

# FREUDENBERG GAS DIFFUSION LAYERS FOR PEMFC AND DMFC

## TECHNICAL DATA

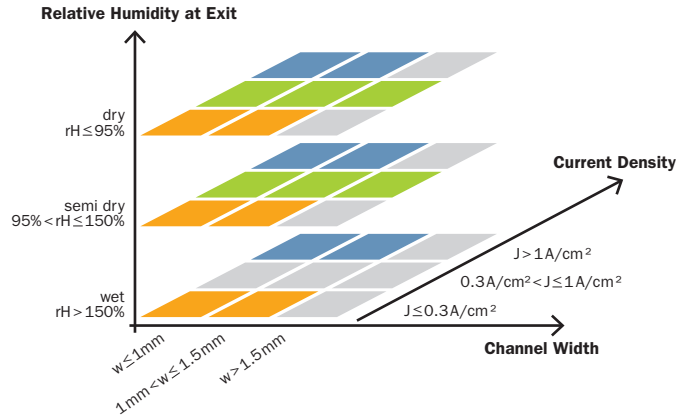
	H2315	H2315	H2315	H2315	H2315	H2315	H2415	H2415	H1410
	I6	C2	C4	I4 C9	I2 C6	I2 C8	I2 C3	C5	I4 C9
<b>HYDROPHOBIC TREATMENT</b>	■			■	■	■	■		■
<b>MICROPOROUS LAYER</b>		■	■	■	■	■	■	■	■
<b>Thickness@0.025 MPa</b> (Internal) in $\mu\text{m}$	210	255	255	250	250	230	290	270	180
<b>Thickness@ 1 MPa</b> (Internal) in $\mu\text{m}$	175	215	215	210	210	200	230	215	150
<b>Area weight</b> (DIN EN ISO 29073-1) in $\text{g}/\text{m}^2$	115	135	135	135	135	135	150	130	100
<b>Compression Set@ 1 MPa</b> (Internal) in $\mu\text{m}$	3	8	8	8	8	3	25	15	7
<b>TP electrical resistance@1 MPa</b> (Internal) in $\text{m}\Omega\cdot\text{cm}^2$	7	10	8	8	8	8	9	9	7
<b>IP electrical resistance</b> (Internal) in $\Omega$	0.8	0.8	0.8	0.7	0.7	0.8	0.6	0.7	1.0
<b>TP air permeability*</b> (DIN EN ISO 9237) in $\text{l}/\text{m}^2\cdot\text{s}$	160	–	–	–	–	–	–	–	–
<b>TP air permeability acc. to Gurley</b> (ISO 5636-5) in s	–	70	50	30	70	90	35	40	30
<b>IP air permeability@ 1 MPa</b> (Internal) in $\mu\text{m}^2$	1.7	2.5	2.5	2.0	1.8	1.5	1.5	2.5	1.5
<b>Tensile strength</b> (DIN EN ISO 29073-3) in $\text{N}/50\text{mm}$	80	80	60	70	70	70	110	70	70

\* at 200Pa pressure drop  
TP = through-plane, IP = in-plane  
(Rev. 04 – 13.02.2013)

All values represent averages which are subject to usual production tolerances. The values do not represent specifications.  
Any warranty and liability is subject to Freudenberg FCCT SE & Co. KG's General Terms of Delivery and Payment applicable at the date of delivery.

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## GDL RECOMMENDATION FOR DIFFERENT LT-PEMFC APPLICATIONS



<b>LT-PEMFC: (Auto)Motive</b>		<b>H1410 I4 C9</b>	thin GDL substrate
		<b>H2315 I4 C9</b>	
		<b>H2315 I2 C6</b>	in particular suitable for GDE
		<b>H2315 I2 C8</b>	very smooth coating surface, suitable for GDE
<b>LT-PEMFC: Stationary CHP High Humidification</b>		<b>H2315 C2</b>	
		<b>H2315 C4</b>	in particular suitable for GDE
		<b>H2315 I2 C6</b>	
		<b>H1410 I4 C9</b>	thin GDL substrate
<b>LT-PEMFC: Stationary CHP Low Humidification</b>		<b>H2415 C5</b>	
		<b>H2415 I2 C3</b>	very dry operating conditions
<b>LT-PEMFC: Back-up / Air-cooled / Off-Grid</b>		<b>H2415 C5</b>	
		<b>H2415 I2 C3</b>	very dry operating conditions
<b>HT-PEMFC</b>		<b>H2315 C2</b>	
		<b>H2315 C4</b>	in particular suitable for GDE
<b>Active DMFC</b>		<b>H2315 C4</b>	in particular suitable for GDE
		<b>H2315 I6</b>	
<b>Electrolysis</b>		<b>H2315 I6</b>	