

The most efficient pathways for water, electrons and gas

Porous transport layers

Benefits

- ① GW-scale PTL production footprint
- ② Interfaces tuned to membrane, electrode and BPP
- ③ Exceptional fluid dynamic performance
- ④ Available in titanium, nickel and stainless steels

Why choose Bekaert?

Experience

Bekaert is the pioneer in designing, developing and producing metal fiber products for a wide range of applications. Our experience of more than 20 years in PEM WE has given us the flexibility and technical expertise to provide you with a solution that perfectly matches your quality and performance requirements.

Scale

We have industrial production capacities for our porous transfer layers in place and we anticipate significant growth. We have initiated the required investment plans to scale our production footprint and to capture future volume demands.

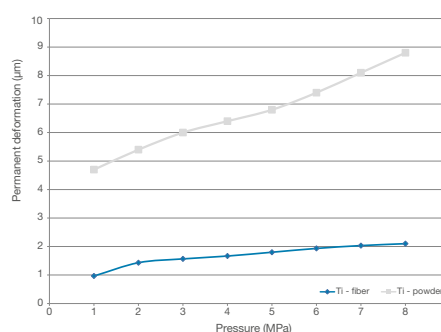
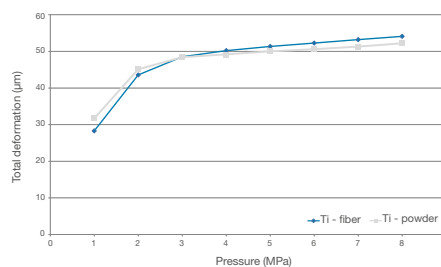
Partner for next-generation PTLs

To keep up with industries' evolving needs, we are strongly committed to innovation. Together with customers, independent research partners and in-house research facilities we are constantly creating new solutions.

Build your water electrolysis stacks with Bekaert Porous Transport Layers

Currently, many commercial PEM water electrolysis cells are equipped with sintered titanium fiber PTLs, often customized towards the specific cell design. Improving the overall performance of these cells is possible through optimizing the interfaces.

Bekaert has a long history in Porous Transport Layer (PTL) development, based on our sintered metal fiber structures. By modifying the key characteristics of PTL porous structures – such as fiber diameter and porosity – we have enhanced fluid dynamic performance and realized best-in-class properties for more efficient fluid and gas pathways through your PEM electrolyzer. The mechanical strength, ductility and flexible compression



characteristics of Bekaert's PTLs facilitate smooth stack assembly. Their corrosion resistance keeps degradation of conductivity to the minimum. Moreover, our PTLs can be provided in large dimensions, while platinum coatings are available on demand.

Bekaert has produced and supplied PTLs to the electrolyzer world for over 20 years. Our operations are guided by a strict industrial quality system to ensure a high degree of

consistency. Our current production capacity for sintered titanium fiber structures is sufficient for 1 GW of PEM water electrolyzers.

At Bekaert we build on our design and product experience with our partners and customers. Preparing for the future involves further scaling our footprint as well as developing a novel product portfolio for high-performing PEM and AEM water electrolysis.

3D surface renderings of metal fiber PTLs

Based on XTM data of three different media types

Fiber dia
14 μm

Fiber dia
22 μm

Fiber dia
50 μm

porosity
56 %



porosity
78 %



Scale 1:1  200 μm

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More
information?

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