

PRODUCT CATALOGUE

FUEL CELL TECHNOLOGY



Danish Power Systems®

WWW.DAPOSY.COM

About this brochure

Danish Power Systems specializes in the development and manufacture of the core component of fuel cells, the membrane electrode assembly (MEA).

HTPEM (High Temperature Polymer Electrolyte Membrane) fuel cells can use all fuels – methanol, diesel, natural gas - that can be converted into a hydrogen containing gas.

This brochure is an introduction to our products and services.



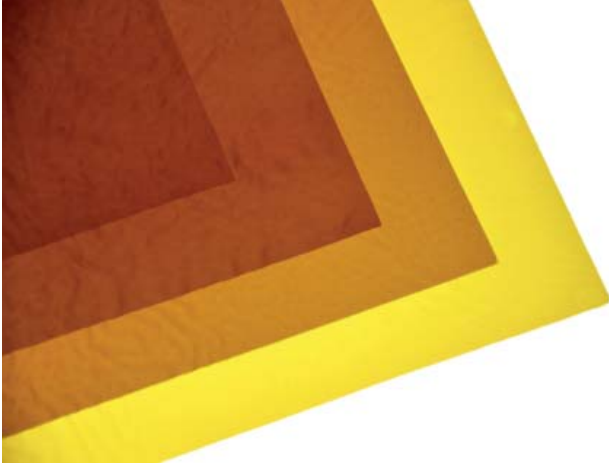
DPS offers more

We are here for the customers! If you need materials or services that are not specified in this brochure, then please contact us or one of our sales agents.

The contact information can be found on the last page.

OUR PRODUCTS

Dapozol[®] Membranes



Our membranes are produced from high molecular weight polybenzimidazole (PBI).

The membranes can be delivered in 40 μm thickness in sheets or rolls. Other thicknesses are available upon request.

The membranes can be delivered pristine or doped with phosphoric acid.

We also perform research on chemical and physical modifications for the improvement of the membrane properties:

