



HYGIENE
AND CLEANLINESS



DEVELOP *clean solutions.*
LET'S DO THIS TOGETHER.

CLEANING WIPES MADE OF *Viscose & Lyocell*

We are constantly working to develop and utilize non-woven fabrics that do not contain synthetic polymer fibers. Thanks to the isotropic fiber orientation and our spunlace technology, we are able to process nonwovens made from viscose, lyocell, or even natural fibers (e.g. flax or hemp) where their overall stability is comparable to materials with synthetic fibers.

Our Norafin ECOLINE[®] brand comprises cleaning wipes which consist of renewable and biodegradable raw materials². For our nonwovens, we prefer the use of VEOCEL[™] or natural fibers to support the production of wipes made of biodegradable fibers¹.



Purely for you

VEOCEL[™] is a trademark of Lenzing AG

¹ LENZING Lyocell[™] and LENZING Viscose[™] fibers for nonwoven applications OK Compost according TÜV Austria: Biodegradable soil for spunlace and needlepunch nonwovens; Compostable home for spunlace nonwovens with maximum nominal grammage 62 g/m² (55 g/m² for viscose); Industrial compostable for needlepunch nonwovens with maximum nominal grammage 56 g/m² (54 g/m² for viscose) and for spunlace nonwovens with maximum nominal grammage 62 g/m² (55 g/m² for viscose).

² Various LENZING[™] Lyocell and viscose fibers for nonwoven applications have been certified by TÜV AUSTRIA as biodegradable in soil, freshwater, and seawater, as well as compostable under household and industrial conditions. This certification does not apply in California, the U.S., and France.

- ✓ free of synthetic polymers
- ✓ made from biodegradable fibers²
- ✓ different structures: fine, coarse, extra coarse apertured or embossed
- ✓ weight range, between 30 – 200 g/m²

100%
LYOCELL

40 g/m², 100% Lyocell,
SL, flat*

100%
VISCOSE

90 g/m², 100% Viscose,
SL, Bubble*

100%
COLORED
VISCOSE

65 g/m², 100% Viscose,
SL, 3D-Performance*

100%
COLORED
VISCOSE

75 g/m², 100% Viscose,
SL, fine apertured*

Also available as
colored viscose.

* Please note: The indicated product is only one sample of our wide product range.

WIPE SOLUTIONS MADE OF *Natural Fibers*

Norafin is a pioneer in successfully processing natural fibers into tear-resistant and durable nonwovens without using chemical binders in the strengthening process.

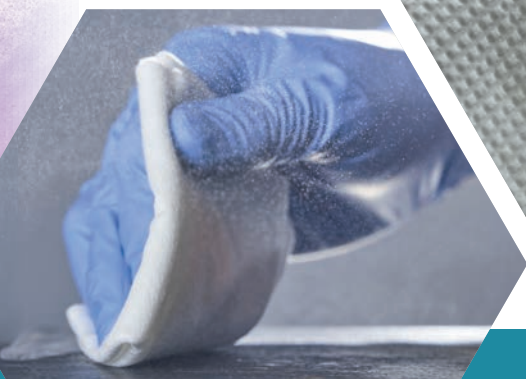
NONWOVENS MADE OF FLAX FIBERS

Nonwovens made from this renewable raw material have very high inherent stability and absorbency, making them perfectly suited to a variety of applications. Flax fibers are an ideal base material for various wipe solutions. One example is disposable washing gloves for daily personal hygiene. The antibacterial effect of flax helps to prevent germs and bacteria from spreading. With Norafin's Hydro-Stitch⁵ technology, washing gloves can be manufactured without chemical binders.

NONWOVENS MADE OF HEMP FIBERS

Nonwoven fabrics made from hemp are extremely durable and resistant to abrasion due to their natural fiber structure. Hemp fibers are naturally robust with high tear and scrub strength, making hemp a alternative to conventional polishing and abrasive materials.

⁵ The Norafin Hydro-Stitch technology is an advanced form of hydroentanglement. It is a purely mechanical process used to manufacture nonwoven fabrics. Rather than using adhesives or binders, fibres are intertwined and bonded together using only the force of fine, high-pressure water jets.



- ✓ renewable fibers
- ✓ reusable
- ✓ absorbent
- ✓ tear-resistant, even when wet
- ✓ skin-friendly

* Please note: The indicated product is only one sample of our wide product range.



NONWOVEN SOLUTIONS MADE OF *Sheep's wool & Viscose*

Besides nonwovens made from flax and hemp fibers, our portfolio includes products made from sheep's wool. The combination with viscose fibers makes the nonwoven durable, soft, and particularly skin-friendly.



Thanks to our expertise in spunlace technology, we can produce high-quality, lightweight nonwovens from sheep's wool.

NATURALLY VERSATILE AND HIGH-PERFORMANCE FIBERS

Our newly developed nonwoven combines the natural benefits of sheep's wool with the functionality and softness of viscose. Manufactured using our chemical-free spunlace technology, it is an high-performance solution for a variety of applications.



Where do we see the fields of application?

