



Product line introduction

N-composite roll

NAFIGATE Park has developed and manufactures nanofibrous composite media suitable for face masks and respirators. The N-composite roll consists of a laminated four-layer material with a PVDF nanofiber membrane, in some versions also enhanced with Ag+ ions built into the fibers of the nonwoven supporting layer.

We offer the N-composite roll in four classes - sorted by filtration efficiency, optimized for the production of protective medical masks classed I+II, IIR and PPE (respirators) classed as FFP2 and FFP3.

We offer each filtration class in two versions:

Antimicrobial: comes with Ag+ ions that inhibit bacterial growth and are suitable for repeated use

Basic: without Ag+ ions, ideal for disposable PPE or medical protective masks



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N-composite roll

Benefits of our material

1 Ultra-high efficiency

- Our nanofibrous laminate N-composite roll effectively filters bacteria and viruses at the level required for the certification of face masks according to the EN14683+AC:2019 standard, or respirators according to the EN149:2001+A1:2009 standard.
- In addition to these standards, the N-composite roll effectively filters particles the size of the COVID-19 virus (90-120 nm), depending on the selected filtration class from >90% up to 95%. Filtration efficiency was measured by accredited laboratories.

2 The highest comfort

- **Comfort:** The use of a nanofiber membrane makes it possible to meet the limits of filtration efficiency with a much thinner and lighter material, which significantly improves **breathability** and overall **wearing comfort**. It will be appreciated not only by seniors and vulnerable groups, but also by athletes.
- **Performance stability:** Thanks to the use of nanofibers, the filtration principle is mechanical – therefore there is no reduction in filtration efficiency due to spontaneous discharge caused by moisture as is the case with masks and respirators made from electrostatically charged nonwoven fabric. **The stable filtration performance** is also achieved by using PVDF nanofibers, which are resistant to the acidic environment of exhaled air, and thus the efficiency of the nanofiber layer is not disturbed and reduced over time. This property of the PVDF is extraordinary among the commonly offered nanofibrous material.

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3 Long-term service life

- The laminated membrane is resilient to mechanical damage. Filtration effects do not decrease with use.
- The PVDF material contributes to **longevity** with its low absorbency and chemical resistance, also making it possible to be washed and disinfected.
- The version with Ag+ ions prevents the growth and multiplication of bacteria. The material is thus hygienically safe for a long time.

4 Made in the Czech Republic

- The nanofiber membranes are made using Czech Nanospider™ technology.
- The laminates are assembled from Czech materials.
- Made by the Czech company NAFIGATE Park with its headquarters and manufacturing in the Czech Republic.

About the company

NAFIGATE Park Ltd

was established as the first nanofiber production facility belonging to NAFIGATE Corporation a.s. The establishment of this production company, including its own center for research and development, was motivated by our passion for nanofibers and their optimization according to the needs of our customers. The nanofibrous composite media have been developed in collaboration with scientists who have been developing nanofibers for 15 years.

Contact us

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