- Synthesis of PBI and derivatives
- Cross-linking
- Blends
- Composites

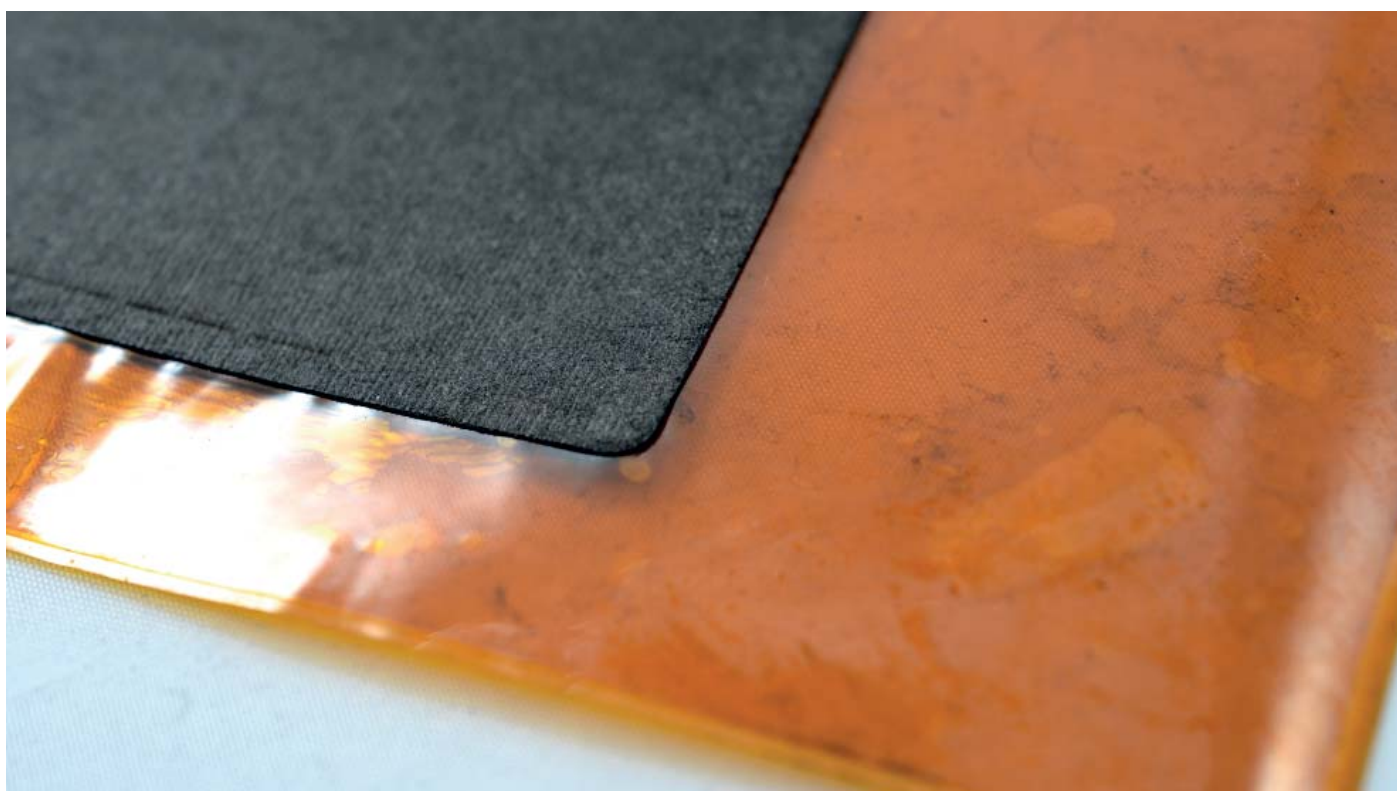


Dapozol® Membrane Electrode Assemblies

Production of Dapozol® Membrane Electrode Assemblies (MEAs) for HTPeM with an area in the range 10-400 cm².

Characteristics:

- Pt based catalysts
- Carbon based electrode material
- Edge reinforcement for easy implementation



The main advantages of our Dapozol[®] MEA for use in HTPEM fuel cells:

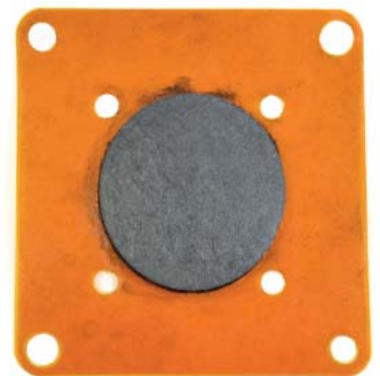
- Up to 200°C under ambient pressure
- No humidification
- Very high CO tolerance (up to 3%) at 150-200°C
- Lifetime >15.000 hours by continuous operation
- Tested >240 start-up cycles
- Low degradation rate < 4 $\mu\text{V/h}$ over 10.000 hours demonstrated
- Excellent performance using hydrogen and reformat

Our Dapozol[®] MEA is available in different standard sizes:

- G33 (3 x 3 cm gross area)
- G55 (5 x 5 cm gross area)
- G77 (7 x 7 cm gross area)
- G717 (7 x 17 cm gross area)
- G1018 (10 x 18 cm gross area)
- Customized sizes



*MEA in the standard
G1018 size*



*Customized
round MEA*

Polybenzimidazole (PBI) powder

Available in different ranges of average molecular weight (from 10.000 - 120.000 g/mol, calculation based on inherent viscosity (IV))



