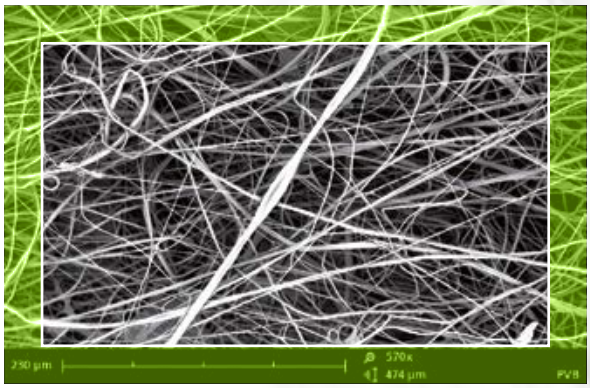
PVB

NnF MBRANE® – PVB (Polyvinylbutyral)

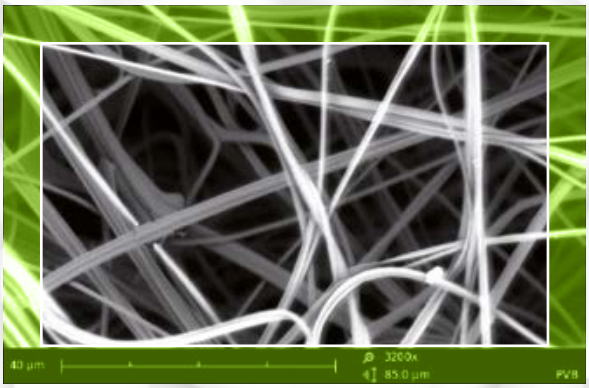
Product description

NnF MBRANE® – PVB (Polyvinylbutyral) is a novel kind of nanofibrous mambrane produced by industrial production technology operated by **PARDAM, s.r.o.** in the Czech Republic. Nanofibrous layer is deposited on the top of a supporting substrate with air permeating structure made of virtually any material on customers` request – woven/nonwoven textiles, filtration paper... Combination of the grammage of nanofibrous layer and the type of supporting substrate enables manufacturing of filtration membranes with different permeability and filtration efficiency. Nanofibrous membrane possesses small pore size together with high permeability due to its open fibre structure. Basic feature of this material among others is its hydrophobic – hydrophilic bivalent character, which enables this material to dissolve in alcohol, but does not allow it to swell in water. This leads to long-term biodegradable material suitable for environmentally and health-friendly applications. This material has also a great perspective for doping of fibers with various functional components with slow releasing properties, such as scents, antibacterial or medical compounds as well as any type of nanoparticles.

Images



SEM image, magnification: 570x



SEM image, magnification: 3200x

Physical properties

Physical form and structure

PVB NnF layer on PP support

Material characteristics

fiber structure	**randomly oriented**
typical fiber diameter	**300-800 nm**
fiber length	**continuous**
physical form	**thin layer**
grammage	**0,5-15 g/m²**
air permeability	**40-400 l/min/dm²**
width of the roll	**max. 0,8 m**
maximum length of the roll	**2000 m**
melting point	**200 °C**
vicat softening point	**180 °C**

Breathable | High flux | Chemically stable with the exception of strong acids and organic solvents | Biodegradable | Peel-able – it is possible to use nanofibrous layer without support material

Type of supporting substrate and grammage of nanofibrous layer determine the permeability and filtration efficiency of the membrane. These parameters can be modified in accordance with customers' demands.

Additional post-treatment available:
Lamination of nanofibrous membranes (double / triple sandwich material) | Doping with functionalized particles (Ag, ZnO, TiO_2... antibacterial function).

Please feel free to contact us for more information.

Applications

Air | Liquid | Water filtration | Separation processes | Life science | Biomedical applications | Medicine carriers | Doping with liquid dopants – long time release

Important notice:
Production of two-layer polymer nanofiber membrane (combination of polymers from our portfolio) in one production step is also possible (improvement of mechanical and functional properties).

Important notice for purchaser

Pardam nanotechnology

Developed by Pardam nanotechnology www.pardam.cz | **Produced by** N4F Technology www.nano4fiberstechnology.com | **Distributed by** N4F Group www.nano4fibersgroup.com

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