- ✓ **Hygiene products** (e.g. sanitary towels, diapers)
- ✓ **Textiles** (e.g. shoes, temperature regulation)
- ✓ **Construction materials** (e.g. insulation, drywall)
- ✓ **Filtration** (e.g. liquids, exhaust fumes, dust)
- ✓ **Cleaning** (e.g. sponges, wipes)



2 APPLICATIONS – 1 SOLUTION

Duo-Twist

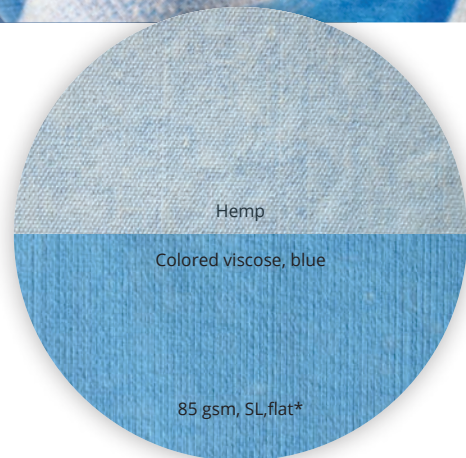
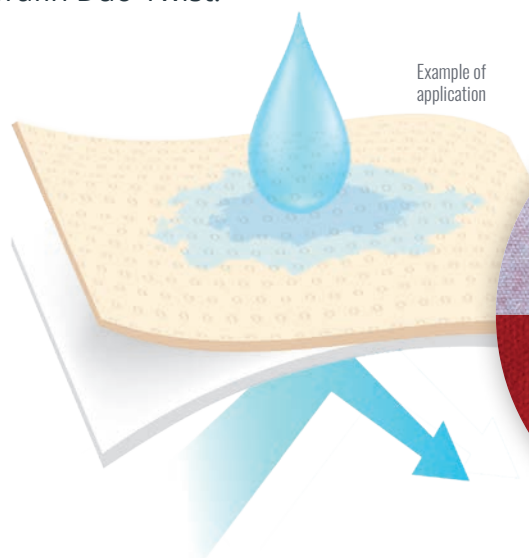
A special feature of our product portfolio is our multifunctional nonwoven, which combines two functions in one wipe.

During the manufacturing process, two different nonwoven layers are firmly and inseparably bonded together using high-pressure water jets. No adhesive is required.

This means that all customer requirements, such as specific structures, colors, weights, and fiber compositions, can be incorporated into one wipe – the Norafin Duo-Twist.

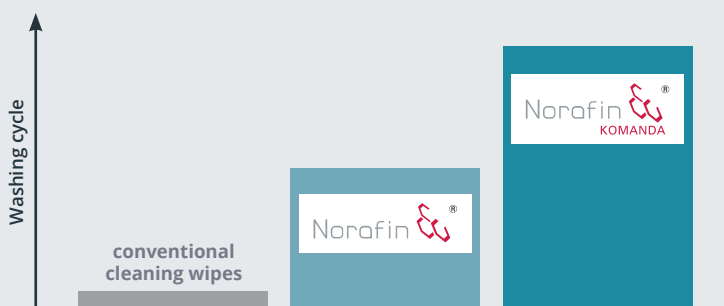
Possible wipe solutions:

- ✓ cleaning & polishing
- ✓ oiling & removing
- ✓ roughening & planing
- ✓ hydrophylic & hydrophobic
- ✓ 2-color solution



Reusable rather than disposable

Thanks to the combination of our internal technology we succeeded in developing our unique **Norafin KOMANDA®**-technology, which provides our nonwovens with exceptional performance characteristics. The resulting wipe solutions are highly tear-resistant and can withstand many industrial washes without losing performance. Therefore, they can be reused several times.



Norafin  **KOMANDA**



* Please note: The indicated product is only one sample of our wide product range.

NEEDLEPUNCH TECHNOLOGY

The fiber web is processed “dry” on the independent needle line. The web supplied by the carding machine is mechanically consolidated by vertically moving needles. Additional layers can then be added to the material in a second step. If necessary, the material can be thermally fixed in the dryer.

- ✓ all colors available, including RAL colors

SPUNLACE TECHNOLOGY

Drops of water combine to form high-pressure water jets that strike a fibrous web to create an intertwined, uniform and resilient nonwoven. To ensure uniform bonding, the fibrous web passes through multiple nozzle bars and is processed on both sides. Different surface structures can be produced by using different drums. Additionally, two autonomous carding machines allow us to produce up to four-layer material constructions in a single step.

- ✓ smooth, perforated, and embossed (3D) materials
- ✓ multi-layer and double-sided material constructions
- ✓ all colors available, including RAL colors
- ✓ binder-free production with our own water treatment cycle

TOGETHER, WE TAKE RESPONSIBILITY FOR A FUTURE WORTH LIVING

Most of our nonwoven solutions, which are made of viscose, flax, hemp, and lyocell fibers, are certified according to STANDARD 100 by OEKO-TEX®. We also process viscose from sustainably managed forests that are certified according to FSC™ regulations for sustainable forestry.

We are both ISEGA and IFS certified to ensure safety and compliance throughout the entire supply chain.



**STANDARD
100**

16.0.90034
Hohenstein HTTI

www.oeko-tex.com



The mark of
responsible forestry
FSC™ C140662

ISEGA



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*Join us as a partner and
let's work together to develop
clean solutions.*



CL Sustainable 09/2026



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