Cell fixtures

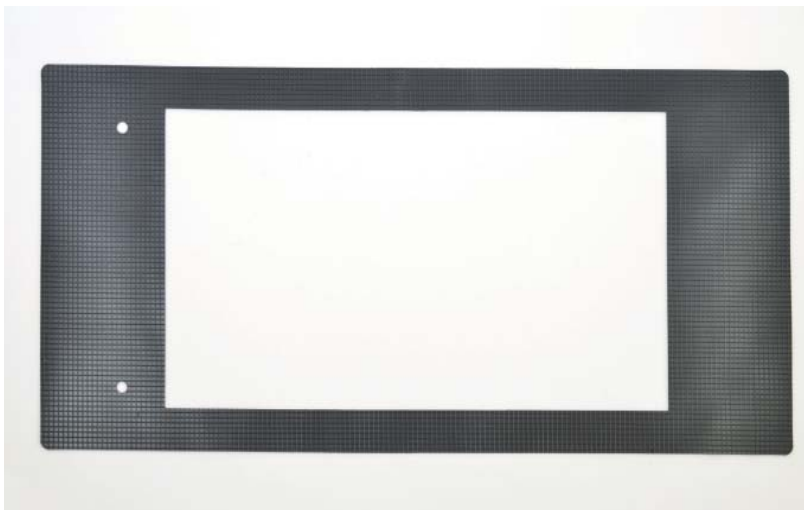
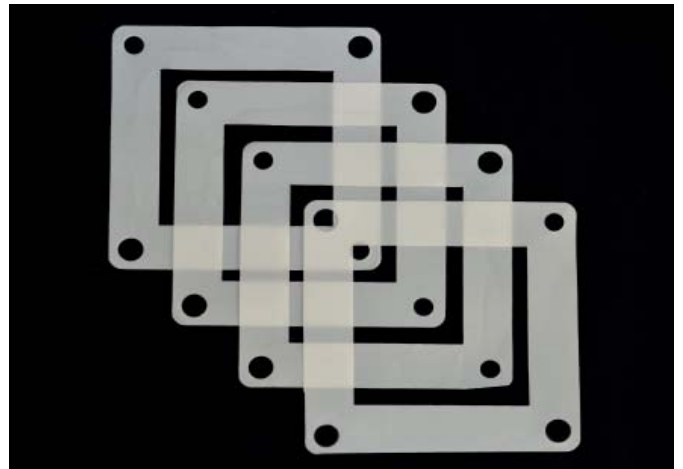


The assembled fuel cell fixture for a G55 MEA

Teflon Gaskets

Teflon gaskets for fuel cell testing or stack manufacturing

Available in standard and customized sizes and thicknesses



FKM gaskets

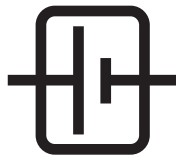
FKM gaskets for fuel cell testing or stack manufacturing

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Bipolar plates

Bipolar plates can be delivered in standard 5x5 cm active area individually or as spare parts for the cell fixture





Danish Power Systems®

The High Temperature PEM fuel cell technology delivers clean energy and very high efficiency.

Danish Power Systems delivers world class and customised critical MEA components.

Danish Power Systems is a research based production company founded in 1994, working in the fields of energy and chemistry.

Our mission is to promote and develop environmentally sustainable technology to the benefit of our business partners.

Danish Power Systems is a member of:

- The Danish Partnership for Hydrogen and Fuel Cells
- The Danish Academy of Technical Sciences
- Confederation of Danish Industry
- Network Brennstoff zelle & Wasserstoff NRW
- American Chemical Society
- The Electrochemical Society
- Materials Research Society
- Korean Electrochemical Society
- Hydrogen Europe

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[For a confidential consultation and further information contact:](#)

Danish Power Systems

Main Office

Danish Power Systems ApS

Egeskovvej 6C

3490 Kvistgaard

Denmark

Phone: (+45) 4587 3934

Fax: (+45) 4587 3933

E-mail: daposy@daposy.com

Web: www.daposy.com

DPS International

India - sales agent:

Vispadh Group

15721, S3, Ashok Shri Kamakshi

4th Street, Lakshmi Nagar

Naganallur, Chennai - 60061

Tamil Nadu

India

Phone: (+91) 9841542653

Mail: vispadhgroup@yahoo.com

South Korea - sales agent:

IoneerCell, Inc.

C-313, Sangmyung University

31 Sangmyungdae-gil,

Dongnam-gu Cheonan

Chungnam 330-720

Republic of Korea

Phone: (+82) 41 550 5315

Fax: 041-550-5313

E-mail: ioneercell@gmail.com

Web: www.ioneercell.co.kr

China - sales agent:

Kunshan Sunlaite New Energy Co., Ltd.

Tuspark, No.1666, Zucongzhi South

Road,

215347 Kunshan,

Jiangsu P.R.

China

Phone: 0 512-570 197 92

(+86) 177 1516 0662 Miss Chen

Fax: 0512-55119102