
- **asphalt/cement production**
- **power generation**

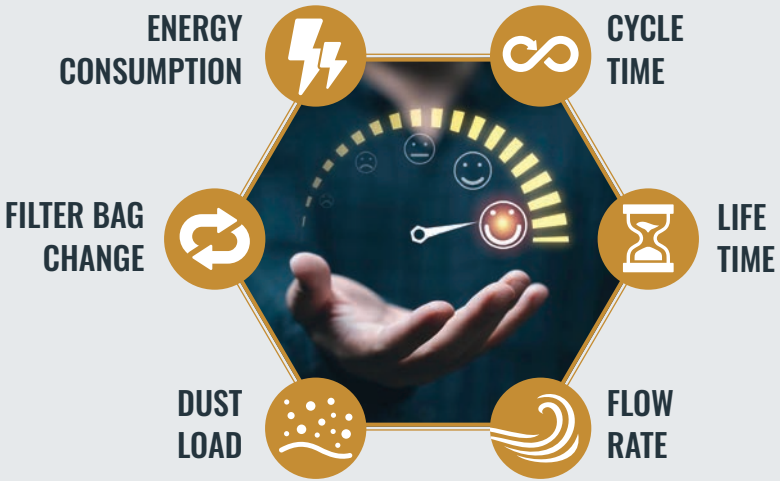
The impact of our products on operational properties

Although filter media account for only a small portion of total operating costs, they have a significant impact on over half of ongoing operating expenses.

Therefore, choosing the right filter media is of critical strategic importance.

Improvements to the filter media can result in **SIGNIFICANT SAVINGS** during operation!

The proportion of filter media costs themselves is not as decisive as their impact on:



Norafin®
CRYSTALEN

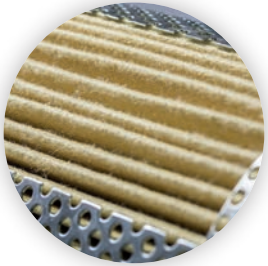
The responsible use of resources and energy is one of the cornerstones of our corporate philosophy. Above all, we place great emphasis on the quality and performance of our products – tailored to the specific needs of our customers.

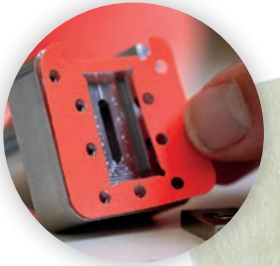
You can also benefit from:

- **personalized consultation**
- **a thorough assessment of your requirements**
- **proof of quality**
- **process analysis**

Our manufacturing capabilities extend far beyond just the filter medium

We offer a wide range of equipment, technical capabilities, and additional processing steps. We have our own in-house production line, which allows us to finish our technical nonwovens according to specific requirements and deliver the ordered goods in a customer-focused manner.





FUNCTIONALIZATION
Impregnating, laminating, calendering, foam application

PRECISION CUTTING
Customized formats using fully automated cutting technology

HYDRO-SPLICE
Our own patented process – two nonwovens are connected on the edges without any visible joint.

SMALL QUANTITIES

We are your contact for nonwoven solutions in the field of filtration.

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Norafin Industries (Germany) GmbH
Gewerbegebiet Nord 3
D-09456 Mildenau
Phone +49 3733 5507 0
info@norafin.com

Norafin (Americas) Inc.
111 School House Road
Mills River, NC 28759
USA
Phone +1 828 435 7000
info-us@norafin.com

www.norafin-group.com