

Factsheet Membrane

More than a membrane

Maximum performance, minimum cost to the environment

We are outdoors a lot and have the highest demands on our shoes and clothing. They are designed to keep the body dry and regulate body temperature. We have developed a membrane that provides optimal comfort in any weather and activity.

For 30 years, the Sympatex membrane has been a benchmark for the sports and outdoor industry, as well as for challenging everyday work. Our membrane not only protects you during your outdoor adventures, but also nature. For us, this is not a contradiction. With our membrane made of polyester and together with our partners, we want to completely close the textile loop.



Top Performance

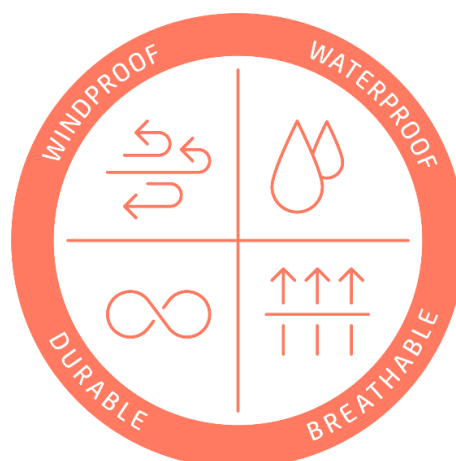
We deliver high functional textiles

With purpose, we look on two factors. One is the most obvious one: doing business with a durable product, which delivers high functional waterproof and breathable aspects as a natural given.

Our non-porous membrane consisting of billions of hydrophilic molecules which uses a physio-chemical process to rapidly transport moisture from the inside to the outside. It ensures that the body always remains dry – even in extreme situations. Not only that, the membrane also provides effective protection against rain.

In contrast to conventional microporous structures, the Sympatex membrane continues to function fully even after repeated washing, as the pores are not clogged by surfactants. The Sympatex membrane consists of polyether ester, a chain of polyester and polyether molecules that is harmless to health, and is therefore absolutely environmentally and skin-friendly and recyclable like a PET bottle.

- compact hydrophilic, poreless membrane
- 100% waterproof
- 100% windproof
- optimally breathable
- dynamic climate regulation
- durable and extremely hard wearing
- the world's thinnest membrane (5 µm thick)
- up to 300% stretch (wearer comfort)



Maximum Ecology

We Re-Close the Loop. Together.

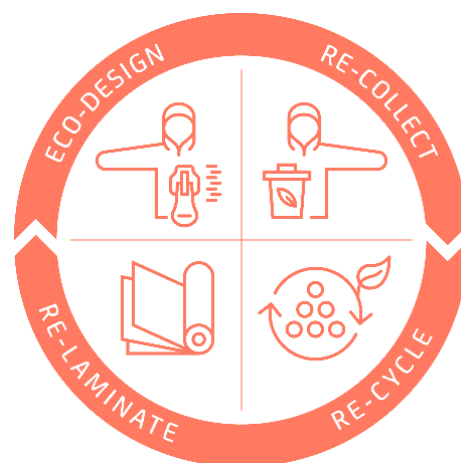
The second one is the purpose of doing business right. And if we have the momentum of where we are in a holistic view on our world in mind – we should make sure that we use our circle of influence and spread the word.

The material basis of the highly functional membrane is the Sympatex copolymer, a component of polyester and polyether molecules. During the production, which follows specific Sympatex formulations, the company and its partner DSM have managed to considerably reduce the carbon footprint of the product. Specifically, this means that the production of a Sympatex copolymer creates 30 times less CO₂ in comparison with a PTFE polymer.

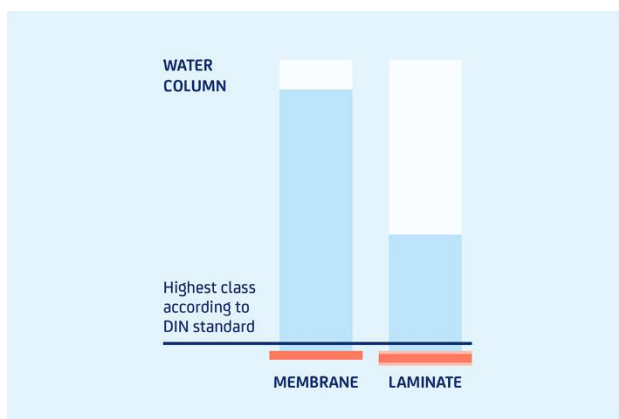
In addition, after several years of research, more than 25% of Sympatex membrane raw materials will be converted to renewable raw materials during 2021 - without compromising performance values. In order to eliminate all contributions to global warming, Sympatex has additionally started to compensate the CO2 amount of its entire yearly membrane production from 2017 onwards through respective certified CO2 projects in cooperation with ClimatePartner.

Other membranes are made of PTFE (polytetrafluoroethylene), the production, landfilling and incineration of which can release compounds that are considered ecologically problematic. Because of this high level of environmental compatibility, the Sympatex membrane has been awarded the Standard 100 by OEKO-TEX® certification. This involves extremely stringent testing for possible contaminants. The certification guarantees that the membrane is in no way harmful to health. And as a certified bluesign® partner, Sympatex fulfils strict guidelines for environmental protection, health and safety and operates a high-standard and environmentally sound production chain.

- Polyester and polyether copolymer (oxygen-carbon-hydrogen)
- no risk to health and environment
- 100 % climate neutral membrane
- 100% recyclable membrane
- PTFE-free and PFAS-free
- Standard 100 by OEKO-TEX® certified
- bluesign® approved
- reduced carbon footprint in the polymer production
- water-repellent treatments, free of toxic fluorocarbons



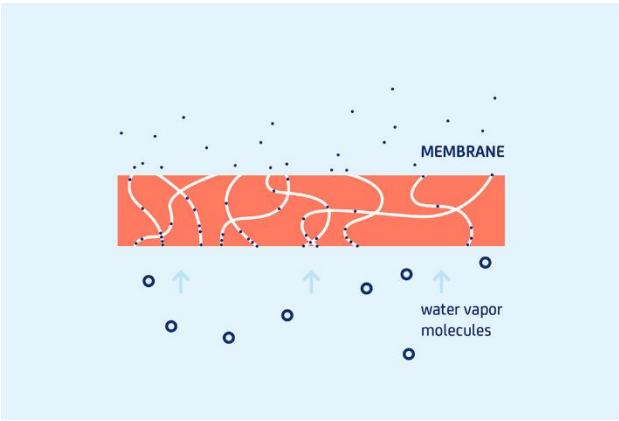
Waterproof



Our membrane has a water column of over 45,000 mm.

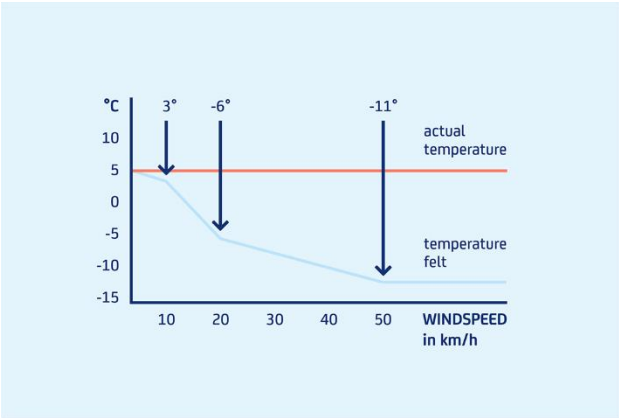
As a comparison: The highest standard class of DIN EN 343 is reached from 1300 mm.

Breathable



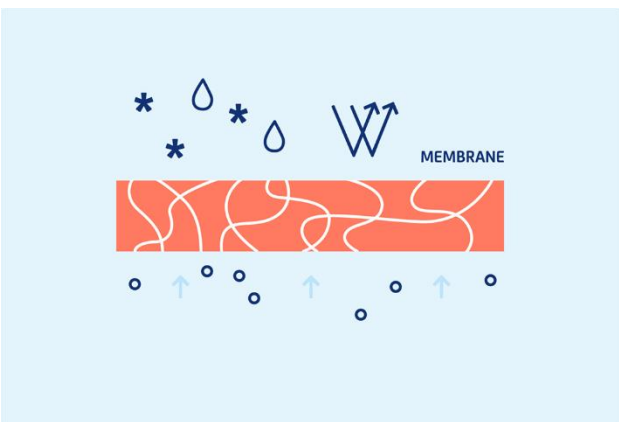
The hydrophilic molecular chains dissipate the water vapor to the outside. The effect increases dynamically with increasing temperature or humidity difference.

Windproof



Our membrane is absolutely windproof according to DIN EN ISO 9237 and thus ensures that the warming layer of air is not carried away from the body.

Durable



We deliberately avoid pores in our membrane that could become clogged over time. Thus, the function of our membrane is maintained for a long time.

Re>Closing the loop. Together.

With the climate neutral and recyclable Sympatex membrane

100 billion garments and 23 billion pairs of shoes produced p.a. represent Sympatex's future source of new raw material, once they've reached their end of life. The intelligent Sympatex membrane has been used in clothing, shoes, accessories and technical applications since 1986 and guarantees being 100% waterproof, windproof and breathable – in accordance with the performance standard. Intelligent? The membrane develops proportionally increasing breathability at higher activity. New and far above standard is that Sympatex produces functional textiles from recycled and recyclable monomaterials. Sympatex will no longer use new materials from the oil industry in the future. Instead, used textiles are transformed into new, high-quality membranes, laminates and functional textiles. Sympatex is working with selected brand partners worldwide to close the textile cycle together.

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